Post-Pandemic Inflation Dynamics: a Comparative Study of the Fiscal Theory in the Czech Republic and France

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Abstract

Background: In the post-2021 era, Central Europe grapples with enduringly high inflation rates, challenging the effectiveness of conventional monetary policy tools.

Objective: This study aimed to shed light on these complex dynamics, offering insights into the effectiveness of fiscal strategies in an environment where conventional monetary policies appear increasingly inadequate.

Methods: The Fiscal Theory of Inflation offers a straightforward model to examine the financial exchanges between governments and the public within a two-day economic setting. The framework explains the recurring patterns in government borrowing, taxation, and public expenditure, highlighting their impact on inflation and presents the focal point of this study.

Results: Utilizing empirical survey data primarily from the Czech Republic and France, sourced from the Czech Statistical Office, the Czech National Bank, Banque de France, and INSEE, this study engages with the Fiscal Theory of Prices to elucidate these phenomena. Central to this analysis is the Fiscal Theory of Inflation, which argues that unanticipated inflation results in the devaluation of nominal treasury bonds, prompting a corresponding adjustment either in expected primary surpluses or the discount factor. This adjustment is crucial to ensure alignment between the total government debt's actual value and these surpluses' present value.

Recommendation: The study aims to provide insights into these intricate dynamics, offering implications for the efficacy of fiscal strategies in an environment where conventional monetary policies increasingly prove inadequate.

Practical relevance: This paper explores the implications of these persistent inflationary trends, focusing on the imperative of government debt recovery, as recognized by the newly elected government in the autumn of 2021. This research is helpful for any economist who opposes inflation measurement, targeting, or, most importantly, the belief that money grows on trees, allowing the government to fund public expenditures that many view as crucial.

Originality/value: The paper is original, based on the ideas of J.H. Cohrane. The paper is an empirical test of the so-called fiscal theory on the example of France and the Czech Republic.

Keywords
Fiscal Sustainability, Monetary Policy, Inflation, Consumer Price Indices

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Introduction and overview

Presently, industrialized economies are grappling with one of their most formidable challenges in the real economy: the emergence of excessively high and sustained inflation rates after the global pandemic in 2019-2020 and the later conflict in Ukraine. Notably, the inflation rates within the Eurozone economies are comparatively lower, prompting a multitude of rationalizations. This scenario has seen the application of traditional economic methodologies alongside innovative responses facilitated by exchange rate dynamics.

The study aims to shed light on these complex dynamics, offering insights into the effectiveness of fiscal strategies in an environment where conventional monetary policies appear increasingly inadequate.

The variability of discount rates appears as a critical determinant in the potential for mitigating inflation, as explained by the fiscal Theory of Inflation. This phenomenon extends beyond merely expected future surpluses in governmental finance. It also encapsulates investor expectations about diminished returns on government bonds, positing a theoretical framework where inflationary pressures are likely to recede in an economic downturn.

This perspective, fostered by the fiscal Theory of Inflation, imparts a recalibrated understanding of macro-financial dynamics, particularly concerning national debt and budgetary deficits. In this revised conceptualization, these elements are not fiscal metrics but have significant implications for broader economic trends and policy considerations. This theoretical approach underscores the interconnectedness of fiscal policy, market expectations, and economic cycles. It accentuates the imperative for nuanced understanding and strategic management of fiscal variables to effectively navigate the complexities of inflation control within the contemporary economic landscape. The fiscal Theory of Inflation, thus, serves not only as an analytical tool but also as a guiding framework for policymakers in reshaping economic strategies in alignment with evolving market realities.

In the Czech Republic, the recent overhaul of the Central Bank's governance, involving the regrettable removal of the governor and banking board, has culminated in the

new board electing to continue the trajectory set by its predecessors. This path is contentiously characterized by aggressive monetary constraints, notably the elevation of basic interest rates following their rapid reduction during the COVID-19 pandemic. The current strategy of the central bank's board of directors, adopting a cautious 'wait-and-see' approach, has compelled them to intervene in the currency rate, diminishing the nation's foreign exchange reserves. This situation focuses on the contemporary Fiscal Theory of Inflation, which the Czech Republic's administration is presently using as a foundation for advocating the restoration of public finances. However, it is discernible that specific measures undertaken may be more politically driven than economically rational. In addressing such complex issues, an open-minded approach is paramount, given that proposed solutions often worsen problems rather than resolve them, irrespective of their origin. Political factions often perceive crises as opportunities to advance their populist, ideologically driven agendas.

As a benchmark for comparison, France is chosen as one of the most developed E.U. countries. Furthermore, France is characterized by a robust public sector. We expect a different reaction compared to the situation in the Czech Republic, in which the public sector is weakened.

Literature Review

Recent literature explores the fiscal theory of inflation, particularly in economies with persistent primary budget deficits, despite the risks of growing national debt. Brunnermeier et al. (2020) examine factors leading to low inflation rates in such economies, showing a pivotal link to the government bond market. The discrepancy between lower government bond yields and higher economic performance, noted by Cochrane (2023) and Brunnmeier (2020), challenges traditional fiscal perspectives.

Cochrane (2001) disrupts conventional thinking by arguing that the nominal debt value and future state budget surpluses do not solely determine economic prices, highlighting the significance of government debt's maturity structure. His VAR-based empirical analysis (Cochrane, 2023) further reveals that changes in discount rates predominantly drive unexpected inflationary trends.

Bianchi et al. (2023) suggest that post-pandemic fiscal policies are primary inflation drivers, supported by the stabilization effects seen in the U.S. following COVID-19 legislation. Kim (2023) introduces a structuralist view, linking inflation to structural variables like labor share, while Corhay et al. (2023) posit that adjusting the national debt's maturity structure can mitigate inflationary shocks.

Makovský (2022) provided a comprehensive analysis of the term structure of interest rates across Central Europe, a crucial aspect for understanding the region's financial dynamics. His review aims to synthesize the key findings from this and related studies, mainly focusing on the nuances of term premiums in Central European nations. In the

Czech Republic, Brůna's (2006) research played a pivotal role in examining the influence of the central bank's repo rates on immediate adjustments in swap and forward rates. His study, spanning a decade from 1998 to 2008, revealed that despite disinflationary policies, these monetary tools had minimal immediate impact on market rates. This observation suggests a lag in the market's response to central bank policies, underscoring the complex relationship between central bank actions and market reactions. Brůna's findings also pointed to the diminished credibility of the central bank due to inaccurate investor expectations about economic growth, impacting the country's trajectory towards a low-inflation state.

Creel (2016) and Aldama and Creel J. (2017) developed the Regime-Switching Model-Based Sustainability test, allowing for periodic (or local) violations of Bohn's (1998) sustainability condition. They assume a Markov-switching fiscal policy rule whose parameters stochastically switch between sustainable and unsustainable regimes. Their findings are about how long-run fiscal sustainability depends on regime-specific feedback coefficients of the fiscal policy rule and the average durations of fiscal regimes. Initially, the importance of fiscal policy in France was strengthened after WFC 2008, as described in Creel et al. (2009) and Creel et al. (2005).

Compared to France in the Czech Republic, Mackiewicz-Łyziak, J. (2015) speaks about assessing fiscal sustainability in the Czech Republic, Hungary, and Poland. She tests the existence of fiscal dominance in these countries in the context of the fiscal theory of the price level. The empirical study uses unit root tests and co-integration analysis with possible structural breaks. The approach is consistent with the backward-looking approach for fiscal dominance testing proposed by Bohn (1998). The results suggest that fiscal dominance prevailed in the Czech Republic and Poland in the analyzed period, while monetary dominance prevailed in Hungary. The result for Hungary may be caused, however, by a one-time reduction in debt resulting from changes in the pension system. Mackiewicz-Łyziak, J. (2016) also develops the findings on the effects of inflation targeting in the CEE countries. Wesołowski (2018) contributes with the effects from the real economy variables evidence from Poland. Kučera et al. (2017) created a decomposition of the Czech treasury bonds yield curve to show the effect of expectations on the price level change. A similar analysis was conducted in Hungary by Kicsák (2017).

Cochrane (2023), a leading authority in the Fiscal Theory of Inflation, has dedicated years to examining the fiscal underpinnings of inflation. The financial ramifications of the pandemic particularly galvanized his commitment to developing this theory. A historical parallel can be drawn with the U.S. economy during World War II, which was able to fund the war effort due to a transformed economic reality – a contrast to the Cold War era, which, despite its significant expenditures, fortuitously bolstered the USA's global standing. Furthermore, the U.S. has experienced robust long-term GDP growth, primarily attributed to supply-side factors such as labor productivity and technological advancement, with only a marginal expansion in social security systems. The U.S. has also historically maintained low-interest rates and exerted control over financial capital through stringent financial regulation. Neither the United States, the Czech Republic, nor France exhibit these conditions.

Kladívko (2010) added another dimension by approximating the yield curve of Czech government bonds. His interest in applying forward rate dynamics to forecast errors sheds light on the challenges of accurately predicting market movements. The absence of a fully developed yield curve model for Czech government bonds during this period highlights the limitations and potential areas for further financial modeling and forecasting research. Kučera et al. (2016), employed by the Czech National Bank, made significant contributions by validating the structure of futures premiums. Their efforts to deconstruct the yield curve into its constituent parts provided valuable insights into market expectations for upcoming macroeconomic changes and investors' risk perception. This approach enhanced the understanding of futures premiums and revealed essential trends in risk-neutral rates and term premiums. The post-2009 financial crisis period is particularly notable for the observed trends in falling term premiums and risk-neutral rates, characteristics indicative of declining bond yields. This period also saw an increased focus on credit risk, a direct consequence of the financial crisis's impact on global markets.

Kladívko and Sterholm (2019) present a significant analysis of the Swedish economy's key financial indicators, proving a notable performance against the stochastic random walk method across various financial horizons. Their research explicitly highlights four critical financial indicators, displaying their predictive accuracy over specific timelines. The random walk model outperformed market predictions for the five-year Treasury yield and the repo rate over extended periods. However, the research shows no significant differences in forecast accuracy between the SEK/USD and SEK/EUR exchange rates, suggesting predictability and stability in these currency pairs. This analysis contributes to a deeper understanding of the Swedish financial market's behavior, particularly in terms of long-term consumption and the structure of interest rates. The ability of the random walk model to outperform market participants in specific scenarios while showing parity in currency exchange rate predictions offers valuable insights into market efficiency and the predictability of financial indicators in the Swedish economy.

Further, Joyce et al. (2010) explore U.K. interest rates dating back to October 1992. Their model introduces an arbitrage constraint between nominal and real yields, breaking interest rates into several components: expected exact interest rates, expected inflation, the actual premium, and inflation itself. This model offers a comprehensive framework for understanding the dynamics of U.K. interest rates and their underlying drivers. By decomposing interest rates into these fundamental elements, Joyce et al. illuminate the complexities of interest rate movements and their correlation with economic variables.

Greenwood et al. (2015) delved into central banks' monetary policy tools in developed nations, focusing on forward guidance and quantitative easing (Q.E.). Their study highlights how Q.E. alters the maturity structure of publicly available government debt by buying long-term government bonds and other securities. This alteration impacts bond risk premiums and long-term interest rates by shifting the duration risk borne by market participants. Similarly, forward guidance significantly influences long-term rates by signaling the central bank's commitment to maintaining low short-term rates in the future. These tools, pivotal in modern monetary policy, are critical in shaping the interest rate landscape and influencing economic behavior.

Continuing the examination of global financial dynamics, Bauer and Rudebusch (2016) address the structural issues influencing long-term interest rates. Notably, they show slower productivity growth and excessive global savings as critical factors contributing to the historically low levels of long-term interest rates. This environment of low rates has likely led to reduced expectations for steady-state interest rates, further driving these rates down over extended periods. The implications of this trend are significant, as it affects the overall investment climate and economic growth potential. Furthermore, Bauer and Rudebusch (2016) saw that the term premium on long-dated bonds has diminished, a trend likely influenced by accommodating monetary policies implemented both domestically and internationally. This decrease in term premiums affects a range of financial instruments and markets, notably affecting returns on futures, which are inherently expectation-based. The dynamics of these long-term interest rates and term premiums offer essential insights into the current state of global financial markets and monetary policy effectiveness.

The Fiscal Theory of Inflation, while receiving high regard in theoretical circles, confronts the practical challenge of persistent inflation in developed economies, particularly after the 2021 pandemic crisis. This period marked a distinct shift in inflation dynamics, diverging from traditional fiscal explanations. Data show that central banks and monetary authorities need to work on effectively controlling this persistent inflation. This challenge is notably prevalent in Central and Eastern European countries, which experience some of the highest inflation rates regardless of their currency alignment.

This literature review shows the gap in empirical research concerning the impact of fiscal stimuli on inflation, specifically in the Central and Eastern European context. This article aims to bridge this research gap by exploring the connections between national debt indicators and inflation, using the tools and concepts of the Fiscal Theory of Inflation. Doing so aims to provide a more comprehensive understanding of the fiscal drivers of inflation in these regions, offering valuable insights for policymakers and economists in addressing the challenges of post-pandemic economic recovery and stabilization.

Methodology of Fiscal Theory

The Fiscal Theory of Inflation, as discussed by Cochrane (2023), offers a straightforward model to examine the financial exchanges between governments and the public within a two-day economic setting. This framework explains the recurring patterns in government borrowing, taxation, and public expenditure, highlighting their impact on inflation and presents the focal point of this study.

Well before Cochrane, Sargent and Wallace's hyperinflation theory (1981) examined how monetary policy can lead to rapid price increases when fiscal policies are unsustainable. Their framework suggested that government deficits, financed by money creation, can spiral out of control if not complemented by fiscal discipline, ultimately leading to hyperinflation and eroding the value of the currency. They argued that in situations where

government debt is high and fiscal policy remains fixed, monetary authorities may have limited control over inflation rates.

Sims (2011) presented a seminal approach to understanding macroeconomic dynamics by emphasizing the significance of incorporating policy analysis into econometric models. He argued that traditional econometric methods often miss capturing the inherent complexities and interdependencies of economic variables over time. By employing Vector Autoregressions (VARs), researchers can better account for these factors, allowing for a more nuanced and accurate depiction of economic phenomena according to him.

Finally, Bianchi and Melosi (2019) provided a comprehensive exploration of macroeconomic dynamics, primarily focusing on the dynamics of monetary policy and its broader implications on economic stability. Their work is grounded in the context of post-financial crisis economic landscapes, where they analyze how central banks can manage the dual objectives of inflation stabilization and economic growth. By employing econometric models, Bianchi and Melosi assessed how expectations and forward guidance played vital roles in shaping outcomes in unconventional monetary policy environments.

For the purpose of clear framing of this study, we shall focus on the critical aspect of the assumption that individuals only keep money after some time in the Fiscal Theory of Inflation model (Cochrane, 2023). It leads to two distinct economic behaviors: some individuals, having a surplus after paying taxes, increase their consumption and buy more products and services, while others, facing a shortage, are compelled to liquidate assets to fulfill their tax obligations. When the total purchases surpass total sales, it creates a condition where aggregate demand exceeds aggregate supply, contributing to inflationary pressures.

The government's role in this model is pivotal in influencing inflation. Printing money in the morning to redeem bonds and then "burning" the money collected from taxes in the evening is a simplified representation of fiscal activities. When the government issues more debt than it can cover through taxation, it requires the authorization of future primary surpluses for the next day. Inflation can be further worsened when the government, facing inflation on the first day, collects more nominal taxes in the evening, potentially leading to an imbalance in the fiscal cycle. The possibility of increasing transfers, which future primary surpluses may partially cover, adds another layer of complexity to this model. It highlights the delicate balance governments must keep between issuing debt, managing taxation, and controlling inflation.

It is essential to delve deeper into the relationship between government debt and inflation, particularly in primary surpluses and their present value. According to the Fiscal Theory of Inflation, the present value of real primary surpluses equates to the actual worth of nominal debt. This concept suggests that a government with significant debt yet supporting financial stability might not induce inflation. Such a government could effectively run primary surpluses, balancing its financial obligations without resorting to inflationary measures. Conversely, a government with minimal debt might face inflationary pressures if public confidence in its fiscal management, particularly its ability to finance

and realize future deficits, wanes. The key determinant in such scenarios is the present worth of the primary surpluses. Hence, to avert acceleration in inflation, especially when discount rates are high, a government must aim for more significant surpluses, as greater discount rates reduce the present value of these surpluses.

This analysis leads to the understanding that primary surpluses play a dual role in enforcing inflation. First, they act as a measure of a government's fiscal health, and second, the level of these surpluses compared to interest rates influences the total interest payable on government debt. Higher interest rates, by increasing the interest part of the government debt, can reduce primary surpluses, thereby influencing inflation. The Fiscal Theory of Inflation does not hinge on a unique demand for money or financial frictions. It is indifferent to why individuals engage with government-issued money or alternative financial instruments.

Managing the money supply, whether through the gold standard or pegged exchange rates, is optional under this framework. As Adam Smith initially noted, this perspective distinctly separates the Fiscal Theory of Inflation from monetarist and neo-Keynesian price level theories. Thus, the Fiscal Theory of Inflation provides a comprehensive framework for understanding the intricate dynamics between government debt, primary surpluses, and inflation. It highlights the importance of public confidence in fiscal policy, the impact of interest rates on government debt, and the pivotal role of primary surpluses in maintaining economic stability.

In the Fiscal theory of inflation's two-day model, the first day sets the foundational dynamics of the government's interaction with the public about taxation and bond issuance. On this first day, the government's primary activity is to issue bonds to cover its previous debt obligations. The public, in response, buys these bonds with their available funds, essentially lending money to the government. As the day progresses, individuals engage in their usual economic activities. A crucial transition occurs by evening: the government collects taxes from its citizens. Tax collection is pivotal in this model as it is not just a revenue-generating mechanism for the government but also a means to regulate the money supply in the economy. The end of the first day in this model sets the stage for the second day's activities.

The government's approach changes on the second day of this two-day economic model. Unlike the first day, the government does not issue any new bonds. Instead, it focuses only on collecting taxes and paying off its total debt. This shift leads to an interesting economic situation with virtually no demand for more money. Here is where we see a direct link to inflation. People who do not have enough money to pay their taxes are obliged to sell their possessions. If this leads to more people wanting to buy than sell, the demand in the economy overshadows the supply. This imbalance results in too much money chasing too few goods, causing prices to rise. The rise in price levels continues as the government collects more taxes and does not issue new bonds. Essentially, the extra money that the government pumped into the economy on the first day to settle its debts gets absorbed back as taxes. The cycle of spending, taxing, and not issuing new bonds on the second day increases price levels until the extra money in circulation is balanced by the taxes collected.

So, in this simple two-day model, we see how the government's decisions on bond issuance and tax collection can directly impact inflation. It illustrates the delicate balance governments must maintain in their fiscal policies to prevent inflation from spiraling. The cycle of issuing bonds, tax collection, and government debt repayment, intricately woven over these two days, brings to light the complex relationship between fiscal policy, public economic behavior, and inflation.

The culmination of the two-day cycle manifests in a scenario where escalating price levels persist until the augmented monetary supply, initially infused by the government to settle nominal debts, is effectively neutralized by accumulating primary surpluses through evening tax collections. This intricate interplay of fiscal activities – encompassing bond issuance, tax levying, and debt redemption – unfolds throughout the delayed period, explaining the multifaceted interdependencies between fiscal policy, public economic conduct, and the phenomena of inflation. This dynamic underscore the pivotal role of fiscal policy in steering economic conditions, where the government's strategic decisions in financial management directly influence market liquidity and purchasing power. The increase in price levels, a direct consequence of these fiscal maneuvers, shows the delicate balance that governments must strike in their economic stewardship to regulate inflationary tendencies. Moreover, this theory provides a framework for understanding how government actions in the financial realm reverberate through the economy, affecting public behavior and market stability. It highlights the criticality of synchronizing fiscal policy with economic realities to keep equilibrium within the financial ecosystem.

During the first day, the government initiates the issuance of bonds to repay past obligations, prompting citizens to purchase these bonds using their accessible resources. This initial transaction lays the foundation for subsequent economic engagements as individuals continue daily business exchanges. By the end of the day, a reversal occurs: citizens remit taxes while the government introduces new bonds for the subsequent day. This continuous cycle facilitates the transfer of funds back to the public, ultimately offsetting the expenses of previously issued bonds. On the following day, this dynamic continues with similar operations, maintaining the cyclical nature of fiscal activities that aid in managing inflationary pressures.

Data and Results

In this empirical investigation was used secondary data procured from the Czech National Bank (CNB) and the Czech Statistical Office (CZSO), encompassing an array of economic indicators. These files formed a time series of data on key economic variables such as interest payments, deficits, primary deficits, and Gross Domestic Product (GDP). Additionally, to provide a more comprehensive analysis, we juxtaposed these findings with the time series data of the Consumer Price Indices (CPI), which were computed based on the prices from the previous year. The analysis involved evaluating the frequency percentages of each variable annually, covering the period from 1995 to 2022, thereby yielding eighteen observational data points.

Our study defines' inflation' as the annualized average percentage change in the CPI according to national accounting principles ESA (European Statistical Accounts). One of the primary focal points of our comparison involved examining the ratios of government debt to GDP and primary deficit to GDP, commonly referred to as the Maastricht criteria. Our findings indicated a pronounced correlation between the time series of the primary deficit/GDP ratio and the CPI percentages, particularly in the period spanning from 1999 to 2019. This observation is pivotal in understanding the dynamics of inflation about fiscal variables.

Cochrane (2023) provided a counter-perspective to the notion that the post-World War II economic growth in the United States was predominantly driven by high government debt. Our analysis reveals that after this period, the U.S. government debt experienced a gradual decline caused by inflation, the generation of primary surpluses, GDP growth, and relatively low-interest rates. This trend suggests that both surpluses and deficits significantly influence the value of government debt. Interestingly, surpluses in our study showed characteristics akin to s-shaped processes rather than showing positive correlations or following first-order autoregressive stochastic processes.

Considering historical records, it becomes clear that the surge in inflation within the United States during the 1970s was predominantly attributed to structural phenomena rather than primary deficits per se. This inflationary trend coincided with the dissolution of the Bretton Woods system, a consequential devaluation of the dollar, and the start of inflation. Subsequently, the economic expansion post-1982 fostered considerable primary surpluses, directly influencing the debt-to-GDP ratio and signaling the cessation of inflationary pressures. Cochrane (2023) posits that an efficacious strategy for inflation control requires an integrative approach encompassing monetary, fiscal, and microeconomic policies. Fiscal reforms should aim at tax augmentation and microeconomic modifications that bolster GDP growth, thereby enhancing governmental revenue streams. The United States' experience, as delineated by Cochrane, suggests that the termination of inflation was primarily a result of these microeconomic and fiscal alterations.

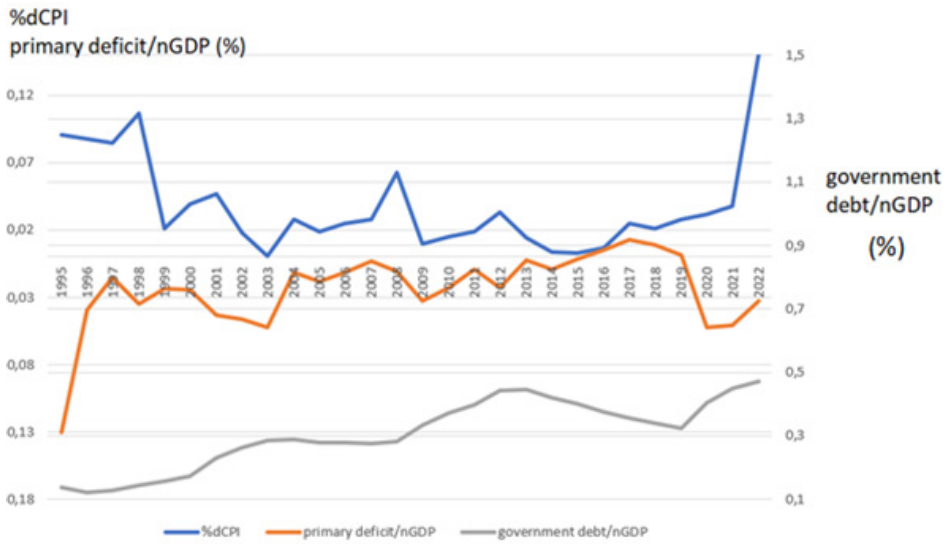
In the ensuing decades, particularly post-2000, and more acutely after 2008 and 2023, the fiscal landscape of the United States underwent significant transformation. The prior trend of primary surpluses shifted towards primary deficits, especially pronounced over the past two decades. Government budgets often register surpluses during economic recovery phases, albeit accompanied by rising inflation rates. This phenomenon shows a robust correlation between primary surpluses, unemployment rates, and inflation, challenging the fiscal theory to develop more sophisticated predictive models that transcend this clear correlation.

The readiness of bond investors to lend to the U.S. government at low-interest rates, grounded in their understanding of the manageability of the country's World War II-incurred debt, has been a longstanding feature of the financial markets. However, anticipating long-term risks and expanding the treasury bond market have precipitated chronic inflation issues. In this context, monetary policies alone appear insufficient to rectify these challenges. The pivotal first measure, as advocated, is the enhancement of investor confidence through comprehensive tax reforms and microeconomic restructuring, both of which are instrumental in stimulating economic growth and augmenting income tax

revenues. While not predominantly influential, monetary policy's role is supportive, yet it may sometimes introduce conflicting outcomes in the economic scenario.

To offer a thorough empirical examination of the Czech Republic, it is essential to emphasize the significant expansion of its public debt over time. Beginning nearly from zero in 1990, the debt escalated to 45% by 2022. While this level of debt is relatively low compared to other developed countries, it has been steadily growing. More precise government strategies must be used to reduce this debt-to-GDP ratio, which might give creditors some confidence. The Czech economy is notably open, comparable to some of the most open economies among developed nations. This openness could be advantageous, mainly if it follows the prudent economic behaviors of larger economies. Investor attitudes towards Czech bonds are influenced by the perceived sustainability of public debt in larger economies like the U.S. or Europe. The data from the Czech Republic shows a positive link between inflation and primary surpluses or deficits, but this depends on public belief in staying stable. The inflation rate and primary surpluses do not always move together when the economy transitions. The Czech economy can be divided into two pivotal periods: pre-1999 and post-2018. This distinction contrasts with the U.S. experience in the 1970s, which was characterized by a supply shock. Analyzing Czech data reveals that a rise in the primary surplus typically leads to an initial inflation increase, followed by a subsequent decrease. However, inflation tends to persist when the government debt to GNP ratio gets too high, especially during significant drops in GDP. This observation suggests that the mechanisms by which inflation permeates the economy could be more intricate than the amount of money in circulation. Employing the Taylor rule for inflation targeting improves the central bank's capacity to regulate crucial interest rates. Such an approach could serve as a fundamental aspect of controlling inflation through fiscal policy, underscoring the necessity for policies that account for both fiscal and monetary influences.

Figure 1: Inflation in comparison to the government debt (the Czech Republic)



Source: own calculations in the MS Excel

Table 1: Characteristics of the time series (The Czech Republic)

	Mean	Median	Standard deviation	ADF test (p-value)	DW stat.	J-B test (p-value)
%dCPI	0,037857	0,0265	0,035231	0,31	1,61	16,064 (0,001)
primary deficit /nGDP	-0,02409	-0,0206	0,027654	0,0001	1,35	49,452 (0,000)

Source: Own output in Eviews (p-values in parentheses)

We see that time series statistical features offer pertinent data. The CPI dynamics first adopt traits from the financial market. Though it is undeniably nonstationary, its differences stay stationary. The primary deficit to nominal GDP ratio appears constant compared to the CPI trends. According to how closely it relates to the political cycle, it is significantly more rigid and dependent on the real economy. This information could be more dependable because of the short duration of the observation period and the small number of observations. However, it is essential to note the statistical aspects. We do not intend to develop any simulations or prediction models for this study because it is primarily comparative. No data features regarding the nominal GDP ratio or government debt have been examined.

Case Study: Czech Republic

The data shows a significant correlation between government debt and inflation rates in the Czech Republic. An in-depth analysis of this relationship reveals how fiscal policies, particularly in the post-2020 period, have influenced inflationary trends. The case study includes graphical representations of data trends and a statistical analysis highlighting key findings.

To provide complete empirical evidence about inflation, we will discuss the statements of inflation of the Ministry of Finance in the Czech Republic and the same statements from the Czech National Bank (CNB, Czechia Central Bank). The significant inflation dynamic increase started in 2021.

In January 2021, M.F. ČR stated about inflation that the fourth quarter of 2020 saw a marked slowdown in the annual growth of consumer prices, with the inflation target set by the Czech National Bank falling back below the upper 3% tolerance band. At the same time, the environment marked by a decline in consumer demand appears to be gradually overcoming supply-side economics frictions, and there has been a noticeable slowdown in the growth of food prices. 2020 saw an average inflation rate of 3.2%. More significant

pro-inflationary factors should be absent in 2021 (apart from oil prices), and inflation should moderate to 1.9% because of declining unit labor costs and a continuing negative output gap.

The CNB spring Monetary Policy Report from 2021 indicates that at its meeting in May, the Banking Council decided to keep the two-week repo rate at 0.25%, consistent with the new macroeconomic forecast CNB's base case. He expects an increase in interest rates starting in the second half of this year, following the initial period of stability. Growing rates will guarantee that inflation stays stable at the target level as the adverse effects of the coronavirus epidemic diminish in the context of building collective immunity. The forecast carries the potential for the pandemic to subside at a slower pace alongside prolonged closures and a cyclical deceleration in both domestic and international economies. This scenario's potential anti-inflationary effect is juxtaposed with the risk of disruptions in global manufacturing and the supply chains of the world economy.

Autumn 2021 is from the point of view of M.F. C.R. about inflation, which is characterized by the growing rates of inflation turning into serious macroeconomic issues. September 2021 saw 4.9% annual inflation. As a result, inflationary pressures are substantially greater than expected in the macroeconomic forecast from August. Other prices gradually reflect the high cost of energy and other commodities. The primary cause of inflation seems to be supply-side issues, while demand is bolstered by continued rather lax fiscal and monetary policy. Furthermore, the economy will perform better than it could the following year. As a result of the combination of these variables, we have raised our estimate of the average inflation rate for 2021 to 3.5% and for 2022 to 6.1%.

The Autumn 2021 situation of inflation from the point of view of the Central Bank is as follows: the two-week repo rate was increased to 2.75% by the Banking Council during its meeting in November. The CNB's autumn macroeconomic forecast served as the foundation for this choice. It predicts that early in the next year, inflation will approach 7% and continue to rise sharply. The forecast calls for a steady increase in market interest rates at the close of this year and the start of the next. Along with the previously mentioned increase in interest rates, the economy's current exceptionally strong domestic and foreign inflationary pressures will eventually fade, and inflation will start to decline over the upcoming year. Inflation will drop to nearly the level of the horizon monetary policy at the turn of 2022 and 2023. Long-term global production chain overloading poses a risk to this outlook, as it may result in even higher inflation than expected, especially when combined with a declining exchange rate, a notable increase in energy prices, and imputed rent. If public finances are consolidated in 2023, there is a moderate risk that things will go in the other direction. We see the impossibility of CNB to manage inflation alone, and this is the first significant proclamation to the central government.

April 2022 macroeconomic report from the M.F. C.R. describes the situation of inflation in that significant inflation diminishes the population's standard of living and hinders economic growth. This year, the expected average rate of inflation is 12.3%. For the rest of the year, inflation is predicted to be in the double digits year over year, with a peak of over 13% in Q2. The unusually robust increase in consumer prices is expected to be driven mainly by natural gas, electricity, and oil costs. The prices of goods and services later reflect the rising costs incurred by businesses. Supply chain issues and private sector

labor costs will also contribute to inflation. Nevertheless, the increase in the monetary policy rate will lessen domestic demand pressures and help strengthen the koruna relative to the euro, which will have an anti-inflationary effect.

The two-week repo rate was increased to 5.75% by the Banking Council during its meeting in May 2022. This decision is a long-term response to the escalating inflationary pressures brought on by the start of the war in Ukraine, and it is based on the CNB's spring macroeconomic forecast. inflation will reach 15% in the upcoming months. It will concern the ongoing increases in household gas and electricity costs, the ongoing acceleration of the growth in food prices, and the ongoing high core inflation. The tightening of domestic credit markets and the extraordinary price pressures will slow down if inflation falls below 10% at the start of next year. As a result, inflation will keep declining quickly before moderating to almost reach the 2% target in the second half of 2023. According to a basic forecast scenario, market interest rates will continue to rise sharply until the second half of this year and gradually decline from this fall. The central bank will set interest rates to meet the 2% target over the standard monetary policy horizon regardless of the source of inflationary pressures. The Central Bank Council decided that substantial risks and uncertainties were associated with the spring forecast's base scenario in both directions. Before deciding, it evaluated the sources of the rising inflationary pressures, primarily powerful external price shocks. As a result, the banking board chose to slightly tighten monetary policy instead of the forecast's base case. It examined the simulation's tone, which had a longer monetary policy horizon than his, and the standard setting in the CNB forecasting device.

M.F. C.R. Winter Report 2022 states that elevated inflation diminishes the population's standard of living and hinders economic growth. The energy-saving package should result in a significant decrease in inflation year over year in the fourth quarter. Thus, this year's average rate of inflation should be 15.0%. The extraordinarily robust increase in consumer prices is mainly due to the contribution of various categories of goods and services, as well as food, fuel, electricity, natural gas, and imputed rent. Domestic demand pressures also contribute to inflation, but the prior rise in monetary policy rates should mitigate them. This factor should support the koruna's strengthening versus the euro over the forecast period, which will have an anti-inflationary effect in addition to the current foreign exchange interventions. By 2023, the typical average inflation could slow to 9.5%.

In comparison, the Czechia Central Bank Winter Report 2022 speaks about how the two-week repo rate was increased to 4.50% by the Banking Council during its meeting in February.

The CNB's winter macroeconomic forecast served as the basis for this decision, which was made in response to the persistently high pressure on inflation domestically and internationally. The rise in market interest rates at the start of this year aligns with the prognosis. Throughout the year's first half, inflation will increase to 10%. This will consider several factors, including the rise in core inflation and the cost of gas and electricity. The extreme strength of price pressures will be eliminated, and tighter domestic monetary policy will contribute to this. As a result, inflation will begin to decline in the third quarter of this year. Inflation is expected to drop sharply at this year's and next year's

turning points and approach the 2% target in the first half of 2023, the monetary policy horizon. These are the risks associated with this outlook. In general, the monetary section supports inflation. Weakening in this direction poses a particular risk to anchored inflation expectations, and the koruna exchange rate potentially strengthens more slowly due to a sharp tightening of foreign monetary policy. Conversely, consolidating public finances poses a moderate risk in the direction of anti-inflation.

Finally, in the 2023 spring report, M.F.C.R. announces persistent inflation. Moreover, inflation diminishes the population's standard of living and hinders economic growth. The extraordinarily robust increase in consumer prices is mainly due to the contribution of various categories of goods and services, not just food, electricity, natural gas, or imputed rent. Domestic demand pressures also contribute to inflation, but higher monetary policy rates should mitigate them. Additionally, the strengthening of the koruna has a deflationary effect. Inflation should drop sharply year over year in the first half of this year before rising to high single-digit levels in the second. The base effect of the energy-saving tariff will be applicable in the year-over-year comparison at the end of the year. The annual growth in consumer prices for 2024 may already be in the upper half of the tolerance band of the Czech National Bank's inflation target. As a result, the average inflation rate may rise to 10.9% this year and then decrease to 2.4% in 2024.

The CNB report from May 2023 is about how the Banking Council kept the two-week repo rate at 7%. The fundamental scenario of the CNB's spring macroeconomic forecast is the basis for this decision. Here, the central bank considers a monetary policy horizon of 12 to 18 months. Currently, these are the second and third quarters of 2024. First, the base scenario spring forecasts align with the market interest rates remaining stable at their current high level, guaranteeing that the inflation target will be met in the upcoming year. Considering that, interest rates are expected to be reduced in the latter part of this year. Domestic economic activity will be muted at the beginning of this year since the Czech economy's performance will be further hampered by a sharp decline in real household incomes and sluggish expansion in foreign demand. There will be an economic recovery in the upcoming year. Domestic inflation will drop further in spring and summer, reaching single-digit levels by mid-year. Price growth will drastically slowdown in 2024 and reach the CNB's 2% target on the monetary policy horizon. The board for banking assessed that the fundamental scenario of the spring macroeconomic forecast carried distinct and significant risks and uncertainties. The Banking Board deliberated over two additional prognostic scenarios and the basic scenario. These presuppose longer-term interest rate stability at the current level, and one of them alerts policymakers to the possibility of overshooting the inflation target on the monetary policy horizon when paired with higher inflationary expectations.

The Autumn Report 2023 from M.F. C.R. expects an inflation rate of 3-4 %. Hopefully, this will end the persistent abnormal price level increase in the Czech Republic for the last two years. This year, high inflation also lowered the population's living standard and slows economic growth. The extraordinarily robust increase in consumer prices is mainly because of the contribution of various categories of goods and services besides food, electricity, and natural gas. Raising monetary policy rates is already reducing the strength of domestic demand pressures. This year, inflation quickly fell year over year, but the base effect of the energy-saving tariff will cause inflation to rise in the fourth quarter. This year,

the average inflation rate might be as high as 10.8%. The annual growth in consumer prices could be between 3 and 4% in 2024. For the entire year, we expect a decrease of 3.3%.

The latest 2023 report from the CNB describes how the period of high inflation is still fading. However, because of the statistical impact of last year's inclusion of the savings allowance energy tariff to the consumer price index, it was suspended in October, and inflation will rise year over year. However, this effect will end in January, and inflation will decline annually to the upper bound of the target's tolerance band. The notable abatement of recent large price shocks and the discernible reduction in domestic inflationary pressures cause persistent dis-inflationary trend results. It can also be observed in core inflation decrease, which shows how the tight monetary policy dampens inflation. The likelihood of low inflation values in the upcoming year may make it seem unnecessarily tight to keep the current monetary policy setting. Therefore, a drop in interest rates is consistent with the monetary section's basic scenario, which calls for rates to decline in the fourth quarter of 2023. The Banking Board decided that there were significant risks to the outlook and forecast uncertainties and that these risks were moving toward inflation. They are especially vulnerable to increased inflationary expectations, which may materialize in wage negotiations and create a more substantial revaluation at the start of the following year. Thus, the Banking Council kept the two-week repo rate at 7% at the November 2023 meeting.

Case Study: France

In France, the inflationary trends are meticulously monitored and analyzed by the Banque de France and the Institut National de la Statistique et des Études Économiques (INSEE). From the Banque de France database, the "Inflation Expectation Report" spanning from the third quarter of 2023 to the current date was identified, derived from the broader document titled "Macroeconomic Projections." This section elaborates on the inflation--related insights encapsulated in these projections.

December 2020: Macroeconomic Projections revealed a cautious outlook on inflation within a deteriorating macroeconomic context. The projections anticipated a gradual reinforcement of inflation, which was expected to remain subdued across the projection horizon. Based on preliminary flash estimates, a significant reduction in the Harmonized Index of Consumer Prices (HICP) was observed, decreasing from 1.7% at the beginning of the year to 0.1% in October and 0.2% in November. This decline was primarily due to a substantial drop in energy prices in the first quarter of 2020, which only saw a partial recovery subsequently. Additionally, a consistent deceleration in service prices, especially in the transportation and accommodation sectors, and temporary price increases in certain services due to new health measures were noted. These factors, however, were transient and did not have a lasting influence on the general inflation trajectory.

March 2021: Projections highlighted an expected volatility in inflation, with a temporary uplift anticipated in 2021, followed by a period of containment in 2022 and 2023. January 2021 saw a surprising uptick in HICP inflation due to a trio of contributing factors: a notable recovery in oil prices beyond the projections of December 2020, a postponement

of winter sales affecting manufactured goods inflation, and an unexpected resilience in service prices in the short term due to specific sectoral increases. These developments led to an upward revision of the inflation forecast 2021, reflecting these unanticipated factors alongside a reevaluation of oil price forecasts and labor market conditions.

June 2021 and September 2021: Projections adjusted inflation expectations considering changing commodity prices and the momentum of economic recovery. The June update predicted a marked increase in inflation in 2021 driven by heightened commodity prices, with an expected stabilization of around 1.2% in the subsequent years. By September, the projections affirmed a significant resurgence in headline inflation, propelled by oil price rises and a revival in inflation excluding food and energy, with moderate increases projected for the following years.

December 2021: The projection envisaged headline inflation peaking near 3.5% towards the end of 2021, heavily influenced by the energy sector, before moderating to below 2% by 2022. This trend was forecasted to stabilize, with inflation expected to oscillate around 1.5-1.6% in 2023 and 2024, supported by a resurgence in service prices.

As the projections moved into 2022, adjustments were made to account for the impact of the Ukraine and other macroeconomic variables. The March 2022 Projection expected higher inflation rates for 2022 and possibly 2023, driven by the conflict's impact on energy prices and supply chain disruptions. This scenario underscored the significant uncertainties and potential for increased inflation rates, dependent on the economic impacts of the conflict and the paths to recovery.

This year-by-year analytical approach underscores the complexity and variability of inflationary trends in France, shaped by a confluence of global and domestic factors, including shifts in energy prices, the post-pandemic economic recovery, and geopolitical tensions. The Banque de France's projections offer a detailed and nuanced understanding of these dynamics, providing valuable insights into the expected evolution of inflation within the French economy over various time horizons.

The December 2022 macroeconomic projection delineated an expectation that inflation would reach its zenith in the first half of 2023, after which it embarked on a downward trajectory towards 2% by the end of 2024 and into 2025. The Harmonized Index of Consumer Prices (HICP) has been on an upward trend recently, culminating at 7.1% in November. This inflationary surge, unprecedented in recent history, was initially propelled by the post-Covid recovery dynamics of 2021 and further worsened in 2022 by the conflict in Ukraine, leading to a dramatic increase in energy prices. The cascading effect of these shocks had permeated other inflation components, which were escalating at rates significantly above long-term averages. Specifically, food prices have ascended beyond 10% since October, fueled by heightened production costs and supply deficits for certain commodities. Concurrently, manufactured goods inflation had surpassed 5% since November, driven by robust growth in production costs, which was only gradually being transmitted to consumer prices. Although industrial production prices began decelerating in the latter half of the year, there was an anticipation of a moderation in consumer prices for manufactured goods moving forward. Services inflation, while accelerated, had remained relatively subdued (below 4% in recent months), primarily driven by wage inflation, as evidenced by adjustments to the minimum wage (salaire

minimum interprofessionnel de croissance, SMIC) and sector-specific wage negotiations.

The March 2023 macroeconomic projection indicated that inflation, excluding energy and food, was expected to peak slightly later than headline inflation before gradually subsiding and converging towards 2% by the end of 2024 into 2025. This divergence in inflationary trends over the projection horizon was anticipated to be marked by distinct temporal and component-specific variations, facilitating the economy's gradual adjustment to past shocks—a cornerstone for sustainable growth. After reaching 7.1% in October and November 2022, inflation, as measured by the Harmonized Index of Consumer Prices (HICP), declined to 6.7% year-on-year in December amidst falling energy prices following a sharp drop in oil prices. However, headline inflation temporarily increased again to 7.0% and 7.3%, respectively, year-on-year in January and February 2023. Core inflation, excluding energy and food, was recorded at 4.2% in January and 4.6% in February. During these months, the energy component of the index was bolstered by a 15% hike in regulated gas and electricity prices in January and February, respectively. Food prices, and to a lesser extent, manufactured goods prices, continued to rise rapidly, reflecting the strong growth in producer prices observed in mid-2022. After remaining stable at 3.6% year-on-year from October 2022 to January 2023, services inflation slightly increased to 4.0% in February 2023.

Throughout 2023, headline inflation markedly declined, particularly in the year's second half, with the annual average rate settling at 5.4% and inflation excluding energy and food at 4.3%. Both headline inflation and inflation excluding energy and food were expected to align at 3.8% year-on-year in the fourth quarter of 2023. This significant reduction in inflation was primarily attributed to changes in the energy and food components. Firstly, despite being driven by the increased regulated gas and electricity prices in early 2023, energy inflation was expected to quickly subside within the year as international wholesale prices, which had begun to fall in the fourth quarter of 2022, continued their downward trajectory. Unlike before 2021, when wholesale energy prices were quickly passed through to consumer prices, the pass-through of current gas prices to consumer prices was being tempered by the price shield, making it weaker and slower. Secondly, food inflation was projected to remain more persistent in the first half of 2023. This persistence could be particularly reinforced by a rise of around 10% in the prices paid by large retailers to suppliers of major food brands, a development announced after the conclusion of negotiations between manufacturers and large retailers on 1 March. While these negotiations are a distinctive aspect of the French market, leading to comparatively lower food inflation in France than in neighboring euro area countries in 2022, a catch-up effect was anticipated in the subsequent months. Following the peak in the second quarter, food inflation was expected to recede, aided by the anticipated easing of agricultural input and international agricultural commodity prices. For the other components of inflation, excluding energy and food, the impact of past shocks was anticipated to persist, affecting non-energy goods prices for some time. Services inflation, in particular, was expected to remain more persistent throughout the year, propelled by wage increases resulting from the upward revisions to the SMIC and industry-level negotiated pay raises.

In 2024, the anticipated easing of energy and food commodity prices, as projected by futures markets, is expected to lead to a decline in all components of inflation, except for

services prices, which are likely to continue being supported by delayed wage and rent adjustments. HICP inflation, excluding energy and food, is projected to decrease to 3.0% annually, with headline inflation expected to drop sharply to 2.4%.

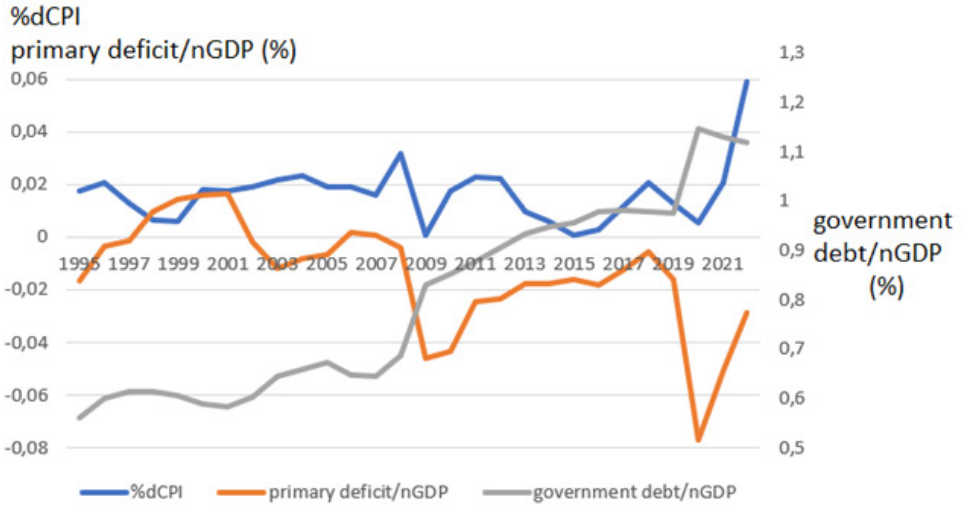
In 2025, the downward trend in headline inflation is anticipated to continue, broadening to an annual average of 2.1%, with underlying inflation also slowing to 2.2%. This decline is expected to bring headline and underlying inflation rates down to 1.9% in the fourth quarter of 2025. This broader trend is attributed to the progressive normalization of commodity prices, further reductions in core inflation, and the mitigating effects of monetary policy tightening. Services inflation, in particular, is expected to ease, reflecting smaller nominal wage increases than in previous years, albeit still enabling real wages to maintain robust growth, reminiscent of the patterns observed between the early 2000s and the financial crisis at the end of that decade.

Overall, the gradual reduction in inflation across the projection horizon, particularly in 2024 and 2025, is expected to be supported by monetary policy tightening aimed at preventing a detachment of economic agents' inflation expectations, thereby steering inflation rates by the European Central Bank.

According to INSEE, the Statistical Office in France, food was the main contributor to headline inflation between September 2022 and September 2023. However, since April 2023, the prices of food products have slowed substantially, and this trend is set to continue until June 2024. This is not only suggested by the business tendency surveys of traders (Figure 4) but is also the result of the decline in agricultural product prices after they peaked in May 2022. Food inflation is thus expected to reach +1.5% year-on-year in June 2024, compared to +5.7% in January. Similarly, the prices of manufactured products are likely to contribute a little more to inflation over the forecasting period. Inflation is bolstered by services prices, driven by dynamic wage levels: in June 2024, they are expected to rise by 3.0% year-on-year. Overall, the inflation rate should settle at about +2.5% year-on-year from spring, with core inflation likely slightly lower at around +2%. It is visible on the following chart from France.

Food was the main contributor to headline inflation between September 2022 and September 2023. However, since April 2023, the prices of food products have slowed substantially, and this trend is set to continue until June 2024. This is not only suggested by the business tendency surveys of traders (Figure 4) but is also the result of the decline in agricultural product prices after they peaked in May 2022. Food inflation is thus expected to reach +1.5% year-on-year in June 2024, compared to +5.7% in January. Similarly, the prices of manufactured products are likely to contribute a little more to inflation over the forecasting period. Inflation is bolstered by services prices, driven by dynamic wage levels: in June 2024, they are expected to rise by 3.0% year-on-year. Overall, the inflation rate should settle at about +2.5% year-on-year from spring, with core inflation likely slightly lower at around +2%.

Figure 2: Inflation in comparison to the government debt (France)



Source: Own calculations in the MS Excel

To present a focused empirical analysis of France, it could be more interesting that there is a significant increase in its public debt, starting from around 56% (GDP ratio) in 1995, which rose to 112 % by 2022. We see a very indebted economy. We also see an apparent dependency of inflation on the total government debt and primary deficit to GDP ratio. The central bank's interest rate management is weak. The government's tweaked discipline became more significant after the COVID pandemic, as is described in the so-called fiscal theory of inflation. But the total impact is much lower in France than in the Czech Republic as a small and very open Economy. Further statistical analysis would have explained the validity of all the factors. We see apparent empirical evidence of inflation in France in 2007 and 2021 (stylized facts).

Table 2: Characteristics of the time series (France)

	Mean	Median	Standard deviation	ADF test (p-value)	DW stat.	J-B test (p-value)
%dCPI	0,01656	0,0178	0,011328	0,20	1,38	44,797 (0,000)
primary deficit /nGDP	-0,01405	-0,0120	0,021182	0,21	1,67	7,019 (0,0300)

Source: Own output in Eviews (p-values in parentheses)

We also performed an analogous test on the French data sample. We offer the data features by analysis done using Eviews output. The primary finding concerns the non-stationarity of the French time series under analysis. Does it recall the same characteristics as the Czech Republic? Both the primary deficit/GDP ratio and the percentage exhibit high rates

of heteroscedasticity in France. Its differences begin to remain stationary even though it is nonstationary. Let us bring it up again. We do not intend to develop any simulations or prediction models for this study because it is primarily comparative. No data features are analyzed for the nominal GDP ratio or the government debt. This is the stock value. Its flows are every other year's deficits. More specifically, the ratios are different. Moreover, the dynamics of the primary deficit to GDP ratio is also still increasing after 2008.

Discussion

We have provided an in-depth analysis of the inflation dynamics in the Czech Republic and France, two developed E.U. nations. We can also discern ex-post expectations on inflation and the actual situation based on a thorough description of the comments made by the relevant institutions in both countries. We now know that, throughout the previous three years, French inflation was among the lowest compared to the Czech Republic. It is now evident that a new paradigm is required. The "fiscal theory of the price level" is a significant method established following the 2008 global financial crisis. It is important to note that numerous scientists, such as Cochrane (2001) and Cochrane (2023), It is immediately evident from the analysis of both countries that inflation increases in tandem with both a country's growing public deficits and a swift rise in the government debt to GDP ratio. Thus, achieving fiscal sustainability rather than controlling interest rates is the solution to combat inflation. After the pandemic, the Czech Republic's political representation reduced citizen income taxes and created instability in public spending. The budgetary sustainability is broken, which has led to extremely high inflation dynamics. Due to the War in Ukraine, the starting position is the same as in France: 6%. However, the Czech Republic's incorrect decisions and situational circumstances account for an additional 12% in 2022. These are primarily the inflation expectations resulting from fiscal factors and the inflation of energy, basic food, clothing, and services in the Czech Republic. Despite having a public debt that is far higher than that of the Czech Republic, France is a favorable benchmark for the future due to its strong public sector, energy policy decisions, and fiscal sustainability.

The French inflation period began in January 2022 (having crossed the 3% oscillation range level) and lasted for two years, ending in January 2024. The National Bank of the Czech Republic raised interest rates earlier than any other developed nation. Although it has been anticipated that inflation rates may be far higher, the inflationary phase must be shorter. The Czech Republic's inflationary era (over the 3% dynamics) runs from July 2021 to January 2024. There is a much larger amplitude and a more extended period.

The reasons for this can be found elsewhere other than in the traditional monetary policy approach. The structure of inflation in the Czech Republic at its peak in 09/2022 is as follows: basic food and drink expenditure: 3.7%; cooked food away from home and accommodation: 1.5%; alcoholic beverages and tobacco: 0.5%; housing, water, energy, fuel: 6.7%; reconstruction, housing equipment: 0.8%; transport: 1.8%; recreation and culture: 1.1%; health: 0.2%; services: 0.8%; Total: 17,1%.

By comparison, the inflation rate for food and tobacco is higher in France. All this can be seen from the graphs as consumer goods. These items increased inflation for the whole market. We also see two peaks in the inflation trend in the Czech Republic. This is explained by the fact that the new Governing Board in the Czech Republic's National Bank, in the middle of the inflation period, canceled using interest rates and used an exchange rate. There are also many consequences of whether to join the eurozone and its currency, the euro.

Implications for Practitioners

The findings of this study have significant policy implications for the Czech Republic, France, and potentially other European Union countries. This section will delve into recommendations for fiscal and monetary policies, considering the insights gained from the Fiscal Theory of Inflation. It will also discuss broader implications for the European Union's economic strategies. The study's findings are helpful to all practitioners who are dissatisfied with how inflation has changed, particularly in the countries of central Europe. We witness negative ideas that have been brought about by the political cycle in the central banks. These damaging ideas have also been made possible by the central bank board and politically indoctrinated (i.e., closed-minded) representatives. The decisions taken were not supported by actual evidence, current knowledge, or experiences, nor were they debated with experts in the public.

This research is helpful for any economist who opposes inflation measurement, targeting, or, most importantly, the belief that money grows on trees, allowing the government to fund public expenditures that many view as crucial.

Conclusions and Future Research

This study aimed to shed light on these complex dynamics, offering insights into the effectiveness of fiscal strategies in an environment where conventional monetary policies appear increasingly inadequate. Emphasizing the topic's realness and the method's empirical nature is crucial. The conclusion is not to reject the monetary approach altogether but rather to add obvious and significant necessary criteria to manage as such. We have demonstrated that under actual conditions in many countries, the monetary management of central banks failed to achieve stable inflation. According to the fiscal theory of prices (inflation), this is highly helpful. We have demonstrated that the possibility of sovereign debt leads to higher-than-anticipated inflation in the Czech Republic.

Compared to France, a nation with a far more advanced economy. There was considerably better control over the inflation. Budgetary theory discusses how budgetary sustainability will be the primary determinant of future inflation. Based on empirical research, it has been shown that the larger economy in the European Union's core (France) has outperformed a smaller, highly open country that had a brief period of fiscal unsustainability due to pandemics (the Czech Republic). France and the Czech Republic have relatively similar

inflation structures. However, the inflation rate in the Czech Republic is three times higher. Complete econometric analysis using multi-regressions, panel co-integration method, two-stage regressions, and the general method of moments will be the focus of future studies on this topic.

In conclusion, this study underscores the importance of considering fiscal factors in understanding and managing inflation, particularly in complex economic scenarios like those presented by the post-2020 world. The findings suggest that while fiscal policies play a crucial role, they operate within a broader economic context, including monetary policies and external factors. The paper concludes with suggestions for future research, particularly exploring the interplay between fiscal and monetary policies in inflation management.

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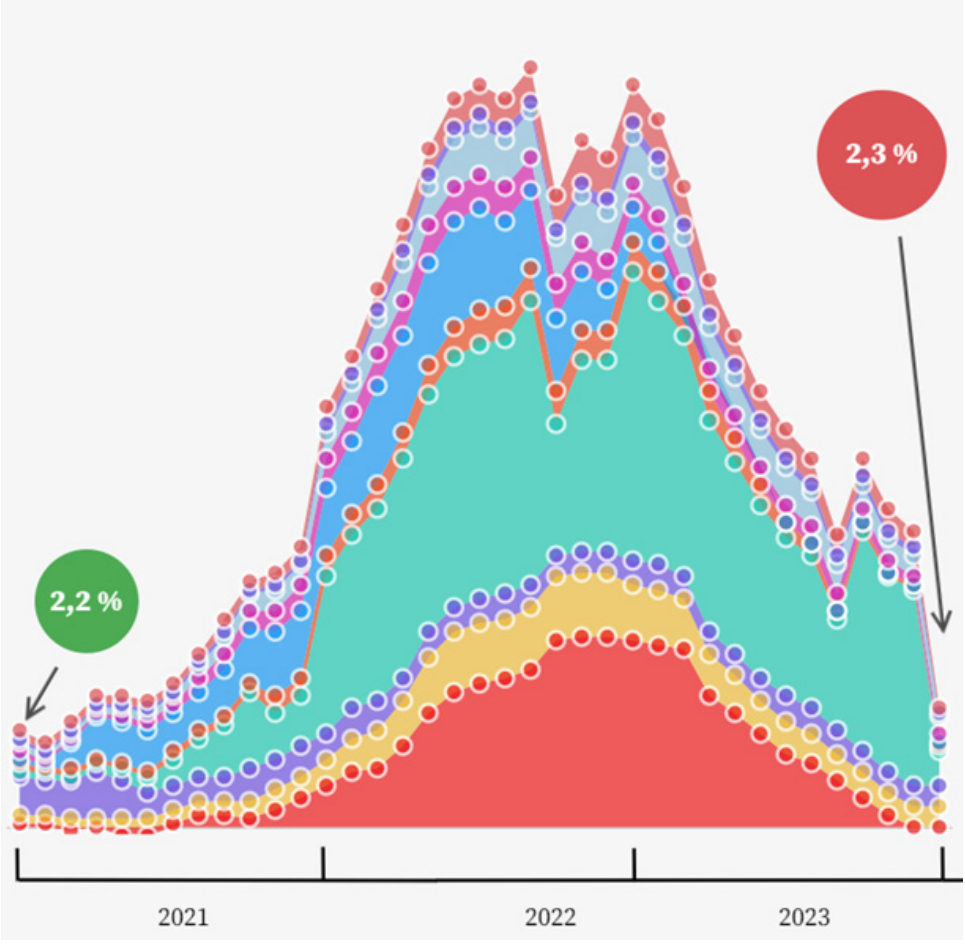
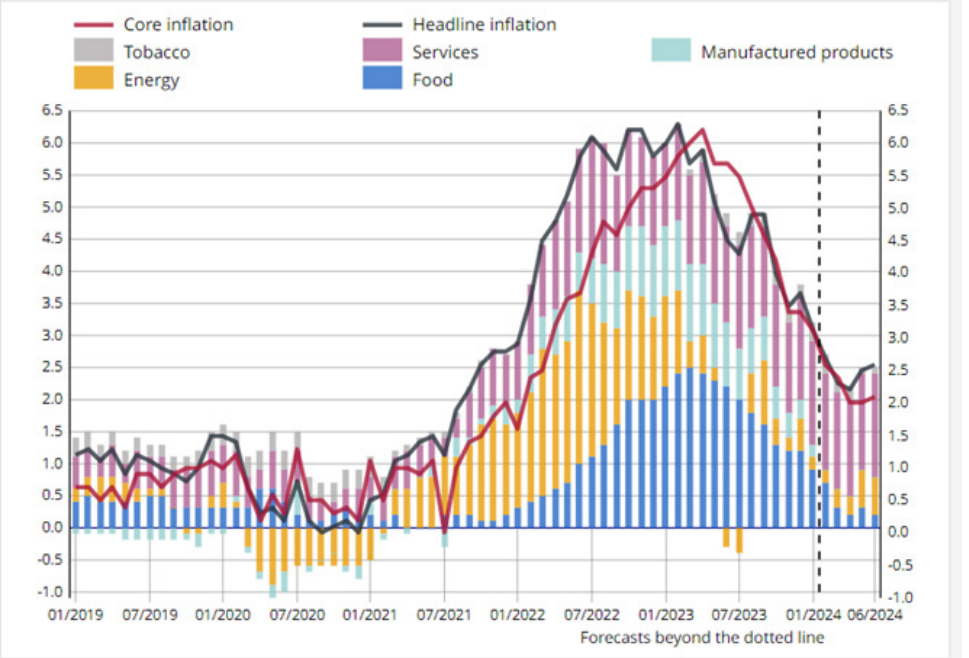
Supplement

Supplement 1: Structure of postpandemic inflation in the Czech Republic



Source: Czech Statistical Office Database

Supplement 2: Structure of postpandemic inflation in the France



Note: for January 2024, headline inflation is a provisional estimate, core inflation is a forecast.

How to read it: in January 2024, the consumer price index increased by 3.1% year-on-year, according to the provisional estimate. Services contributed 1.6 percentage points to this increase.

Source: INSEE.

Source: INSEE Database (France)

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