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Introduction to the special issue on macroeconomic regime changes: Theory, evidence, and policy challenges ahead

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ABSTRACT

This Introduction provides an overview of the EER Special Issue on macroeconomic regime changes: Theory, evidence, and policy challenges ahead. The contributions are organized around four key thematic areas: (1) the dynamics and properties of inflation, (2) sectoral vulnerability to supply-chain disruptions and energy price shocks, (3) structural divergence and the economic impacts of climate change, and (4) the design and effectiveness of economic policies in times of crisis.

The Great Moderation (GM), a prolonged period of macroeconomic stability experienced by industrialized economies, appears to have come to an end. This era, spanning four decades, was characterized by robust economic growth, moderate inflation, and relative macroeconomic and financial stability. Favorable supply-side developments, stemming from the globalization of product and labor markets, demographic trends, reduced labor cost pressures, improved monetary policy, and "luck" in the form of low shock volatility, were its main drivers. Despite the sudden, yet temporary disruptions during the Great Financial Crisis and associated Great Recession, the macroeconomic environment has remained comparatively benign until recent years. The COVID-19 pandemic and the geopolitical crisis triggered by Russia's invasion of Ukraine have marked a multifaceted deterioration in supply-side conditions, characterized by supply-chain disruptions, deglobalization-driven tensions in the goods and labor markets, and price hikes for both energy and non-energy commodities. Hence, the most favorable supply-side developments during GM, which were responsible for sustained growth and moderate inflation, are at risk of reversal due to demographic factors and deglobalization forces, which reduce international trade and technological, capital, and migratory flows. The ongoing decoupling from fossil fuels in industrialized countries, as outlined in green transition strategies, will likely further contribute to these sources of inflationary pressures, due to tight market conditions in renewable and non-renewable energy markets (greenflation and fossilflation; Schnabel, 2022a). Extreme weather episodes might further contribute by creating shortages in agricultural production (climateflation). Worsening geopolitical conditions in Europe, the Middle East, and Asia might further deteriorate supply-side conditions, negatively affecting supply chains, commodity markets, and cybersecurity.

Hence, a new macroeconomic regime might have emerged, characterized by a pro-inflation, weak growth environment — i.e., a

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stagflationary environment. Goodhart and Pradhan (2020) have anticipated this shift to a new post-globalization macroeconomic regime through their concept of the "Great Reversal" of globalization forces and labor market conditions. Other scholars, including Spence (2022), Schnabel (2022b), and Roubini, 2022a, Roubini, 2022b, have similarly highlighted the risks of a new inflationary or stagflationary bias emerging from the compound effect of various factors, including deglobalization, geopolitical, redistributional, and climatological forces.

This special issue compiles academic contributions to the first two editions of the RCEA-Europe International Conference on the Climate-Macro-Finance Interface, held in 2023 and 2025, at the London School of Economics and the Bayes Business School in London. The conferences aimed to debate the macroeconomic regime shift and stimulate interactions between policymakers and academics regarding the policies required in the new regime. Although not explicitly foreseen, most contributions have debated macro-financial conditions in Europe. The contributions to this special issue fall into four main thematic areas.

1. Inflation expectations, nonlinearities, and price dynamics

Inflation expectations, nonlinear price-setting behavior, and global supply shocks interact to shape modern inflation dynamics. Expectations serve as both an early-warning indicator and a propagation mechanism; once unanchored, they can sustain inflation even in recessions. Price flexibility adds another layer of complexity, amplifying volatility and making inflation less predictable, while global shocks—mainly to supply chains and energy—transmit with delays but can trigger persistent inflationary pressures. The combination of these forces creates a regime where inflation becomes both more volatile and more entrenched, thereby raising the risk of stagflation and complicating the calibration of monetary policy. In this respect, **Michele Lenza, Inès Moutachaker, and Joan Parede**, in *"Density Forecasts of Inflation: A Quantile Regression Forest Approach"*, use a Quantile Regression Forest (QRF) approach to investigate the forecastability of Eurozone core and headline inflation and provide a real-time assessment during the 2023–2024 disinflation. They show that QRF performs better for core inflation, where non-linearities are more significant. Forecast accuracy deteriorates in high-volatility environments (e.g., post-2022). Inflation reacts differently under different macro regimes (e.g., low vs. high inflation). Inflation expectations and interest rates are the most influential predictors. In this respect, inflation expectations actively propagate inflation by influencing wages and prices. If expectations remain unanchored, inflation can become entrenched even in low-growth environments, sustaining inflation without strong demand growth. When inflation expectations cross a nonlinear tipping point, core inflation can accelerate disproportionately, making it harder to anchor expectations in volatile conditions. The limited moderating effect of domestic slack suggests that a recession may not provide immediate inflation relief, thereby increasing the risk of sustained inflation even during periods of economic stagnation. Headline inflation remains primarily driven by external cost-push shocks, such as energy prices. On the other hand, actively monitoring inflation expectations is most relevant for gauging early warning signals of core inflation. **Ivan Petrella, Emiliano Santoro, and Yannik Winkelmann**, in *"Inflation and Price Flexibility"*, investigate how aggregate price flexibility—the responsiveness of prices to macroeconomic shocks—varies over time and shapes inflation dynamics in the UK. Using detailed consumer price microdata and a regime-switching autoregressive moving average model, they demonstrate that price flexibility is not constant over time but increases sharply during periods of large shocks (e.g., 2008–2011, post-2020), resulting in higher and more volatile inflation. Inflation is more volatile and less persistent when price flexibility is high, and more persistent but less volatile when flexibility is low. State-dependent price setting means that the impact of shocks on inflation is nonlinear: during periods of high flexibility, inflation responds more strongly. It reverts more quickly, but with greater volatility. A scenario in which adverse supply shocks (e.g., energy, deglobalization, climate change) become more frequent would also exhibit persistent high inflation and weak growth—the hallmarks of stagflation—because price flexibility amplifies the inflationary impact of such shocks. Central banks may face a more difficult trade-off between stabilizing output and inflation, as high price flexibility increases inflation volatility and reduces its persistence, complicating the calibration of monetary policy. The findings suggest that the transition from the "Great Moderation" to a period of heightened inflation volatility—driven by supply-side shocks and state-dependent price setting—raises the risk of a stagflationary macro regime. Policymakers should be cautious about assuming rapid mean reversion of inflation after shocks, especially when price flexibility is high and supply-side disruptions are persistent. **Knut Are Aastveit, Hilde Bjørnland, Jamie Cross, and Helene Olsen Kalstad**, in *"Unveiling Inflation: Oil Shocks, Supply Chain Pressures, and Expectations"*, analyze the drivers of the post-pandemic inflation surge across six advanced, inflation-targeting economies, including the Eurozone. The paper employs a structural Bayesian Vector Autoregression (BVAR) model to identify and quantify the impact of various shocks on inflation, both global and domestic. Global demand and supply shocks were key drivers of the post-pandemic surge in inflation. While demand shocks were historically primary drivers, supply shocks became increasingly important during the 2020-2021 inflation spike. Domestic inflation expectations have significantly amplified the transmission of global shocks to actual inflation, particularly in countries where the pass-through of global energy shocks to inflation, through the wage-setting mechanism, is quicker. Domestic factors, including labor market dynamics, played a more limited role in driving inflation during and after the pandemic compared to global shocks. Global supply chain shocks impact inflation and inflation expectations with a delay, peaking about two years after the initial shock. In a scenario where supply shocks constrain output, if inflation expectations become unanchored and lead to persistent wage-price spirals, aggressive demand-side tightening to curb inflation might exacerbate economic slowdown, potentially pushing economies toward stagflation.

2. Supply chain, energy, and sectoral vulnerability

Energy price shocks and supply chain disruptions are central drivers of stagflationary pressures in the euro area. Supply chain disruptions sustain inflation through delayed and persistent effects on expectations and consumer prices, while energy shocks

primarily erode output and competitiveness, with disproportionate sectoral impacts. Policy responses can mitigate the macroeconomic fallout: production subsidies and targeted fiscal interventions help stabilize inflation and output, but they come at the cost of higher carbon emissions and a slower green transition. Thus, policymakers face a double trade-off—between inflation stabilization and growth on the one hand, and between short-term crisis management and long-term sustainability on the other. Specifically, **Roberto De Santis and Tommaso Tornese**, in *"Macroeconomic Regime Change and the Size of Supply Chain Disruption and Energy Supply Shocks"*, examine the impact of recent supply chain and energy shocks on euro area inflation, real GDP, and sectoral activity, focusing on the post-COVID-19 pandemic period, using both linear and nonlinear SVAR models. They demonstrate that supply chain shocks lead to persistent increases in inflation expectations and headline consumer prices, peaking 18–24 months after the shock, and result in short-term GDP declines that subsequently rebound. Energy supply shocks have a transitory effect on inflation but a pronounced, medium-term negative impact on GDP. The effects of these shocks are state-dependent: in periods of weak growth, real economic activity is more adversely affected; in periods of strong growth, price pressures are more pronounced. The persistent inflationary impact of supply chain disruptions, combined with the medium-term drag on GDP from energy shocks, creates conditions akin to stag-flation—simultaneous high inflation and weak economic growth. Energy-intensive sectors and automotive manufacturing are particularly vulnerable, suffering from both higher input costs and output declines. The energy price shock has eroded competitiveness and increased production costs, particularly in the chemicals and basic metals sectors. The study advocates state-contingent policy responses, as supply-side shocks necessitate structural and sector-specific solutions, rather than relying solely on aggregate demand management or policy tightening. Without such measures, the euro area could face a prolonged period of stagflation. **Romanos Priftis and Rafael Schoenle**, in *"Fiscal and Macroprudential Policies During an Energy Crisis"*, develop a New-Keynesian DSGE model with an energy sector and financial intermediaries to analyze how energy price shocks and policy responses affect the euro area macroeconomy and carbon emissions. They show that energy price shocks (such as those following the 2022 oil and gas price surge) lead to a sharp increase in inflation and a contraction in output, with additional amplification through the financial sector. Energy production subsidies (supporting firms) reduce both headline and core inflation and increase aggregate output. Energy consumption subsidies (supporting households) lower only headline inflation but reduce aggregate production and can increase core inflation. Carbon subsidies (making dirty energy cheaper) have intermediate effects: they modestly lower inflation and increase output, but to a lesser extent than production subsidies. All energy subsidies tend to raise carbon emissions and slow the green transition, though to varying degrees. Taxing dirty energy assets in bank portfolios can shift investment toward green sectors, supporting green investment and mitigating the increase in emissions caused by subsidies. Energy price shocks, especially when persistent and exacerbated by financial frictions, can lead to stagflation. Fiscal interventions can mitigate these effects, but at the expense of slowing the green transition, highlighting a trade-off between short-term stabilization and long-term sustainability.

3. Structural divergence and climate shocks

The Eurozone is subject to the dual pressures of structural divergence and climate vulnerability**.** From the macro-financial perspective, cost-push shocks, productivity slowdowns, and fiscal constraints exacerbate divergence among member states. Climate shocks may further deepen these divides at the regional level, disproportionately affecting low-income, climate-exposed, or sectorally vulnerable areas. The combined picture is one of reinforcing divergence: structural productivity gaps, rising costs, and climate-induced damages jointly threaten cohesion, stability, and growth. Without coordinated reforms and climate-resilient strategies, the Eurozone risks entering a period marked by sluggish output and economic fragmentation—conditions fertile for stagflationary pressures and institutional strain. In this respect, **Fabio Bagliano and Claudio Morana**, in *"Eurozone Economic Integration: Historical Developments and New Challenges Ahead"*, provide a structural analysis of economic integration and divergence in the Eurozone from its inception to the post-pandemic era, focusing on the drivers of convergence and divergence across real, nominal, and financial indicators. Using a novel Factor-Augmented VAR approach, they disentangle the impact of both long-term (trend) and short-term (cyclical) shocks to Eurozone macrofinancial conditions. Among structural sources, productivity advancements have been the primary force behind long-term convergence in production growth, as well as in labor and financial markets. Cost-push shocks (such as rising production costs) supported nominal and competitiveness convergence until 2015, consistent with their benign role during the GM, but have since become a significant source of divergence, especially post-pandemic. Fiscal discipline under the Stability and Growth Pact (SGP) increased divergence during recessions, while the ECB's expansionary monetary policy acted as a convergence force during economic recessions. The suspension of the SGP during the pandemic recession and recovery partially counteracted divergence pressures. The pandemic and the geopolitical crisis have marked a sharp increase in divergence, particularly in inflation and financial conditions. Looking ahead, macro-financial convergence in the Eurozone will be the outcome of countervailing forces and will crucially depend on productivity dynamics and cost-push developments. Within a "Great Reversal" scenario, unfavorable supply-side conditions could lead to higher dispersion across member states, resulting in increased inflation, slower output growth, and greater financial divergence due to adverse productivity growth dynamics and rising production costs. Fiscal policy constraints and restrictive, anti-inflationary monetary policy could also act as additional divergence factors. In this respect, further advancement in structural reforms to counter price and wage rigidities and improve the market-based adjustment mechanism appears mandatory. **Sehrish Usman, Guzmán González-Torres Fernández, and Miles Parker**, in *"Going NUTS: The regional impact of extreme climate events over the medium term"*, investigate the macroeconomic effects of heatwaves, droughts, and floods in 1160 EU regions using a local projections, difference-in-difference framework. They find that these extreme climate events significantly reduce output at all horizons. Output is projected to be 1.5 percentage points lower two years after a summer heatwave, three percentage points lower four years after a drought, and 2.8 percentage points lower four years after a flood. Both lower regional population (through emigration) and lower labor productivity per hour worked contribute to this medium-term decline in current and potential output. The economic effects of extreme

weather vary significantly based on the type of event and regional characteristics, such as climatic conditions (i.e., hot vs. cold regions) and income levels. For instance, hot, low-income regions experience persistent productivity losses due to heatwaves. High-income regions suffer greater capital loss from floods. The effects are also heterogeneous at the sectoral level. For instance, services are most affected by floods in the short term, while agriculture and manufacturing are more significantly impacted in the medium term. Construction might benefit from reconstruction efforts, counteracting capital destruction. Extreme weather shocks can lead to output stagnation by negatively affecting both aggregate supply and demand. Moreover, rising inter-regional inequality may trigger migration, policy fragmentation, and social unrest.

4. Policy tools and crisis management

The post-financial crisis experience has clearly demonstrated the importance of expanding the policy toolkit during times of crisis, particularly when the zero lower bound constrains conventional monetary policy. Quasi-fiscal interventions can deliver rapid stabilization by directly supporting liquidity, employment, and consumption. They may, however, be exposed to distributional trade-offs: benefits accrue disproportionately to wealthier and financially integrated regions, thereby amplifying inequality in the short run. This dual outcome raises a central policy challenge—how to design crisis interventions that balance speed and effectiveness with inclusiveness and equity. In this respect, **Luisa Corrado, Daniela Fantozzi, and Simona Giglioli**, in *"Quasi-Fiscal Policies in Times of Crisis: A High-Frequency Data Analysis"*, investigate the macroeconomic and distributional impact of the monetary policy interventions implemented by the Federal Reserve during the COVID-19 crisis. They distinguish between purely monetary (PM) measures, such as interest rate cuts and asset purchases, and quasi-fiscal (QF) tools, which include credit facilities and liquidity programs. They show that QF interventions were more effective in supporting consumption and employment than conventional monetary tools, with responses materializing within two to three weeks of the announcements. This suggests QF tools can act as more rapid stabilizers during crises due to their direct support for liquidity and employment. Yet consumption inequality across counties increased in the short term, with wealthier counties experiencing larger gains. Asset-price-related wealth effects and greater credit availability through lending facilities in regions with higher capital income and better access to loans account for these findings. Through the use of high-frequency data, the study establishes findings not observable at a coarse time scale. It provides support to QF interventions in crisis times, where central banks may face constraints on conventional tools, such as at the ZLB.

In conclusion, recent years might have witnessed a profound structural shift due to the compounding of supply-side shocks, geopolitical instability, and climate change. This might have led to a new macroeconomic regime marked by stagflation risks and policy challenges that differ significantly from the stability of the Great Moderation era. The contributions to the special issue highlight the various channels through which this shift might have occurred and might persist in the future, stimulating a much-needed debate on the economic policies required to navigate the uncharted waters ahead.

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References

Goodhart, C., Pradhan, M., 2020. The Great Demographic Reversal: ageing societies, waning inequality, and an inflation revival. Palgrave Macmillan, London, UK.
Roubini, N., 2022a. From great moderation to great stagflation. Project Syndicate. August 9, 2022.
Roubini, N., 2022b The stagflationary debt crisis is here. Project Syndicate. October 3, 2022.
Schnabel, I., 2022a. A new age of energy inflation: climateflation, fossilflation, and greenflation. Speech at the ECB, Frankfurt am Main. March 17, 2022.
Schnabel, I., 2022b. Monetary policy and the great volatility. In: Speech at the Jackson Hole Economic Policy Symposium, Jackson Hole, Wyoming. August 27, 2022.
Spence, Michael, 2022. Secular inflation. Project Syndicate, October 12, 2022.