BOOK OF ABSTRACTS

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Keynote Speakers:

Agnes Benassy -Quéré (Bank of France)

Francis X. Diebold (Pennsylvania)

Iftekhar Hasan (Fordham)

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Parallel Session 1A: Journal of Forecasting I

Media Tone – the Role of News and Social Media on Heterogeneous Inflation Expectations

Joni Heikkinen (University of Jyväskylä, Finland and Bank of Finland) and Kari Heimonen (University of Jyväskylä, Finland)

Inflation has rapidly and unexpectedly changed from zero-level to figures not seen for 40 years, irrespective of the central bank low inflation targeting policy. This challenges our understanding of construction of inflation expectations as well. This study offers novel insights into inflation expectation formation, focusing on the influence of Media tone in inflation news across diverse groups. While reactions to inflation news are generally similar, our evidence from US consumer survey expectations suggests that younger generations' expectations are more influenced by social media. Cognitive abilities, linked to education, result in heterogeneous reactions to inflation news shocks too. In contrast to the proposition of Carroll (2003), we argue that professional inflation forecasts do not fully mimic the news information provided for public inflation; hence, Media tone information constitutes an informational source of its own. Our estimates of Local projections models indicate sustained impacts of inflation news on expectations for up to five quarters. Further analysis of the influence of various news topics lends support to the idea that agents' inflation expectations are related to the importance of those news topics for their welfare. The topics were not unanimous across the age cohorts or groups of education, but the importance FED and Inflation related topics lend support for the success of FED inflation targeting policy.

Evaluating Inflation Forecasts in the Euro Area and the Role of the ECB

Francesco Roccazzella (IESEG School of Management, France) and Bertrand Candelon (Université catholique de Louvain, France)

We use a forecast encompassing test that utilizes ex-post optimal combinations of forecasts and nonnegative combining weights to evaluate time-series and institutional inflation projections in the euro area. Combination weights reveal that the ECB was the most informative forecaster before the recent inflation surge. However, its weight declined over time, approaching zero in 2022. Macro-financial conditions (uncertainty, the difference between the current and 2% inflation target, and the loosening of the monetary policy) explain this dynamics.

Economic Forecasts' Dispersion and Policy Credibility Among Experts

Emilia Belen Chocobar (ICADE; Universidad Pontificia de Comillas, Spain), Peter Claeys (ICADE; Universidad Pontificia de Comillas, Spain) and Marcos Poplawski-Ribeiro (International Monetary Fund, USA)

This paper investigates the dispersion and use of information among experts' forecasts. Using monthly survey forecasts for France, Italy and the UK between January 1993 and October 2022, we test how experts process information — and whether it is noisy or sticky — i.e. whether is moved by economic fundamentals or just adapts slowly to incoming information. We then look at how information affects experts' disagreement, and how each can update its forecast. Our main result is that information can be both noisy and sticky at times, but taking into account economic fundamentals, the credibility of the policy framework, and co-movement across experts reduces the dispersion of the expected economic outlook among experts.

Bank Capital Requirements, Lending Supply and Economic Activity: A Scenario Analysis Perspective

Antonio Conti (Banca d'Italia), Andrea Nobili (Banca d'Italia) and Federico Signoretti (Banca d'Italia)

We evaluate the relation between bank capital, lending supply and economic activity using Italian data over 1993-2015, a period which covers three key post-crisis regulatory and supervisory measures (the Basel III reform; the 2011 EBA Stress test; the ECB's Comprehensive Assessment and launch of the Single Supervisory Mechanism – SSM). We quantify the effects of increased bank capital requirements adopting a novel procedure which recovers the size of the policy actions relying on scenario analysis and Bayesian VARs with a rich characterization of the banking sector. We document that the EBA and SSM measures unpredictably raised Tier 1 ratio by about 2.5 percentage points, leading to an average reduction in credit to firms and households by 5 and 4%, respectively, and to a decline in real GDP by over 2 and 4%. The Basel III bank capital increase is instead correctly anticipated in out-of-sample forecasting. These findings are robust to time-varying model parameters and consistent with narrative sign restrictions techniques.

Parallel Session 1B: Banking and Finance I

Corporate Acquisitions and Bank Relationships

Steven Poelhekke (Vrije Universiteit Amsterdam, The Netherlands), Razvan Vlahu (Dutch Central Bank, The Netherlands) and Vadym Volosovych (Erasmus University, The Netherlands)

We study the dynamics of firm-bank relationships following corporate acquisitions using a novel firm-bank dataset for 23 European countries over 2008-2014. Our data allows us to track changes in both firm ownership and bank relationships over time. We find that acquisitions are associated with substantial changes in foreign and domestic bank relationships of target firms. Domestic acquirers actively change the composition of bank relationships, while foreign acquirers tend to retain the target's existing banks. Domestic acquirers replace domestic banks with a broad client base in favor of banks specializing in the target-firm industry. Our findings are consistent with theories emphasizing the accumulation of soft information about the real economy through bank relationships.

Bank Funding, SME Lending and Risk Taking

Sander Lammers (CPB Netherlands Bureau for Economic Policy Analysis, The Netherlands), Massimo Giuliodori (University of Amsterdam, The Netherlands), Robert Schmitz (CPB Netherlands, The Netherlands) and Adam Elbourne (CPB Netherlands, The Netherlands)

We show that a bank's funding composition matters for the riskiness of its SME lending. Analyzing loan growth for SMEs in Europe, we find that SSM-supervised banks relying more on non-equity funding exhibit lending to SMEs of lower creditworthiness. We exploit granularity in a bank's funding composition and show that there are considerable differences in how funding elements relate to both volume and the riskiness of lending. Our most prominent result is that banks using more market funding, lend to riskier firms. Our findings are economically significant. Interestingly, a bank's level of capitalization is not associated with the riskiness of SME lending, suggesting that, while equity has a loss absorbing capacity, it does not alter the riskiness of SME lending. We show that our results are largely robust to sample changes, changes in the timing of variables, and employing a novel measure of firms' creditworthiness. We contribute by analyzing firm-bank pairs, allowing us to study risk taking more accurately and analyze the transmission of a bank's funding composition to firms by observing actual lending.

Bank Diversification and the Shift in Off-balance Sheet Activities

Jari-Mikko Meriläinen (Jyväskylä University School of Business and Economics, Finland) and Gazi Salah Uddin (Linköping University, Sweden)

This study focuses on diversification of activities in Western European banks. Firstly, we examine diversification between on- and off-balance sheet (OBS) items. Additionally, we investigate income diversification and earning asset diversification. To achieve these objectives, we employ three Herfindahl-type diversification indices to examine bank profitability and risk. Our results suggest that diversification towards OBS activities provides banks with more diversification benefits than the other two types of diversification. However, we document a shift away from OBS activities in banks that had previously been actively engaged in them. Moreover, we show that other banks have increased OBS activity during the sample period, fueling their profitability and reducing risk. Hence, these banks have identified lucrative opportunities in OBS business. Furthermore, our results indicate that banks tend to diversify more when faced with negative interest rates.

Fed QE and Bank Lending Behaviour: A Heterogeneity Analysis of Asset Purchases

Supriya Kapoor (Trinity College Dublin, Ireland) and Marianna Blix Grimaldi (Sveriges Riksbank, Sweden)

Though unconventional monetary policy is still new, already there is a conventional wisdom that the impact of monetary policy is related to the composition of the asset mix. This turns out to be incomplete and potentially misleading. In this paper, we find more complex effects on bank lending from Quantitative Easing (QE) introduced by the Federal Reserve Bank in 2008. The novelty of our approach is to augment the model with bank-level heterogeneity. While there is a relation between lending and the type of assets purchased by the central bank, the impact on similarly QE-exposed banks is also crucially dependent on banks' solvency and liquidity exposures. Our results highlight that it is necessary to take heterogeneity of exposure into account when assessing the effects of QE.

Parallel Session 1C: Climate Risk I

Natural Disasters and Unconventional Monetary Policy

Alessandro Cantelmo (Banca d'Italia), Alessandro Lin (Banca d'Italia) and Francesco Zanetti (University of Oxford, UK)

We evaluate central banks' instruments when natural disasters are coupled with large movements in the risk premium, by accounting for effects of both disaster risk and actual strikes. In our DSGE model the central bank can use asset purchases (UMP) or the short-term rate to stabilize financing conditions. We find that including UMP as a tool to tackle consequences of natural disasters significantly affects the distributions of inflation and output gap both before and after their realizations, despite being activated only in response to disaster strikes. UMP is more effective at sustaining output, while also keeping inflation toward higher values. Moreover, UMP would counter the negative inflation outcomes ensuing the increased risk of natural disasters, thus increasing the likelihood of achieving the inflation target. We therefore emphasize the use of UMP as an important tool to mitigate the short- and long-run effects of natural disasters for the conduct of monetary policy, especially if they become more frequent and/or more severe.

Carbon Taxation to Finance Population Aging

Matthias Schön (Deutsche Bundesbank, Germany), Nikolai Stähler (Deutsche Bundesbank, Germany) and Kilian Ruppert (Deutsche Bundesbank, Germany)

This paper assesses an environmental tax reform within a dynamic general equilibrium two-region model enriched with a detailed overlapping generation household structure. The main policy experiment uses the revenues from emission taxation to partially finance the challenges pay-as-you-go (PAYG) pension systems face due to the demographic change. The paper shows that the reduction of detrimental emissions and the increase of the sustainability of PAYG pension systems may bemutually compatible rather than conflicting policy objectives. Compared with other pension reform proposals, which also aim to increase the sustainability of pension systems the emission tax shows itself to be the most favourable policy in terms of output, consumption, private investment and welfare. While the domestic region benefits the most, technology spillover in emission abatement also increase welfare in the foreign region.

The Heterogenous Regional Employment Effects of Climate Change Policies

Luca Bettarelli (University of Palermo, Italy), Davide Furceri (University of Palermo, Italy; RCEA, Italy; and International Monetary Fund, USA), Fabio Mazzola (University of Palermo), Pietro Pizzuto (University of Palermo, Italy) and Khatereh Yarveisi (University of Palermo, Italy)

This paper examines the effects of Climate Change Policies (CCPs) on employment in 324 regions across 26 countries from 1990 to 2020. We find that more stringent CCPs have short-term negative effects on regional employment which disappear in the medium term. The impact varies depending on country and regional characteristics, with market-based instruments having a greater and more persistent effect. Regions in countries with stronger active labor market policies experience less short-term negative effects, while lower employment protection leads to reallocation and job creation in the medium term, without entailing larger short-term costs. Regions with higher levels of emissions, GDP, population density, industrial activities and with lower levels of human capital tend to experience larger and more persistent negative employment effects.

Climate Change Policies and Income Inequality

Luca Bettarelli (University of Palermo, Italy), Davide Furceri (International Monetary Fund, USA; University of Palermo, Italy; and RCEA, Italy) and Pietro Pizzuto (University of Palermo, Italy) and Nadia Shakoor (University of Palermo, Italy)

This paper examines the dynamic impact of Climate Change Policies (CCPs) on income inequality, for a sample of 39 developed and developing countries, during the period 1990-2020. The results show that CCPs are associated with a significant and persistent increase in income inequality. The effect is robust across various measures of inequality and sensitivity tests, including an instrumental variable strategy. The effect of CCPs only materializes in the case of market-based CCPs, is stronger in countries characterized by a higher share of low-educated workers and initial level of inequality, while is mitigated in those with comprehensive redistribution policies, and during periods of fiscal expansions and stronger economic growth. These findings have important policy implications, as they emphasize the importance of the timing and design of CCPs, as well as the role of complementary policies.

Parallel Session 1D: Financial Econometrics I

Portfolio Management Using Graph Centralities: Review and Comparison

Bahar Arslan (Bursa Technical University, Turkey), Vanni Noferini (Aalto University, Finland), and Spyridon Vrontos (University of Essex, UK)

We investigate an application of network centrality measures to portfolio optimization, by generalizing the method in [Pozzi, Di Matteo and Aste, Spread of risks across financial markets: better to invest in the peripheries, Scientific Reports 3:1665, 2013], that however had significant limitations with respect to the state of the art in network theory. In this paper, we systematically compare many possible variants of the originally proposed method on S&P 500 stocks. We use daily data from twenty-seven years as training set and their following year as test set. We thus select the best network based methods according to different viewpoints including for instance the highest Sharpe Ratio and the highest expected return. We give emphasis in new centrality measures and we also conduct a thorough analysis, which reveals significantly stronger results compared to those with more traditional methods. According to our analysis, this graph-theoretical approach to investment can be used successfully by investors with different investment profiles leading to high risk-adjusted returns.

Nowcasting GDP: What are the Gains from Machine Learning Algorithms?

Milen Arro-Cannarsa (University of Bern and Study Center Gerzensee, Switzerland) and Rolf Scheufele (Swiss National Bank, Switzerland)

We compare several machine learning methods for nowcasting GDP. A large mixed-frequency data set is used to investigate different algorithms such as regression based methods (LASSO, ridge, elastic net), regression trees (bagging, random forest, gradient boosting) and SVR. As benchmarks we use univariate models, a simple forward selection algorithm and a principle components regression. The analysis accounts for publication lags and treats monthly indicators as quarterly variables combined via blocking. Our data set consists of more than 1100 time series. For the period after the Great Recession, which is particularly challenging in terms of nowcasting, we find that all considered machine learning techniques beat the univariate benchmark and the forward subset selection algorithm up to 28 % in terms of out-of-sample RMSE.Ridge, elastic net and SVR are the most promising algorithms in our analysis and they outperform principle components regression on a significant level.

Modeling the Distribution of Key Economic Indicators in a Data-Rich Environment: New Empirical Evidence

Iason Kynigakis (University College Dublin, Ireland) and
Ekaterini Panopoulou (University of Essex, UK)

This study explores the ability of a large number of macroeconomic variables to forecast the mean, quantiles and density of key economic indicators. In the baseline case, we construct the forecasts using an autoregressive model. We then consider several general specifications that augment the time series model with macroeconomic information, either directly using the full set of predictors, through targeted-factors, targeted-predictors or forecast combinations. Our findings suggest that aggregating information across quantiles leads to improved estimates of the conditional mean. Overall, augmenting the autoregressive model with macroeconomic variables through methods that perform variable selection or account for non-linearities improves predictive performance. This increase in out-of-sample performance arises from the improved estimation of the lower and middle part of the distribution.

Stochastic Volatility with Time-varying Persistency in Macroeconomic Forecasting

Sercan Eraslan (European Central Bank, Germany) and
Maximilian Schröder (BI Norwegian Business School and Norges Bank, Norway)

We propose a flexible approach to incorporate time-varying persistency in stochastic volatility which allows large and temporary shocks to have less persistent impact on the volatility dynamics. In this regard, it is closely related to recent studies extending stochastic volatility with outlier adjustment to alleviate undesired consequences of large volatility shocks on model estimation. However, the proposed approach follows an alternative way and is computationally less demanding compared to modelling outlier-augmented stochastic volatility. Accordingly, it can easily be implemented in widely used macroeconomic forecasting models, such as simple autoregressive models as well as (mixed-frequency) vector autoregressive and dynamic factor models without increasing the computational burden considerably. We apply the proposed framework in these three model classes to forecast key macroeconomic and financial indicators in the US in real-time. Our (preliminary) results lend some support for time-varying persistency in stochastic volatility. Compared to their counterparts with baseline stochastic volatility (with constant persistency), the time-varying persistency specifications seem to be beneficial to the in-sample model fit as well as to the accuracy of point forecasts for several macroeconomic indicators, especially in times of high volatility.

Parallel Session 1E: Prices and Inflation I

VAT rate cut – more of a hindrance than a help for inflation targeting?

Krystian Jaworski (Warsaw School of Economics, Poland) and
Jakub Olipra (Warsaw School of Economics, Poland)

Using a difference-in-differences approach, we estimate that the VAT rate cut on basic foodstuffs from 5% to 0% implemented in Poland in February 2022 contributed to an average drop in the prices of related products by 2.9%, indicating a limited pass-through of tax reduction to retail prices, equalling only 61.5%, which resulted in a drop in total inflation by merely 0.6 percentage points. This was simultaneously conducive to lowering budgetary revenue by 0.3% GDP, which suggests that such an intervention was both costly and ineffective, a conclusion that offers important policy implications for conducting fiscal policy aimed at price control.

Evaluating the Effects of Sino-US Political Relations Shocks on Commodity Prices

Yifei Cai (Teesside University, UK) and Dimitrios Bakas (Nottingham Trent University, UK)

This study evaluates the impact of US-China political relations shocks on commodity prices within a VAR framework. The empirical results show that worsening political relations decrease non-energy and precious metals prices but not energy prices. The results from impulse responses are considerably different before and after Trump's administration. We also consider the asymmetric effects of political relations when tensions between US and China are warming and darkening. Interestingly, non-energy and precious metals prices react more intensified when political relations are warming. However, energy prices do not have such responses. Additionally, we consider the effects on different individual commodity prices, while we also employ alternative empirical specifications for robustness checks.

Natural Gas Prices and Unnatural Propagation Effects: The Role of Inflation Expectations in the Euro Area

Maximilian Boeck (Università Bocconi, Italy) and Thomas Zoerner (Oesterreichische Nationalbank, Austria)

This paper investigates the recent increases in natural gas prices and their propagation effects via inflation expectations. Using a structural vector autoregression, we identify a euro area natural gas price shock with a combination of sign and zero restrictions. We rely on market-based measures of inflation expectations and find that natural gas price shocks have strong effects on both inflation and inflation expectations. To understand the relative importance of the pass-through from inflation expectations to inflation after anatural gas price shock, we conduct a counterfactual analysis in which we turn off the expectation channel. Our findings indicate the presence of strong second-round effects via expectations. Our analysis provides guidance for policymakers to better understand the potential trade-offs of different policy responses to natural gas price shocks, especially with respect to discussions about inflation de-anchoring.

Parallel Session 1F: European Economics I

Comparing the Effects of Monetary Policy on House Prices and Mortgage Lending across Euro Area Countries

Martin Mandler (Deutsche Bundesbank, Germany) and Michael Scharnagl (Deutsche Bundesbank, Germany)

We compare the effects of the ECB's monetary policy on the market for mortgage loans and on house prices across the four largest euro area economies, Germany, France, Italy and Spain. We use a multi-country Bayesian vector autoregression with monetary policy shocks identified via sign restrictions in order to derive the posterior distribution of cross-country differences in the impulse responses to a monetary policy shock. We show that the quantity of loans for house purchase and real house prices in Germany respond less to monetary policy than in Italy and Spain. France reacts similarly to Germany as far as the volume of lending is concerned, but house prices are more strongly affected by monetary policy than in Germany. A possible explanation for these differences might be differences in the importance of fixed and variable-rate loans across countries.

The Temperature-induced Monetary Stress in the Euro Area

Hamza Bennani (Nantes University, France) and Etienne Farvaque (University of Lille, France)

Climate change, through temperature anomalies, is likely to have an asymmetric effect on prices and economic activity within the euro area. In this paper, we aim to measure the monetary stress for each member country resulting from these asymmetric shocks. For that purpose, we first measure how inflation and GDP per capita respond to temperature anomalies in several euro area countries. As a second step, we simulate the temperature-induced changes in inflation and GDP per capita over the period 2025-2100. The significant divergences in these temperature-induced variables call for different monetary policy needs within the currency union, hence the existence of a temperature-induced monetary stress that is likely to worsen over time. Our results provide evidence that climate change constitutes a challenge to the sustainability of the currency union and to the one size fits all ECB's policy.

Inflation Expectations, Sovereign Bond Yields and Media Sentiment on the ECB in Four European Countries

Wiem Ghazouani (Laboratoire d'Économie d'Orléans,France),
Matthieu Picault (Laboratoire d'Économie d'Orléans, France)
and Julien Pinter (Université du Minho, Portugal)

With 20 countries and 24 languages, the Euro Area presents a unique communication challenge to the European Central Bank especially when countries' inflation diverge. Using a unique dataset of more than 200 000 press articles from 28 journals in 4 countries between 2002 and 2023, we study how the media coverage of the ECB monetary policy varies across the Euro Area by studying both the volume of articles published and the content of the articles. To analyze the sentiment conveyed by the different articles in a multi-language corpus, we rely on both lexicon approach and deep learning Natural Language Processing models to improve the comparability of our quantitative measures. Using the newly released data from the Consumer Expectation Survey, we discuss how the information content of press articles on monetary policy can influence both households inflation expectations and the dynamic and sovereign bonds yields. Using a panel dataset with country specific inflation expectations from both professional and households, macroeconomic control variables and fixed effects, we show that the tonality of the media can significantly influence households inflation expectations between 2020 and 2023

The Reverse Bank Lending Channel of QE and QT and its Heterogeneous Effects Across the Euro Area

Daniel Stempel (Heinrich Heine University Duesseldorf, Germany), Ulrike Neyer (Heinrich Heine University Duesseldorf, Germany), Maximilian Horst (Heinrich Heine University Duesseldorf, Germany) and Philipp Roderweis (University Sorbonne Paris Nord, France)

Large-scale asset purchases by a central bank (quantitative easing, QE) induce a strong and persistent increase in excess liquidity in the banking sector. Furthermore, QE creates deposits and, therefore, leads to an expansion of banks' balance sheets. In the euro area, this excess liquidity as well as the QE-created deposits are heterogeneously distributed across the member states. In a first step, this paper first uses a combination of an SVAR model and local projections to estimate the impact of this excess liquidity on bank lending in six euro area countries. We find that high-liquidity countries experience a decline in bank lending caused by the increase in excess liquidity, while lending in low-liquidity countries is either not affected or increases. In a second step, we show in a two-country New Keynesian model that QE has two opposing effects on banks' costs: (i) QE decreases long-term interest rates and, therefore, banks' refinancing costs; (ii) QE-created deposits expand banks' balance sheets and increase balance sheet costs. Furthermore, QE-created deposits are not loanable funds but banks create deposits when granting loans, implying that bank lending does not increase in QE-created deposits. These model features imply a reverse bank lending channel, which is likely to dampen the expansionary effects of QE and the contractionary effects of quantitative tightening (QT). These dampening effects differ across euro area countries.

Parallel Session 2A: Journal of Forecasting II

Step by Step - A Quarterly Evaluation of EU Commissions' GDP Forecasts

Katja Heinisch (Halle Institute for Economic Research, Germany)

The European Commission's annual growth forecasts play a crucial role in shaping policies and provide a benchmark for many (national) forecasters. These annual forecasts are built on quarterly estimates, which do not get much attention and are hardly known. Therefore, this paper provides a comprehensive analysis of multi-period ahead quarterly GDP growth forecasts for the European Union (EU), euro area, and several EU member states with respect to first-release and current-release data. Forecast revisions and forecast errors are analyzed and the results show that the forecasts are not systematically biased. However, GDP forecasts for several member states exhibit a tendency toward significant overestimating of short-time horizons. Notably, the highest performance is not observed for the current quarter for all countries, although a high forecast revision occurs in the final step (from one-quarter-ahead forecast to the current quarter). Furthermore, the final forecast revision in the current quarter is generally downward biased for almost all countries. Overall, the differences in mean forecast errors are minor when using real-time data or pseudo-real-time data. Additionally, the forecast performance varies across countries, with smaller countries and Central and Eastern European countries (CEEC) experiencing larger forecast errors. The paper provides evidence that there is still room for enhancement in forecasting techniques both for nowcasts but also forecasts up to 8 quarters ahead.

The Bias of the ECB Inflation Projections: A State Dependent Analysis

Eleonora Granziera (Norges Bank, Norway), Pirkka Jalasjoki (Bank of Finland) and Maritta Paloviita (Bank of Finland)

We test for state dependent bias in the ECB projections for inflation. We show that the ECB tends to underpredict when the inflation rate observed at the time of forecasting is higher than an estimated threshold of 1.8\%. The magnitude of the bias is larger at intermediate horizons. This suggests that inflation is projected to revert towards the target too quickly. These results cannot be fully accounted for by errors in the exogenous assumptions on short term interest rates, exchange rates or oil prices, contrary to the view that forecast errors for inflation arise because of errors in these conditioning assumptions. Moreover, the fast reversion to the target cannot be explained by the persistence embedded in the forecasting models. Our findings are consistent with the predictions of a model in which the central bank acts strategically to steer expectations towards the target.

Money Growth and Inflation - How to account for the Differences in Empirical Results

Michael Scharnagl (Deutsche Bundesbank, Germany) and
Martin Mandler (Deutsche Bundesbank, Germany)

Empirical analyses have presented different results on the long-run relationship between money growth and inflation with some pointing to a stable relationship with a slope coefficient of close to one and others suggesting instability or a weakening of the relationship over time. Using the example case of the U.S. and nearly 150 years of data, we provide a systematic investigation into and comparison of the results from time series-based empirical evidence on the relationship between money growth and inflation. We use the results from a wavelet analysis as a benchmark as it offers a flexible framework that provides information on the relationship both across different frequencies and different points in time. We relate these results to those in the literature obtained from other empirical approaches and investigate the underlying causes of differences in the results. We argue that it is possible to arrive at a consistent conclusion of a stable correlation between money growth and inflation in the U.S. at cycles of 30 to 60 years with a declining trend in the slope relationship even though the empirical results in the literature appear to be at odds. We show that in some analyses the evidence on the "long-run" relationship is distorted by unintentionally including higher frequencies or that results are dominated by outliers at very low frequencies for which the data does not contain much information. Furthermore, the way in which different analyses account for time variation also can influence the results.

Money Matters: Broad Divisia Money and the Recovery of U.S. Nominal GDP from the COVID-19 Recession

John V. Duca (Oberlin College and Federal Reserve Bank of Dallas, US) and Michael D. Bordo (Rutgers University, National Bureau of Economic Research Hoover Institution, Stanford University, USA)

We assess the sustainability footprint of mutual funds through the holdings they have. Rather than relying on ESG metrics, we define the sustainability of a company by its impact on the 17 UN's Sustainable Development Goals (SDGs). We document that mutual funds performing well according to the economy & infrastructure and social progress SDG dimensions experience higher abnormal returns, while the opposite impact—returns relationship holds for environment and basic needs. Institutional investors appear to infer the relation between different sustainability dimensions and fund abnormal returns and reflect it in their allocation decisions. Funds with increased sustainability performance in less profitable SDG impact domains experience capital outflows. Funds that improve their sustainability standing in areas with positive impact—return relationship attract institutional investor flows. The institutional investors' taste for remunerative sustainability that we document cannot be revealed using standard ESG metrics.

Parallel Session 2B: Macroeconomic Theory and Policy I

Risk-sensitive Optimal Control with Forward-looking Variables

Guido Traficante (European University of Rome, Italy) and Paolo Vitale (Università Gabriele D'Annunzio, Italy)

We discuss how to solve infinite-horizon optimal control problems with recursive preferences à la Hansen and Sargent (1995) when both backward and forward-looking variables enter into the laws of motion regulating the system dynamics. With our analysis we establish: 1) under which conditions the risk-adjustment in the objective function of the standard linear-quadratic formulation introduced by Hansen and Sargent affects the optimal policy; 2) how the optimal policy in a stationary solution is identified solving two distinct fixed-point problems, the former pertaining to the optimization exercise,the latter to the expected values of the forward-looking variables; 3) how this policy differs from the robust policy chosen by an agent endowed with standard quadratic preferences and subject to Knightian uncertainty. Applying our methodology to Smets and Wouters' (Smets and Wouters, 2003) new-Keynesian model of monetary policy, we show how a central bank endowed with recursive preferences à la Hansen and Sargent (1995) selects a more aggressive policy than one furnished with quadratic preferences.

Investment and Idiosyncratic Volatility: Role of Ownership Concentration

Anubha Dhasmana (IIM Bangalore, India)

This paper studies the role of ownership concentration in determining the relationship between idiosyncratic volatility shocks and investment across firms. Using a panel of Indian manufacturing firms listed on the Bombay Stock Exchange we find investment to be much more sensitive to idiosyncratic volatility shocks in case of firms with high ownership concentration. Further investigation points towards increased tendency for overinvestment by low-ownership concentration firms when faced with higher idiosyncratic volatility as the possible reason behind smaller investment sensitivity to idiosyncratic volatility. Institutional ownership helps in reducing this tendency for overinvestment thereby bringing investment behaviour of low ownership concentration firms closer to that predicted by the real options framework. Our results suggest that institutional ownership beyond a certain level can curb the tendency for overinvestment driven by desire of private benefit extraction and thus help protect the interests of minority shareholders.

How Does International Capital Flow?

Michael Kumhof (Bank of England), Phurichai Rungcharoenkitkul (Bank of Thailand; BIS, Switzerland) and Andrej Sokol (Bloomberg, USA)

We develop a 2-country New Keynesian model with endogenous domestic and cross-border gross capital flows. It distinguishes physical saving and ledger-entry financing, which often move in opposite directions following shocks. This matters for key debates. First, global saving glut: Current account deficits are financed with (typically domestic) credit, not foreign saving. Second, sudden stops: In a crisis creditors stop financing debt, not current accounts. Third, Triffin's current account dilemma: Dollar creation requires dollar bank credit, not US current account deficits. Fourth, high correlation of gross capital inflows and outflows: An automatic consequence of double-entry bookkeeping, not an economic phenomenon.

Sovereign Wealth Funds during crisis

Jean-Yves Gnabo (CeReFiM, Belgium), Malik Kerkour (CeReFiM, Belgium) and Louise Schraverus (CeReFiM, Belgium)

This chapter examines how crisis periods affect sovereign wealth funds' asset allocation strategies. Portfolio holding data from major SWFs between 2000 and 2021 are used to analyze their investment adjustments during domestic and global crises. The analysis shows that when the home country experiences a recession, SWFs allocate portfolios toward domestic assets, supporting local economies and promoting stability. Sectors benefiting from this allocation include utilities, industrials, and energy. Conversely, for commodity-based economies, when the home country displays resilience in the face of global crises, SWFs are more inclined to increase their cross-border investments, suggesting that they seize opportunities by holding underperforming assets and/or face lower protection for strategic sectors, like finance, and energy, from target countries. Overall, the evidence supports SWFs' active management in crisis periods characterized by defensive strategies, shifts in investment priorities, sectoral preferences, and engagement in strategic sectors.

Parallel Session 2C: European Economics II

Monetary Policy and Financial Stress: Evidence from the Euro Area

Mathias Cammerlander (University of Innsbruck, Austria), Daniel Gründler (University of Innsbruck, Austria) and Johann Scharler (University of Innsbruck, Austria)

We study how levels of systemic stress affect the transmission of monetary policy shocks in euro-area countries. Our findings provide evidence that regime effects are weak and short-lived. The results hold for measures of systemic financial stress considering multiple financial domains, systemic stress in sovereign bond markets, or financial fragmentation. Despite several fundamental differences between euro area member countries, the transmission of monetary policy seems quite homogenous across countries conditional on financial stress regimes. However, significant differences between high and low stress regimes are most pronounced on the country level.

Common Cycles in the Euro Area and Monetary Policy - A Bayesian Proxy FAVAR Approach

Lukas Berend (FernUniversität in Hagen, Germany) and Jan Prüser (TU Dortmund, Germany)

We use an unified Bayesian Proxy FAVAR model with external instruments and sign restrictions to study the role of common Euro area GDP and inflation cy- cles in the transmission of monetary policy shocks. We provide empirical evidence that common Euro cycles explain most of the variation in GDP and inflation of the member countries, whereas for southern European economies larger deviations from the cycles become apparent in the aftermath of the financial crisis. Building on this findings, we show that monetary policy is homogeneously transmitted to the member countries via the common cycles. However, once we allow for macro- financial channels to affect country-specific GDP and inflation, the policy outcomes become more heterogeneous. Thus, we show that heterogeneity in the transmission of monetary policy stems from fragmentation in financial markets, whereas highly synchronized business provide a source for a homogeneous transmission in the Euro area.

The Role of Exchange Rate in the Monetary Transmission: The Case of the Euro Area

Boris Fisera (Slovak Academy of Sciences, Slovakia and Webster Vienna Private University, Austria), Martin Melecky (World Bank Group, USA) and David Vondracek (Masaryk University, Czech Republic)

Contractionary monetary policy tends to appreciate the exchange rate, which might amplify the macroeconomic effects of monetary policy. We use a structural vector autoregressive (SVAR) model to study the role of the exchange rate in the transmission of monetary policy in the Euro Area. We distinguish between pure monetary policy shocks and central bank information shocks. We find that contractionary monetary policy appreciates the euro exchange rate, reduces real output and consumer prices. Using a counterfactual analysis, we construct a counterfactual where the exchange rate does not respond to monetary policy, and we contrast this counterfactual with our baseline findings. In the absence of exchange rate appreciation, the transmission of monetary policy shocks to consumer prices is weaker, highlighting the role of the exchange rate channel in the transmission of monetary policy. Furthermore, we find some evidence that the exchange rate also limits monetary transmission to real output. However, the exchange rate does not exert any effect on the transmission of central bank information shocks.

Deposit Market Concentration and Monetary Transmission: Evidence from the Euro Area

Stephen Kho (European Central Bank, Germany and University of Amsterdam, The Netherlands)

I study the transmission of monetary policy to deposit rates in the euro area with a focus on asymmetries and the role of banking sector concentration. Using a local projections framework with 2003-2023 country-level and bank-level data for thirteen euro area member states, I find that deposit rates respond symmetrically to an unexpected tightening or easing of monetary policy. However, more concentrated domestic banking sectors do pass-on unexpected monetary tightening (easing) more slowly (quickly) than less concentrated banking sectors, which contributes to a temporary divergence of deposit rates across the euro area. These results suggest that heterogeneity in the degree of banking sector concentration matters for the transmission of monetary policy to deposit rates, which in turn may affect banking sector profitability.

Parallel Session 2D: Financial Economics I

Organization Capital and Firm Cash Flow Shocks: Evidence from the Covid-19 Crisis, Chen Huang (Queen Mary University of London, UK)

Georgios P. Kouretas (Athens University of Economics and Business, Greece; IPAG Business School, France), Mingran Zhang (University of Bath, UK), and Yu Zhang (University College Dublin, Ireland)

Spanning a three-year window before and after the Covid-19 pandemic from 2017 to 2022, we examine the impact of organization capital on firm cash flow shocks. Employing a difference-in-difference design, we find that organization capital plays a pivotal role in safeguarding firms from adverse cash flow shocks stemming from operational disruptions during the pandemic. The superior post-Covid cash flow in high organization capital firms is attributed to extensive trade credit, diligent cost- reduction initiatives, and enhanced operational efficiency. We further show that the effectiveness of organization capital is accentuated in regions where local governments are actively involved in curbing the spread of the Covid virus and implementing policies to mitigate economic precarity. Additional tests underscore that the positive effect of organization capital is more pronounced in young firms, small firms, and those characterized by high governance quality. Our study sheds light on the interplay between organization capital and firm resilience during challenging economic periods, offering implications for firm decision-makers, policymakers, and investors alike.

Financial Stress and Economic Activity Evidence from a New Worldwide Index

Hites Ahir (International Monetary Fund, USA), Giovanni Dell'Ariccia (International Monetary Fund, USA), Davide Furceri (International Monetary Fund, USA), Chris Papageorgiou (International Monetary Fund, USA), and Hanbo Qi (International Monetary Fund, USA)

This paper uses text analysis to construct a continuous financial stress index (FSI) for 110 countries over each quarter during the period 1967-2018. It relies on a computer algorithm along with human expert oversight and is thus easy to update. The new indicator has a larger country and time coverage and higher frequency than similar measures focusing on advanced economies. And it complements existing binary chronologies in that it can assess the severity of financial crises. We use the indicator to assess the impact of financial stress on the economy using both country- and firm-level data. Our main findings are fivefold: i) consistent with existing literature, we show an economically significant and persistent relationship between financial stress and output; ii) the effect is larger in emerging markets and developing economies and (iii) for higher levels of financial stress; iv) we deal with simultaneous causality by constructing a novel instrument—financial stress originating from other countries—using information from the text analysis, and show that, while there is clear evidence that financial stress harms economic activities, OLS estimates tend to overestimate the magnitude of this effect; (iv) we confirm the presence of an exogenous effect of financial stress through a difference-in-differences exercise and show that effects are larger for firms that are more financially constrained and less profitable.

R&D Tax Credits and R&D Investment Efficiency: International Evidence

Seraina Anagnostopoulou (University of Piraeus, Greece), Ioannis Tsalavoutas (University of Glasgow, UK) and Fanis Tsoligkas (University of Bath, UK)

We examine the effect of country level research and development tax credits on optimal levels of firm-specific R&D investments. We use a sample of R&D active firms from 22 countries and find that such credits drive firms to invest towards optimal levels of R&D investment and particularly reduce overinvestment. Thus, we provide novel evidence that R&D tax credits do serve the purpose intended by regulators. Further, we find that our findings hold for firms that are based in jurisdictions with weaker accounting enforcement and have lower institutional ownership. We interpret these results as indicative of R&D tax credits promoting optimal R&D investment levels in contexts where other mechanisms that should favor optimal R&D investment are weaker. Finally, we find that R&D tax credits strengthen the positive association between R&D investment and firms' accounting and market performance. These findings indicate that optimized levels of R&D investment, incentivized by tax credits, positively reflect future profitability and this positive outcome is also reflected on market appraisal. Our study makes significant contributions to both the tax and the financial accounting strands of the literature and its findings raise important policy implications.

Determinants and Effects of Countries' External Capital Structure: A Firm-level Analysis

Uros Herman (Aix-Marseille University, CNRS, AMSE, France) and Tobias Krahnke (European Central Bank, Germany)

This paper investigates the impact of a firm's foreign liability composition on its resilience during economic turmoil and identifies the factors affecting its foreign capital structure. Using firm-level data, we corroborate previous findings from the literature that the composition of foreign liabilities matters for a country's susceptibility to external shocks. We find that firms with a positive equity share in their foreign liabilities were less affected by the global financial crisis and less likely to default in the aftermath. This was mainly due to the availability of intra-firm trade credit and intra-firm loans, which acted as a financial buffer when external capital markets became distressed

Parallel Session 2E: Monetary Theory and Policy I

Unconventional Monetary Policy and the Search for Yield

Manthos Delis (Audencia Business School, France), Sotirios Kokas (Essex Business School, UK) and Alexandros Kontonikas (Essex Business School, UK)

We use U.S. syndicated loan market data to examine how banks responded to the increase in reserves during quantitative easing (QE) programmes. We show that the connection between banks' reserves and lending volume depends on the banks' net return on reserve balances. We find that higher reserves boost bank lending, and banks attenuate this effect when their net returns are less affected by an FDIC regulation on this net return on reserve balances. Our findings demonstrate that the search for yield component of the risk-taking channel, wherein banks increase risk-taking to achieve nominal profitability targets during periods of low interest rates is also a relevant consideration for policymakers during massive reserve injections.

Differential Effects of Unconventional Monetary Policy

Sebastian Eiblmeier (Leibniz Uni Hannover, Germany)

Did the Eurosystem's quantitative easing from 2015 to 2018 have differential effects regarding the bank lending volume to different institutional sectors, industry sectors, or types of loans? To investigate this question, this paper employs linked microdata of the German banking system. These allow for computing the volume of bond redemptions at bank level as a measure of banks' exposure to QE. Because when a bond matures, the bank is faced with the decision of whether to reinvest the proceeds into bonds or whether to rebalance into another asset such as loans. When the central bank squeezes bond yields through large-scale purchases, banks with more redemptions have a stronger incentive to rebalance. However, a fixed effects model reveals no significant difference between banks with a high exposure compared to the control group regarding their overall loan growth. Neither can any of the mentioned differential effects be observed. While these findings are at odds with some of the previous empirical literature, they are in line with theories that argue that lending is purely demand-led and any central bank action geared towards the supply side of the loan market merely constitutes "pushing the string".

Distressed Assets and Monetary Policy: Are AMCs a Third Way?

Udara Peiris (Oberlin College, USA), Reiner Martin (National Bank of Slovakia) and Edward O'Brien (European Central Bank, Germany)

Following the Global Financial Crisis of 2007-08, amidst increased loan delinquencies in Eurozone, Ireland, Slovenia Spain implemented significant delinquent loan purchase programs through Asset Management Companies (AMCs), amounting to about 44%, 16%, and 10% of their GDPs, respectively. While these programs were individually deemed successful, questions have been raised about their principal mechanisms and broader applicability. We investigate whether the success of AMCs, through their funding structure, stemmed from being defacto traditional capital and liquidity support to banks. We show that AMCs improve welfare and enhance banking systems, and their effectiveness is largely independent of their funding structure. They directly enhance the returns to bank lending, in turn directly promoting additional lending (bank lending channel) and indirectly by improving corporate borrowers' balance sheets (balance sheet channel).

The Enduring Effects of Unconventional Monetary Policy

Giulio Tarquini (Sapienza University of Rome, Italy)

This paper investigates unconventional monetary policy (UMP) transmission linked to credit-financed endogenous growth. Using a dynamic general equilibrium model where financial conditions and growth are interwoven, I study the aggregate aftermath to Quantitative Easing, Forward Guidance and Negative Interest Rate Policy. All expansionary interventions operate through the credit channel, influencing banks' conditions and fostering economic growth. In calibrated scenarios, FG and NIRP emerge as optimal options for sustained productivity increases. These policies influence TFP and output, easing the ZLB constraint. While QE boosts TFP persistently, its quantitative impact is relatively lower, with a more short-lived effect on output.

Parallel Session 2F: Central Banking I

Does the Fed say it All? Comparative Analysis of Public Communications and Private Discussions

Aleksei Chernulich (Durham University, UK), Mengheng Li (University of Technology Sydney, Australia) and Eamon McGinn (University of Technology Sydney, Australia)

Forward guidance is a key monetary policy tool that emerged to address modern monetary policy challenges, which central banks use to manage market expectations about future interest rates. Public communications have been the center of studies on the effect of forward guidance. The Fed's public communications are based on private discussions within FOMC. This paper analyses private information revealed in FOMC meeting transcripts. Combining textual analysis and time series techniques, our study finds: (1) private information has an information advantage in predicting future policy rate changes, conditional on public information and economic variables, and (2) public information does not overshadow the predictive power of economic variables. These findings imply that to address the emerging challenges the Fed can communicate more assertively and transparently to anchor market expectations on future policy.

Media Sentiment and ECB Communication: Unraveling the Dynamics of Mutual Fund Behavior

Joey Soudant (Université de Namur, Belgium), Jean-Yves Gnabo (Université de Namur, Belgium) and Hamza Bennani (Université de Nantes, France)

This research focuses on the evolving landscape of central bank communication, focusing on the wide development of forward guidance and its impact on financial markets. We will explore the responses of European equity mutual fund managers to media sentiment about ECB press conferences, examining shifts in portfolio allocations. Utilizing a unique dataset of around 2800 European equity mutual funds and their stocks holdings from 2009 to 2021, we employ advanced techniques to measure media sentiment. Our study contributes valuable insights into the dynamics between central bank communication, media sentiment, and mutual funds behavior, a constantly-growing sector. While ongoing, this research anticipates detailed findings that significantly enhance our understanding of the transmission mechanisms of ECB communication through media sentiment.

Does it matter if the Fed goes Conventional or Unconventional?

Marcin Kolasa (International Monetary Fund, USA and SGH Warsaw School of Economics, Poland) and Grzegorz Wesołowski (University of Warsaw, Poland)

We investigate the domestic and international consequences of three types of Fed monetary policy instruments: conventional interest rate (IR), forward guidance (FG) and large scale asset purchases (LSAP). We document empirically that they can be seen as close substitutes when used to meet macroeconomic stabilization objectives in the US, but have markedly different spillovers to other countries. This is because each of the three monetary policy instruments transmits differently to asset prices and exchange rates of small open economies. The LSAP by the Fed lowers the term premia both in the US and in other countries, and results in bigger exchange rate adjustments compared to conventional policy. Importantly for international spillovers, LSAP is typically associated with a more accommodative reaction of other countries' monetary authorities, especially in emerging market economies. We demonstrate how these findings can be rationalized within a stylized dynamic theoretical framework featuring a simple form of international bond market segmentation.

The Fed speaks, but does the Press repeat? Investigating the Communication Channel between the Fed and the Written Press

Ami Dalloul (Leibniz University of Hannover, Germany)

To enhance the understanding of the media's role in the transmission of central bank communications to the public, this study applies a Latent Dirichlet Allocation (LDA) topic model and a LASSO penalized regression to analyze 5,407 FED communication documents and 333,384 articles from USA Today from 2003 to 2023. A positive and significant relationship between FED communications and media coverage is found. This effect is stronger and more instantaneous since the initiation of the FED's post-FOMC meeting press conferences in 2011. However the effect are not uniform across all FED communications topics.

Parallel Session 3A: European Economic Review I

Predicting high inflation episodes: The role of uncertainty and inflation expectations

Maria-Eleni K. Agoraki (University of the Peloponnese, Greece), Nektarios Aslanidis (Universitat Rovira i Virgili, Spain) and Georgios P. Kouretas (Athens University of Economics and Business, Greece; IPAG Business School, France)

The recent upsurge in inflation rates is a major challenge for the implementation of monetary policy around the globe. The new macroeconomic environment is also characterized by the elevated levels of economic uncertainty. We examine the predictive power of a real-time forward-looking uncertainty measure (Ahir, Bloom and Furceri, 2022) in conjunction with inflation expectations on the probability of high-inflation episodes. The analysis is carried out for group of advanced inflation-targeting countries. First, we show evidence that increased uncertainty is generally associated with a lower probability of being in a high-inflation state. Second, incorporating inflation expectations for the year ahead into our models improves significantly the accuracy of the prediction. Overall, our paper highlights the importance of real-time and, more importantly, inflation expectation data considerations in predicting the future state of inflation.

The House Price Phillips Curve

Margarita Rubio (University of Nottingham, UK) and Fang Yao
(Central Bank of Ireland)

The conventional view is that managing inflation and achieving financial stability are usually distinct and often complementary goals. In this paper, we challenge this claim by highlighting a linkage between monetary policy and financial stability through a House Price Phillips Curve (HPPC). Weshow that (i) HPPC can be observed in the data, linking house price growth and the unemployment rate; (ii) we use a DSGE model with housing and collateral constraint to rationalise the coexistence of the conventional inflation PC and the HPPC; (iii) in the presence of inflation shocks, monetary policy becomes more efficient with loose macroprudential policy but at the expense of financial stability. These results stress an important interaction between the use of macroprudential policies and monetary policy and the policy trade-o¤s arising in the context of inflationary shocks.

The China Shock, Market Concentration and the U.S. Phillips Curve

Melih Firat (International Monetary Fund, USA)

This paper studies the effects of the China shock and market concentration on the U.S. Phillips curve at the industry level. Empirical results show that higher import penetration from China weakens the relationship between inflation and the output gap across industries, and sectoral linkages amplify this result through downstream effects. The paper also shows that a rise in market concentration reduces the Phillips curve coefficient. I rationalize these findings with an extension of the two-country multi-sector model of Atkeson and Burstein (2008) with input-output networks and firm heterogeneity. Consistent with the empirical results, the model provides a closed-form expression showing that the structural Phillips curve is flatter in industries with higher market concentration or trade dependence. The quantitative exercises imply that market concentration is more important than the China shock on the flattening of the aggregate Phillips curve. However, the China shock's effect on the slope of the manufacturing sector Phillips curve is stronger than that of market concentration.

The Spatial Effects of Monetary Policy in a Monetary Union: The Case of the Euro Area

Deborah Gefang (University of Leicester, UK), Stephen G. Hall (Leicester University, UK; Bank of Greece, Greece; University of Pretoria, South Africa), George S. Tavlas (Bank of Greece, Greece; Hoover Institution, Stanford University, USA) and Yongli Wang (Birmingham University, UK)

We investigate the way that a change in the ECB's monetary policy affects the members of the euro area. Our data set consists of sixteen countries and covers the period from 2009 to 2023. We introduce a spatial VAR, which allows us to decouple the direct effects of a policy change from the spillover effects of the change. In contrast to standard spatial models, which use a predetermined spatial matrix, we estimate the spatial matrix endogenously, thus providing increased accuracy. In contrast to previous studies, we find generally symmetric reactions both in terms of the timing and the magnitude of shocks, and in the effects of shocks on the decomposition between direct and indirect (spillover) effects although there are occasional exceptions. We find that the indirect effects (spillover) effects are generally smaller than the direct effects but that in all cases they reinforce the direct effects.

Parallel Session 3B: Macroeconomic Theory and Policy II

Wage Reforms and Equality Gains: Evidence from Greece

Alexandros P. Bechlioulis (University of Ioannina, Greece), Michael Chletsos (University of Piraeus, Greece), Tryfonas Christou (European Commission, Belgium) and Aikaterini E. Karadimitropoulou (University of Piraeus, Greece)

This paper examines whether wage reforms affect the dispersion of wages, particularly at the lower tail of the wage distribution, from the average wage of every occupation in an economy. We construct a novel "within-occupation" measure of wage dispersion, using a Greek dataset between 2010 and 2020. Using modern difference-in-difference analysis for causal inference, our findings show non-symmetrical effects on wage dispersion when a minimum wage reform is imposed. An upward wage rigidity in the lower tail of wage distribution drives the impact of 2019 minimum wage increase on wage dispersion, while the absence of downward wage rigidity explains the insignificant impact of a minimum wage cut in 2012 on wage dispersion. Our paper equips policymakers with a solid understanding of the effects of minimum wage reforms on the wage inequality at the bottom segment of the labor market.

The Effect of Public Capital on Trend GDP and its Dependence on Country Characteristics

Josef Hollmayr (Deutsche Bundesbank, Germany) and
Natascha Hinterlang (Deutsche Bundesbank, Germany)

This paper analyses how country characteristics including macroeconomic as well as socioeconomic conditions affect the relationship between public capital and trend GDP. We do so by estimating a panel conditionally homogenous vector-autoregressive (PCHVAR) model for a sample of 16 industrialized countries over the period from 1965 to 2013. The model allows us to capture structural cross-country heterogeneities, yielding country- and period-specific impulse responses to a shock in public capital. We find that the effect on trend GDP is larger for countries with lower interest rates, higher inflation, lower debt levels, a larger degree of inequality, a younger age structure and less economic freedom

Barriers to Entry and the Labor Market

Andrea Colciago (De Nederlandsche Bank, The Netherlands and University of Milano Bicocca, Italy) and Marco Membretti (University of Pavia, Italy)

We provide evidence showing that a tightening in entry regulation depresses the job creation of new firms and boosts that of incumbents, resulting in a persistent rise in employment concentration at large firms. In the short run, the reallocation process is expansionary. In the long run, missing job creation from new firms leads to a higher unemployment rate. To rationalize these empirical findings, we propose a model that integrates the theory of firm boundaries, through diminishing marginal returns, into a framework with search and matching frictions in the labor market.

Demographic Aging and the New Keynesian Phillips Curve

Gene Ambrocio (Bank of Finland)

I document a statistical link between old-age dependency ratios and average markups. I propose that a mechanism whereby households develop deep habits in consumption as they age could explain this feature of the data. I show that when this mechanism is embedded in an overlapping generations New Keynesian model, the slope of the New Keynesian Phillips Curve flattens as the population ages. Further, the contractionary effects of monetary policy surprises on output are amplified. These results suggest that the challenges faced by monetary policy may become more pronounced as populations age.

Parallel Session 3C: Exchange Rate Economics I

FX Dealer Constraints and External Imbalances

Jantke de Boer (Ruhr University Bochum, Germany) and Stefan Eichler (TU Dresden, Germany)

We study the relationship between the financial sector and exchange rates by empirically testing the model predictions of Gabaix and Maggiori (2015) that tighter financial constraints of intermediaries lead to increased currency risk premia. Using balance sheet data from the ten largest FX dealer banks spanning 2004 to 2021, we construct an intermediary constraints index that reflects the risk-bearing capacity of intermediaries. The innovations in the intermediary constraints index explain cross-sectional variation in returns to currency portfolios sorted by countries' net foreign assets. Our results imply higher (lower) intermediary risk premia for currency portfolios of net external debtors (creditors) that pay low (high) returns when constraints are tightening. When constraints tighten, currencies of countries with low net foreign assets tend to depreciate, whereas those with high net foreign assets tend to appreciate. This depreciation is especially pronounced for emerging market currencies and in cases where countries have large outstanding net debt liabilities and low foreign exchange reserves.

The Macro Neutrality of Exchange-Rate Regimes in the Presence of Exporter-Importer Firms

Cosimo Petracchi (Tor Vergata University of Rome, Italy)

I characterize exchange-rate regime breaks for thirty countries between 1960 and 2019, and I establish that while they affect the volatilities of nominal and real exchange rates they do not change the volatilities of other real macro variables. This is true even in countries in which exports and imports represent a large component of gross domestic product. I propose a model with exporter-importer firms which matches the behavior of nominal and real exchange rates and real macro variables across exchange-rate regimes, even for economies in which the sum of exports and imports exceeds gross domestic product.

Global Value Chain Participation and Exchange Rate Pass-through

Georgios Georgiadis (European Central Bank, Germany), Johannes Gräb (European Central Bank, Germany) and Makram Khalil (Deutsche Bundesbank, Germany)

This paper draws a causal link between the rise of global value chain participation (GVCP) and the decline of exchange rate pass-through (ERPT) to import prices since the 1990s. We first illustrate in a structural multi-country model how greater trading-partner GVCP can reduce a country's ERPT to import prices, both due to re-imports of domestic value added and third-country value added provision. We then estimate instrumental variable regressions using adopted trade agreements as instruments for economies' GVCP in a cross-country panel dataset of advanced economies for the time period from 1995 to 2014. Consistent with the mechanism spelled out in the structural model, we find that ERPT to export prices has been higher in economies which exhibit greater GVCP, and that ERPT to import prices has been lower in economies whose trading partners exhibit greater GVCP.

Intrafirm Trade and Exchange Rate Pass-Through

Andreas Freitag (Swiss National Bank and University of Basel)

About 30% of global trade is intrafirm, that is trade within the borders of multinational enterprises. I document differences in the exchange rate pass-through (ERPT) between intrafirm and arm's length trade prices as a function of the dominant invoicing currency used in trade. The result can account for different perceptions of the role of intrafirm trade across countries. For the analysis, I develop a measure of intrafirm trade in customs records based on the name similarity between trading partners and exploit the sudden and large appreciation of Swiss franc against euro after an unexpected removal of the minimum exchange rate to analyze the divergent ERPT of intrafirm and arm's length trade. I find that the aggregate ERPT increases (decreases) with intrafirm trade if trade is predominately invoiced in local (producer) currency. I validate the results in a global panel and show that the differences in ERPT have allocative effects.

Parallel Session 3D: Fiscal Policy I

Macroeconomic-policy Interactions and the Effects of Fiscal Stimulus

Romain Houssa (University of Namur, Belgium) and Olivier Hubert (Banco de España)

We examine the impact of government deficit shocks on US sovereign yields, inflation and output conditioning on different fiscal and monetary policy stances between 1954Q3 and 2015Q1. We identify regime switches through Markov-switching regressions of fiscal and monetary policy rules, respectively. We use regime-dependent local projections to study the dynamic responses of bond yields, inflation and output to deficit shocks. Results are twofold. First, when only the fiscal rule is considered, a positive deficit shock during unsustainable (Fiscal Active) fiscal policy episodes increases bond yields by 35 basis points together with inflation. Conversely, a deficit shock in the sustainable (Fiscal Passive) fiscal pol-icy regime decreases bond yields. When monetary policy accommodates inflation, deficit shocks raise output after 12 quarters. The response of the yield curve exhibits regime-dependence. While yields responses in the Monetary Active - Fiscal Passive regime indicate a Level effect, the yield curve flattens in the Monetary Passive - Fiscal Active and Monetary Passive - Fiscal Passive regimes.

Public Debt and Inequality. Theorectical and Normative Considerations and Closer Look at Switzerland

Michael Graff (ETH Zurich, KOF Swiss Economic Institute, Switzerland)

Both public debt and social inequality are topics of lively debate. Both issues are inextricably linked to value judgements. Therefore, it is virtually an impossibility to reach general societal acceptance regarding the "right" extent of public debt and socio-economic inequality. A pronounced economic liberal basic conviction, for example, postulates that a dollar is in worse hands in the hands of the state than in the hands of private households and companies, with a few exceptions (judiciary, police and military). According to this view, the state should limit itself to observing the rules of the game, at most finance some basic research and infrastructure that is not lucrative for private companies, but otherwise give priority to private market initiatives and ideally not get into debt at all. The opposing position sees the state much more strongly in charge and traditionally calls for social security, generally accessible education, affordable housing and demand stimulation during economic downturns. For some time now, the conversion to an ecological economy and way of life has also been part of this repertoire. In the absence of taxes or other state revenues, debt is definitely an option from this perspective. State redistribution to correct a politically undesirable degree of inequality in income and wealth is caught between the two positions. Those who would rather see a thrifty state will argue for great restraint, since social transfers are usually costly and tend to require state borrowing. Those who would rather see a more egalitarian society will be more lenient towards debt. In order to better understand the options for action, this paper first looks at the discussions on public debt and social inequality and summarises them briefly. Then, using the available statistical data for Switzerland, we bring into focus the possible connection between these two issues. In doing so, we look at the available data and ask which of the assumptions about the possible links between government debt and inequality are compatible with them.

The Determinants of Haircuts in Sovereign Debt Crises

Dominik Maltritz (University of Erfurt, Germany)

We analyze the determinants of the amount of haircuts, i.e., the loss given default, on sovereign debt using a comprehensive data set that comprises observations over the past four decades. We can explain the very high variation between observed haircuts to a large extent, as R-square values of approximately 65% indicate. Countries' general capacity to pay, measured by the relationship between GDP and debt, but also and especially the external payment capacity, approximated by trade balance and openness, impact the size of the haircut. Also the total GDP, which is an indicator of countries' economic size and negation power, matters. However, we find strong evidence for non-linear effects. We also confirm an impact of past haircuts and a time trend towards higher haircuts. We cannot confirm differences between haircuts for different world regions. Also, change (growth) of the variables (in contrast to levels) do not matter in the most cases.

Fiscal Multipliers in a Permanent Liquidity Trap

Alice Albonico (University of Milano - Bicocca, Italy), Guido Ascari (University of Pavia, Italy) and Alessandro Gobbi (University of Milan, Italy)

We consider a small-scale overlapping generations model where the zero lower bound on interest rates is always binding. We estimate the model for the Japanese economy, accommodating both active and passive fiscal policy scenarios. Our findings reveal a predominantly passive fiscal policy stance during the period spanning from 1995 to 2019. We compute ex-ante and ex-post fiscal multipliers for various policy instruments. Under the backdrop of passive fiscal policy: i) Government spending multipliers exhibit values below one. ii) A reduction in lump-sum taxes results in a modest decrease in output. iii) In general, multipliers are lower compared to an active fiscal policy regime, except for labor taxes, where the opposite is observed.

Parallel Session 3E: Environmental, Social and Governance I

Moderating Effects of Corporate Social Responsibility on Credit Risk: Evidence from Peer-to-Peer Lending

Evzen Kocenda (Charles University, Czech Republic) and
Svatopluk Kapounek (Mendel University, Czech Republic)

We investigate the moderating effects of Corporate Social Responsibility on credit risk activities demonstrating the impact on peer-to-peer lending projects. We use a comprehensive dataset covering over 850,000 projects across 55 countries from 2005 to 2018 and show that CSR activities moderate the negative effect of credit risk on peer-to-peer lending project success in general. Country-level differences emphasize the impact of institutional quality, peer-to-peer platform regulation, and overall economic development.

The Impact of Compulsory Carbon Disclosure Regulation on Operating Lease Activities

Maria-Eleni K. Agoraki (University of the Peloponnese, Greece), Chen Huang (Queen Mary University of London, UK), Tam D Nguyen (University of Bath, UK), and Yu Zhang (University College Dublin, Ireland)

Using a sample of S&P500 companies spanning the period from 2000 to 2019, our study examines the impact of the 2010 Greenhouse Gas Reporting Program (GHGRP) on the financing choice between lease and buy options. We find that firms falling under the regulatory scope of GHGRP show a greater inclination towards operating lease activities. This effect is particularly pronounced for firms emitting higher levels of carbon dioxide or belonging to the top ten carbon-intensive industries. Furthermore, our findings indicate that (i) debt and lease are supplementary to each other, and (ii) financially constrained firms tend to use more operating lease in the post-GHGRP period. Additionally, we observe a negative correlation between CEO risk incentives and the proportion of lease financing to total assets. Our results shed light on how the climate change uncertainty – i.e., transition risk, can affect a firm's financing decisions.

The Costs of Being Sustainable

Emanuele Chini (University of Luxembourg), Roman Kräussl (Bayes Business School, UK; Hoover Institution at Stanford University, USA; CEPR, UK) and Denitsa Stefanova (University of Luxembourg)

We assess the sustainability footprint of mutual funds through the holdings they have. Rather than relying on ESG metrics, we define the sustainability of a company by its impact on the 17 UN's Sustainable Development Goals (SDGs). We document that mutual funds performing well according to the economy & infrastructure and social progress SDG dimensions experience higher abnormal returns, while the opposite impact—returns relationship holds for environment and basic needs. Institutional investors appear to infer the relation between different sustainability dimensions and fund abnormal returns and reflect it in their allocation decisions. Funds with increased sustainability performance in less profitable SDG impact domains experience capital outflows. Funds that improve their sustainability standing in areas with positive impact—return relationship attract institutional investor flows. The institutional investors' taste for remunerative sustainability that we document cannot be revealed using standard ESG metrics.

ESG Ratings and Firms' Financing Decisions

Roman Kräussl (Bayes Business School, UK; Hoover Institution at Stanford University, USA; CEPR, UK), Joshua Rauh (Stanford Graduate School of Business, USA), Denitsa Stefanova (University of Luxembourg)

We study the effects of ESG ratings on firms' security issuance decisions. We develop a dataset based on Refinitiv's point-in-time (PIT) ratings product that ensures we are only considering ratings actually available to investors as of the time of financial decisions. We find that higher environmental scores (the "E" component of ESG) are associated with increases in equity issuance and decreases in debt issuance, without increasing the firm's overall capital. There is therefore no evidence that changes in ESG scores either affect a firm's opportunity cost of capital for new investments or relax financing constraints, although changes in ESG scores (and "E" scores in particular) may change the relative prices of issuing different types of securities. We document numerous false inferences that would be made about capital raising if using the standard Refinitiv product instead of the PIT data. We also demonstrate that there are no apparent effects of ESG scores on stock returns as measured by alphas in standard 4-factor asset pricing models.

Parallel Session 3F: Financial Markets I

The Impact of CEO Ethnic Cultural Identity on Foreign Investments: Evidence from Cross-Border Acquisitions

Miriam Marra (University of Reading, UK), Dimitris Petmezas (Durham University, UK), Jing Ruan (University of Reading, UK) and Chao Yin (University of Edinburgh, UK)

Focusing on CEOs' ethnic cultural identity (ECI), this study investigates whether CEO-specific cultural values affect cross-border acquisitions. Regardless of the immigration time of CEOs' ancestors to the US, acquirers are more likely to bid for a target firm in their CEOs' ancestral country of origin. The CEO ECI also increases the probability of completed deals, revealing a matching preference when acquirer's CEO ethnic cultural identity and target firm both originate from the same country. Additionally, it does not affect acquirer's announcement stock returns. Collectively, these results support an ethnic cultural homophily channel and reject information advantage or agency costs explanations.

The Gnomes of Zürich and the New York Bankers' Panic of 1907

Thomas Nitschka (Swiss National Bank, Switzerland)

The New York Bankers' Panic of 1907 affected Swiss stock prices earlier than previous studies of the international spillovers of this crisis suggest. Using a unique dataset of daily returns on all Swiss stocks traded on the Zurich exchange, I show that key events, such as the news about the collapse of United Copper, the bankruptcy of the Knickerbocker Trust and the New York Clearing House suspending convertibility of deposits into gold, are associated with abnormally low daily returns on Swiss banks' stocks. Returns on stocks of Swiss firms from other sectors did not significantly respond to those events.

Stock Price Crash Risk and the Managerial Rhetoric Mechanism: Evidence from R&D Disclosure in 10-K filings

Panayiotis C. Andreou (Cyprus University of Technology, Cyprus), Neophytos Lambertides (Cyprus University of Technology, Cyprus), Marina Magidou (Open University of Cyprus)

We utilize narrative disclosure in the Management Discussion and Analysis (MD&A) section of 10-K filings that emphasize forward-looking research and development (R&D) activities, as a proxy for managerial rhetoric. We employ a firm's future growth opportunities and use ChatGPT as an interpretive tool to demonstrate that this proxy is contextually relevant and aligns with cues indicative of investor optimism. Most notably, we conduct a battery of empirical tests supporting that the managerial rhetoric proxy is positively related to future idiosyncratic stock price crashes. This positive relation is driven by the sample of firms that face heightened competition, have weaker anti-takeover provisions and are followed by analysts. Intriguingly, stronger internal corporate governance does not appear to attenuate the positive managerial rhetoric-crash risk relation. Our findings underscore the existence of a rhetoric mechanism that managers strategically exploit to disseminate information that hypes investors' expectations and inflates a firm's stock price beyond its intrinsic value.

Public Attention to Gender Equality and Stock Market Returns

Jonathan Peillex (ICD Business School, Ireland) and Imane El Ouadghiri (Pôle Universitaire Léonard de Vinci, France)

We examine the effect of public attention to gender equality on returns on two U.S. pro-gender diversity stock indices (the MSCI USA Women's Leadership and the Morningstar Women's Empowerment index) in comparison to their traditional counterparts (the MSCI USA and the Morningstar USA index) over the 2017-2022 period. We consider several measures of public attention to gender equality: (1) the U.S. daily Google Search Volume Index for different keywords related to gender equality, (2) the number of daily visits to specific Wikipedia pages devoted to gender equality, and (3) the daily number of news stories related to this phenomenon. We provide robust evidence of positive effect of public attention to gender equality on returns on U.S. pro-gender diversity stock indices. We attribute this result to an increasing investor's preferences for owning stocks of companies that promote gender diversity in the workplace during periods of high public attention to gender equality. This finding which is robust to a battery of alternative estimation methods and proxies offers important managerial and public policy implications.

Parallel Session 4A: European Economic Review II

Does Monetary Policy Transparency Aid Technological Knowledge?

Aikaterini Karadimitropoulou (University of Piraeus, Greece), Claire Economidou (University of Piraeus, Greece), Alexandros Bechlioulis (University of Ioannina, Greece), and Evangelos Dioikitopoulos (Athens University of Economics and Business, Greece)

This paper studies the role of central bank transparency in shaping the real economy through the innovation channel, both from the input and output (patents) side, which is an essential driver of economic growth. Based on a panel of 44 developed and developing countries over the period 1999-2019 and a fixed effects identification and appropriate instrumentation strategy, we provide three novel results. Firstly, markets with high degree of financial sophistication and trust do not require tremendous central bank information disclosure in order to observe positive effects on R&D investment. In contrast, when financial sophistication is low and institutional distrusts prevails, channeling large information to the market is necessary for the economy to increase R&D investment. Secondly, while transparency is important for both developed and developing countries, the effect on innovation is an inverse U-shape for the former, and a U-shape for the later. Those findings demonstrate the existence of an optimal monetary policy transparency level. Finally, our results suggest that policymakers should focus on the economic and operational transparency in developed countries, and on procedural transparency in the developing countries, as those particular aspects of transparency are more conductive to R&D activity.

Persistent Slumps: Innovation and the Credit Channel of Monetary Policy

Raoul Minetti (Michigan State University, USA), Elton Beqiraj (Sapienza University of Rome, Italy), Qingqing Cao (Michigan State University, USA) and Giulio Tarquini (Sapienza University of Rome, Italy)

Monetary policy is increasingly found to exert long-run effects on the aggregate economy. We investigate the long-term effects of monetary policy through the credit channel. We develop a dynamic general equilibrium model with financial intermediaries and endogenous innovation in which credit frictions constrain firms' investment and R&D expenses. Following an adverse monetary shock, the tightening in lending conditions for the innovation sector generates sizeable long-term effects, turning the shock into a persistent stagnation. We quantify the contribution of this transmission channel to productivity and output hysteresis. We then characterize the monetary policy tradeoffs between short- and long-term targets, showing that the control of inflation can entail a growth slowdown. The results are consistent with Bayesian VAR estimates of the responses of credit and innovation aggregates to monetary shocks.

Unit Cost Expectations and Uncertainty: Firms' Perspectives on Inflation

Brent H. Meyer (Federal Reserve Bank of Atlanta, USA) and
Xuguang (Simon) Sheng (American University, USA)

We propose a novel survey-based measure of nominal marginal cost expectations held by business decision makers to track building inflationary pressures and augment the existing set of inflation expectations data policymakers frequently monitor. Unlike other surveys of firms or households that elicit “aggregate” expectations, we focus on idiosyncratic costs that firms are well-aware of, plan for, and matter for price setting. We document five key findings. First, once aggregated, firms’ unit cost realizations closely comove with U.S. inflation statistics. Second, in aggregate, firms’ unit cost expectations significantly outperform households’ inflation expectations when inflation is low and are at least as accurate as the expectations of professional forecasters in out-of-sample forecasting exercises. Third, we find that up until early 2020, the evolution of firms’ views was similar to other survey and market-based measures of inflation uncertainty. Fourth, utilizing special questions, we find evidence that information treatments about aggregate inflation and policymakers’ forecasts do little to alter firms’ unit cost expectations. And, lastly, we show that unit costs, at the firm level, are an important determinant of their own price setting behavior.

Global Value Chains and the Phillips Curve: a Challenge for Monetary Policy

Daniele Siena (Politecnico di Milano, Italy), Anna Florio (Politecnico di Milano, Italy) and Riccardo Zago (Banque de France)

This paper shows that participation in Global Value Chains (GVCs) have important effects on the ability of monetary policy to control inflation. This is due to the fact that GVCs change the elasticity of inflation to economic slack, the slope of the Phillips Curve (PC). Using (i) country data within the European Monetary Union (EMU) --to estimate a regional Phillips Curve-- (ii) exploiting exogenous shifts in GVCs --as the Covid-19 shock-- and (iii) using monetary policy shocks as demand shifts, we show that countries experiencing a substantial increase in GVCs participation exhibit a flatter PC afterwards. Theoretically, GVCs could change the slope of the Phillips curve either ways. Showing that positioning in GVCs does not determine the slope of the PC, we highlight that the main channel through which GVCs affect the PC is variable markups.

Parallel Session 4B: Financial Econometrics II

The Power of Many: The Procrustes Approach to Proxy-SVAR Identification with Multiple Instruments

Srecko Zimic (European Central Bank, Germany) and Skander Garchi Casal (Morgan Stanley)

This paper proposes a novel methodology to identify structural VARs using multiple proxy instruments. The proposed methodology does not impose any restrictions on the total number of proxy variables used and allows for the incorporation of plausibly exogenous and/or weak instruments. In a nutshell, our method identifies the VAR by matching a targeted relationship between shocks and instruments. Monte Carlo experiments suggest, among other things, that using a complete set of instruments (meaning at least one instrument per shock) improves the identification for the entire system of shocks. Additionally, using instruments for individual shocks with lower cross-correlations seems to alleviate endogeneity problems. We apply our method to a small-scale VAR identifying demand, supply, and monetary drivers in US data.

On Bayesian Filtering for Markov Regime Switching Models

Nigar Hashimzade (Brunel University, UK), Oleg Kirsanov (University of Glasgow, UK), Tatiana Kirsanova (University of Glasgow, UK) and Junior Maih (Norges Bank, Norway)

This paper presents a framework for empirical analysis of dynamic macroeconomic models using Bayesian filtering, with a specific focus on the state-space formulation of New Keynesian Dynamic Stochastic General Equilibrium (NK DSGE) models with multiple regimes. We outline the theoretical foundations of model estimation, provide the details of two classes of powerful multiple-regime filters, IMM and GPB, and construct corresponding multiple-regime smoothers. A simulation exercise, based on a prototypical NK DSGE model, is used to demonstrate computational robustness of the proposed filters and smoothers and evaluate their accuracy and speed. We show that the IMM filter is faster than the commonly used Kim and Nelson (1999) filter and is no less, and often more, accurate. Using it with the matching smoother improves the precision in recovering unobserved variables by about 25%. Furthermore, applying it to the U.S. 1947-2023 macroeconomic time series, we successfully identify significant past policy shifts and recent policy events post Covid-19. Our results demonstrate the practical applicability and potential of the proposed routine in macroeconomic analysis.

Greek GDP Forecasting Using Bayesian Multivariate Models

Ioannis Krompas (NBG Economic Research and Panteion University, Greece) and Zacharias Bragoudakis (Bank of Greece and National and Kapodistrian University of Athens, Greece)

Building on a proper selection of macroeconomic variables for constructing a Gross Domestic Product (GDP) forecasting multivariate model (Kazanas, 2017), this paper evaluates whether alternative Bayesian model specifications can provide greater forecasting accuracy compared to a standard Vector Error Correction model (VECM). To that end, two Bayesian Vector Autoregression models (BVARs) are estimated, a BVAR using Litterman's prior (1979) and a BVAR with time-varying parameters (TVP-VAR). The BVAR is found to have statistically significant forecasting gains against the benchmark and the TVP-VAR. Furthermore, the BVAR requires only minimal modifications to account for the effect of pandemic observations on its coefficients, and that is for the longer-term forecasting.

Parallel Session 4C: Financial Markets II

Revisiting the Performance of Marketplace Lenders: Evidence from Prosper Payment Data

Roman Kräussl (Bayes Business School, UK; Hoover Institution at Stanford University, USA; CEPR, UK), Zsofia Kräussl (Bayes Business School, UK), Joshua Pollet (University of Illinois at Urbana-Champaign, USA), and (Kalle Rinne, Mandatum, Luxembourg; University of Luxembourg)

Marketplace lending is by now a mature example for financial disintermediation. It has transformed the traditional financing process of consumer credit through a direct distribution channel of funds between borrowers and creditors. We have witnessed that marketplace lending has been becoming an attractive alternative for borrowers with different risk profiles. We also see examples of marketplace lending platforms turning into banks, diffusing therefore their business model under the regulatory umbrella. This paper assesses the performance of a still active marketplace for lending and uses proprietary cash flow data of payments to compare performance of two different marketplace lending platforms that dominated the US market of credit disintermediation between 2007 and 2017. As institutional lenders would form broad portfolios to benefit from diversification, and the securitization of personal loans is taking higher momentum, we address if there existed a platform-specific factors that affect the performance of loan portfolios. We find that both marketplace platforms offer uniquely high returns in general terms. Moreover, we detect risk-driven performance effects for different borrower segments. Our findings indicate that the borrower risk-dependent performance is due to the segmentation of the marketplace lending sector, rather than to the rise of competition. We therefore suspect that household loan portfolios can be treated as a new, emerging asset class for institutional investors.

Market Disappointment with Central Bank Announcements

Matthieu Picault (University of Orléans, LEO, France) and Julien Pinter (University of Alicante, FAE, Spain)

We build an index of market disappointment with central bank announcements for both the FeD and the ECB. To measure disappointment, we use the content of key financial newspapers and use advanced text-mining methods to detect sentences conveying disappointment. We employ a new NLP model that is found to outperform GPT 3.5 in our context of paraphrase detection. Our index allows us to unveil new facts about the market response to central bank announcements. First, we document important asymmetries between the market's preferred policy and the central bank actual policy. About 20\% of central bank announcements are disappointing to market participants, predominantly stemming from the absence of easing measures. Second, we find that market disappointment lead to changes in monetary policy rule perceptions quicker than previously documented using monetary policy surprises. Third, we find that market disappointments lead to drop in next day stock returns and increases in volatility. The effect is economically important and is present for both the FeD and the ECB, controlling for standard monetary policy surprise measures. The reversal pattern and further analysis suggest that this effect goes through investor sentiment.

Attention and Sentiment of Scheduled Macroeconomic News Announcements: Forecasting the Volatility on the U.S. Equity Market

Martina Halousková (Masaryk University Brno, Czech Republic) and Štefan Lyócsa (Masaryk University Brno, Czech Republic; Slovak Academy of Sciences, Slovakia; and University of Prešov, Slovakia)

Scheduled macroeconomic news announcements are known to be of interest to equity market participants, yet their role in out-of-sample predictions of price fluctuations is not documented for several reasons: i) macroeconomic news announcements are not frequent, ii) the exact timing of the announcement might change, iii) the market expectations about the announcement vary as it is unclear when such expectations are formed and how do they change prior to the news announcement, iv) news might be priced with prolonged time-period, v) the importance of a given news announcement (e.g. inflation) might change over time due to turning-points or unexpected changes or under different market conditions. In this study, we recognise that interest towards a given macroeconomic news is spread over time, potentially peaking around the news announcement. Instead of timing the news, we estimate attention and sentiment of the general public with regard to ten scheduled macroeconomic news announcements that we retrieve from multiple data sources. The resulting attention and sentiment series does not suffer from the limitations listed above. Consequently, we show that by using machine-learning methods, we are able to improve volatility forecasts of over 400 major U.S. stocks. We extract attention and/or sentiment from social media, news articles, information consumption, and search engine. Working within the penalized regression framework, complete sub-set regression framework, and random forest, we find that measures of general attention retrieved from Google Trends, indicators of positive macro-event specific sentiment, and negative emotions extracted from newspaper articles drive future price fluctuations. One of our key

results is that models that use sentiment related to macroeconomic news announcements consistently improve volatility forecasts across all economic sectors, with the most remarkable improvements in days of extreme price variation.

Non-bank Financial Intermediaries and Euro Area Fragmentation

Pablo Anaya Longaric (European Central Bank, Germany), Katharina Cera (European Central Bank, Germany), Georgios Georgiadis (European Central Bank, Germany) and Christoph Kaufmann (European Central Bank, Germany)

We study whether investment funds exert a (de-)stabilizing force in euro area sovereign debt markets during fragmentation risk episodes, understood as shocks to the beliefs about the probability of a rare euro-related disaster. We exploit monthly security-level holdings data for approximately 6,500 investment funds for the period 2007-2022. The nature of the dataset allows us to control for entry/exit into the fund sector, liquidity supply shocks, changes in fund-manager preferences and fund investor base. Using approximately 1,000,000 fund-issuer observations, our key findings are that in response to fragmentation risk shocks: (i) funds divest from periphery debt but do not invest more in core debt; (ii) funds are less likely to start holding and more likely to stop holding periphery debt; (iii) less euro-area-sovereign-debt-savvy funds exhibit greater sensitivity; (iv) the shedding of periphery debt is confined to euro-denominated bonds and bonds with longer residual maturities.

Parallel Session 4D: Prices and Inflation II

Fiscal Multipliers, Trend Inflation, and Endogenous Price Stickiness: Evidence from the U.S.

Ilya Gulenkov (Higher School of Economics, Russian Federation)

A post-COVID surge in inflation in the U.S. has already changed the behaviour of economic agents, which opens the possibility of entering a regime of higher structural inflation than before. While the impact of trend inflation on monetary policy is well-studied, it has been largely overlooked when it comes to fiscal policy analysis. This study analyzes the fiscal transmission under different inflation regimes. We use a New Keynesian model with habits in consumption and endogenous price stickiness to generate predictions about fiscal policy under non-zero trend inflation. The empirical analysis based on smooth transition local projections reveals considerable differences in the effect of fiscal shocks across inflation regimes. In a high inflation environment, the cumulative multiplier peaks at 0.3 and crowds in consumption, while in a low inflation regune the effect reaches 0.87 and consumption is crowded out. In a high trend inflation regime, fiscal shocks are more inflationary, which speaks in favour of state-dependent pricing. The benchmark structural model fails to accurately capture the fiscal transmission, suggesting that changes have to be made to adapt the NK framework for fiscal policy analysis under non-zero trend inflation.

Forward Guidance Puzzle and Anchored Inflation Expectations

Alexandra Drobysheva (HSE University, Russia) and Sergey Merzlyakov (HSE University, Russia)

In recent years, central banks have increasingly turned to forward guidance as a central tool of monetary policy. This paper investigates the model in which the power of forward guidance is highly sensitive to the degree of anchoring of inflation expectations and the central bank's ability to maintain price stability. To this end, agents have an imperfect understanding of the inflation process and construct their forecasts by solving signal extraction problem for unobserved trend inflation. The introduction of boundedly-rational equilibrium with positive and time-varying trend inflation provides a possible resolution to forward guidance puzzle. Moreover, a more hawkish monetary policy serves to endogenously anchor expectations and approximates the model-implied forecasts to observed data in presence of the forward guidance shocks. However, the extremely strong response of monetary policy to inflation casts doubt on the central bank's ability to influence macroeconomic equilibrium through forward guidance.

Belief Distortions and Disagreement about Inflation

Valeria Patella (Sapienza University Rome, Italy) and Giuseppe Pagano Giorgianni (Sapienza University Rome, Italy)

Disagreement in households' beliefs correlates with expectations, forecast errors, and inflation. Using the microdata of households' one-year-ahead inflation expectations from the Michigan Survey of Consumers, we estimate a Phillips Curve under heterogeneous beliefs and assess - by functional data analysis - the contribution of disagreement in explaining inflation compared to mean expectations. Then, local projections simulate a model-consistent belief wedge shock (in systematic deviation from rational expectations) and show that the cross-sectional dispersion of beliefs has quantitatively large effects on inflation in the presence of beliefs' distortions. An increase in pessimism generates upward biases in inflation forecasts, increased disagreement, and higher inflation. In contrast, disagreement does not matter for inflation in response to a standard supply shock.

The Effect of Inflation Expectations on Consumption in a New Keynesian Framework: Revisiting the Underlying Assumptions

Frantisek Masek (Sapienza University of Rome, Italy; European Central Bank, Germany)

The article disentangles the assumptions behind a positive response of the current consumption on changes in inflation expectations in the New Keynesian framework. I show that the standard result of a positive reaction hinges upon the ability of households to propagate expected higher inflation into higher nominal wages. I decompose the total consumption reaction into the intertemporal substitution effect and the income effect. I also highlight the key role of labour supply and discuss the importance of the income effect stemming from the presence of profits in RANK models. The results are compared to a stylized version of a HANK model which does not feature the income labour supply effect due to profits. While the consumption response stays always positive in the RANK model and varies only quantitatively, the total effect in the HANK model may switch between zero, positive or negative depending on the value of the elasticity of intertemporal substitution (EIS)/labour supply income effect parameter. I compute the necessary passthrough of expected higher price level into expected nominal wages to reach a positive consumption response for realistic values of the EIS. I also discuss the role of myopia.

Parallel Session 4E: European Economics III

Marrying Fiscal Rules & Investment: a Central Fiscal Capacity for Europe

Francesca Vinci (European Central Bank, Germany) and Christopher Schang (European Central Bank, Germany and European University Institute, Italy)

The European fiscal governance framework remains incomplete, leading to challenges in coordinating policy responses when facing economic shocks, and hampering the transmission of the single monetary policy. High public debt and heterogeneity in fiscal space also result in pro-cyclical and chronically low public investment. Several policy-makers, institutions and academics share the view that the establishment of a central fiscal capacity (CFC) would be an important step forward. In this paper, we provide a framework to quantitatively assess a proposal for a CFC in the euro area, aimed at stabilizing the business cycle, promoting sovereign debt stabilisation as well as stimulating public investment. We develop a two-region DSGE model with a permanent CFC that allocates resources based on the relative output gap of the two regions while earmarking a fraction for public investment and imposing fiscal adjustment requirements for the high debt region. We find that the introduction of the CFC leads to enhanced business cycle stabilisation, reduced procyclicality in public investment and welfare improvements for both regions. The analysis also explores modelling extensions to finance the CFC through European bond issuance and implement an active supranational investment strategy by providing European public goods (EPGs).

Tightening Monetary Policy and Investment Dynamics in the European Monetary Union: Firm- and Country-Level Heterogeneity

Paolo Canofari (Università Politecnica delle Marche, Italy), Marco Cucculelli (Università Politecnica delle Marche, Italy), Alessandro Piergallini (Università degli Studi di Roma Tor Vergata, Italy) and Matteo Renghini (Università Politecnica delle Marche, Italy)

We employ firm-macro matched data on small and medium-size enterprises in the European Monetary Union to study the investment response to tight monetary policy shocks. We show that firms with higher financial expenses, higher leverage, and longer debt maturity are more negatively responsive to monetary restrictions. Capital structure significantly affects monetary policy transmission: a leverage ratio one percentage point larger than average implies a semi-elasticity of investment to a nominal interest rate hike approximately one-tenth higher two years following the monetary shock and, overall, four years more persistent. We further argue that the investment response to monetary contractions is heterogeneous not only with respect to the firm-level financial structure but also in relation to the country-specific financial and productive conditions. Specifically, we show that the investment semi-elasticity to rate hikes significantly increases in countries characterized by higher frictions in accessing the credit market and in countries featured by either a larger share of small-size firms or a larger share intangibles.

Investment Funds, Risk-taking, and Monetary Policy in the Euro Area

Margherita Giuzio (European Central Bank, Germany), Christoph Kaufmann (European Central Bank, Germany), Ellen Ryan (European Central Bank, Germany) and Lorenzo Cappiello (European Central Bank, Germany)

We examine the transmission of monetary policy via the euro area investment fund sector using a Bayesian vector autoregressions framework. We find that expansionary shocks are associated with net inflows and that these are strongest for riskier fund types, reflecting search for yield among euro area investors. Search for yield behaviour by fund managers is also evident, as they shift away from low yielding cash assets following an expansionary shock. While higher risk-taking is an intended consequence of expansionary monetary policy, this dynamic may give rise to a build-up in liquidity risk over time, leaving the fund sector less resilient to large outflows in the face of a crisis.

Are Risk-sharing Channels Complements or Substitutes? Evidence from the United States and the Euro Area

Jacopo Cimadomo (European Central Bank, Germany), Massimo Giuliodori (University of Amsterdam, The Netherlands), Andras Lengyel (Bank of England, UK) and Haroon Mumtaz (Queen Mary University of London, UK)

In this paper, we propose a time-varying parameter panel VAR model, with stochastic volatility, which allows us to assess how the the main risk-sharing channels identified in the literature - i.e., the capital, credit and fiscal channels - have evolved over time in the United States and the Euro Area. Based on this time-varying framework, we develop a new test to evaluate whether these channels have operated as substitutes or complements. We document that risk-sharing has constantly improved in the United States. However, this improvement has halted since mid-2000s. In the Euro Area, risk-sharing has remained overall weak. We show that - in both areas - the credit and capital channels tend to move in opposite directions, thus signalling substitutability. Finally, we document evidence of complementarity between the fiscal channel and private channels, thus supporting the Farhi and Werning (2017)'s hypothesis that the presence of a fiscal union could be beneficial for private risk-sharing.

Parallel Session 4F: Monetary Theory and Policy II

Take it and Leave it: The Effects of Targeted Longer-term Refinancing Operations on Banks' Balance Sheets

Michael Sigmund (Oesterreichische Nationalbank, Austria), Johannes Wächtler (Deutsche Bundesbank, Germany), Philip Schuster (Oesterreichische Nationalbank, Austria), Robert Ferstl (Oesterreichische Nationalbank, Austria) and Maria Teresa Valderrama (Oesterreichische Nationalbank, Austria)

We set up a dynamic optimization model to assess the effects of the European Central Bank's (ECB) targeted longer-term refinancing operations (TLTRO) on banks. We show that key factors influencing TLTRO outcomes are the costs that incur when a bank adjusts its balance sheet structure, and the spread between the TLTRO rate and the Deposit Facility Rate. For three different cases of adjustment costs and portfolio separation, we derive the solutions expressed as policy functions. Using monthly data from 200 large euro area banks spanning from 2007 to 2021, we then estimate these policy functions. Our empirical results indicate the presence of adjustment costs and that banks increase central bank liquidity, particularly after the TLTRO III program in 2019 where the ECB implemented a reversal of its policy rates, by setting the TLTRO rate below the ECB Deposit Facility Rate. Simultaneously, banks mainly expand their central bank assets. Hence, the TLTROs were not as effective as expected in stimulating lending to the private sector, but TLTROs have improved banks' profitability, which has been severely affected by the negative interest environment.

Monetary Policy Autonomy and Spillover Effects in an Integrated World: A Novel Network-based Indice

Cristina Badarau (University of Bordeaux, France), Vanessa Olakemi Dovonou (World Bank Group, USA) and Camelia Turcu (University of Orléans, France)

This paper revisits the traditional Taylor rule for the monetary policy under the dominant currency paradigm. Starting from empirical evidence for open economies, it proposes a new hybrid monetary rule able to characterize regimes with different degrees of monetary autonomy. We integrate it into the theoretical framework of Gopinath et al. (2020) and seek to identify an optimal degree of monetary autonomy/exchange rate flexibility that ensures the best stabilization of national variables in the case of adverse foreign monetary shocks. Contrary to the traditional trilemma, we find that this optimal situation corresponds to an intermediate regime with ”partial” central bank autonomy and ”managed” exchange rate. The adoption of such a regime can explain the high sensitivity of many countries’ interest rates to the US rates.

Risk Sharing and Monetary Policy Transmission, Théodore Renault (European Central Bank, Germany)

Sebastian Hauptmeier (European Central Bank, Germany) and Fédéric Holm-Hadulla (European Central Bank, Germany)

Using regionally disaggregated data on economic activity, we show that risk sharing plays a key role in shaping the real effects of monetary policy. With weak risk sharing, monetary policy shocks trigger a strong and durable response in output. With strong risk sharing, the response is attenuated, and output reverts to its initial level over the medium term. The attenuating impact of risk sharing via credit and factor markets concentrates over a two-year horizon, whereas fiscal risk sharing operates over longer horizons. Fiscal risk sharing especially benefits poorer regions by shielding them against persistent output contractions after tightening shocks.

The Natural Rate of Interest: Selective Conceptual Differences among Wicksell, von Mises and Woodford and Implications for its Estimation and Monetary Policy

Francisco Nadal De Simone (United Business School, Belgium)

Interest in Wicksell's natural rate of interest (NRI) rekindled after Woodford's put it into a modern macroeconomic setup. Recent NRI estimates from semi-structural and dynamic stochastic general equilibrium models display a declining NRI path during the last three to four decades. However, some time series' stylized features discussed in the literature raise questions about those estimates, including the relative stability of the real return on productive capital against the steady decline in real interest rates on safe assets used to estimate the NRI. The objective of this paper is to shed light on the possible causes of the challenge faced by NRI empirical estimates. It summarizes the literature on Woodford's interpretation of Wicksell's NRI and his 'cumulative process' and the divergence between Wicksell and von Mises on the interdependence between the market rate of interest and the NRI. This study contributes to the literature by arguing that considering von Mises' view of the interdependence between the financial market interest rate and the NRI and its business cycle theory can help understanding the challenge faced by NRI's estimates. A computation of the U.S. NRI is provided. Finally, a time-varying parameter FAVAR model is estimated over the 1980-2020 sample period, when the link between the interest rates and saving-investment determinants seems stable. The impulse-response functions show that monetary policy may have had a persistent downward influence on real interest rates increasing the gap with the real return on productive capital. There is evidence of several features of von Mises' business cycle theory. Implications include the need to pay attention to the evolution of the NRI concept in Wicksell's thinking and the differences with von Mises' business cycle theory when estimating the NRI. Moreover, given that the interaction between monetary policy and the financial sector can produce path

dependence, NRI estimates should control for it. These issues are of theoretical and policymaking importance with implications not only for economic dynamics and stabilization, but also for the theory of capital and, possibly, income distribution.

Parallel Session 5A: Macroeconomic Theory and Policy III

Market Concentration and Competition: New Insights from the Melitz Model

Andreas Hefti (Zurich University of Applied Sciences, Switzerland)

This paper provides detailed mathematical derivations of an extended version of the closed economy model of Melitz (2003). The extended model generalizes Melitz's (2003) result that supply side market concentration is unaffected by increasing international integration in the closed economy to a more general assumption on the parameter governing the returns to scale of firm technology. The paper adapts the approach of Hefti and Teichgr ¨aber (2022) and restates Melitz's (2003) monopolistic price competition as a competition for market shares. In so doing, the paper admits to tractably elicit specific inequality effects in Melitz (2003) and provides an extension of Hefti and Teichgräber's (2022) equilibrium model by allowing for dynamic firm entry. The paper then shows that under the standard assumptions in Melitz (2003) and Pareto distributed firm productivity, an increase in the entry fixed costs leads to more market inequality in terms of market shares and firm profit and that entry fixed cost and industry fixed costs have opposite effects on the number of varieties in the market.

GDP Revisions are not Cool: The Impact of Statistical Agencies' trade-off

Joan Paredes (European Central Bank, Germany), Stylianos Asimakopoulos (Brunel University London, UK), Magdalena Lalik (European Central Bank, Germany) and José Salvado García (European Central Bank, Germany)

Official estimates of economic growth are regularly revised and therefore forecasts for GDP growth are done on the basis of ever-changing data. The economic literature has intensively studied the properties of those revisions and their implications for forecasting models. However, the reasons for Statistical Agencies (SAs) to revise their estimates are not well understood. SAs estimates must be timely and reliable. Therefore, SAs are interested in not revising their initial GDP estimates too much, while they are much more open to revise GDP components over time. We exploit the resulting cross-correlation of GDP components revisions to build a model to better forecast GDP.

(Re)Evaluating Recent Macroeconomic Policy in the US

Tatiana Kirsanova (University of Glasgow, UK), Campbell Leith (University of Glasgow, UK), Celsa Machado (Polytechnic of Porto, Portugal) and Ana Paula Ribeiro (University of Porto, Portugal)

We build and estimate a small-scale DSGE model of the US, where policy is described as the strategic interaction between monetary and fiscal policy makers following targeting rules. We use this model to analyse the two episodes where interest rates hit their zero lower bound (ZLB). We find that changing fiscal policy objectives, adopting suitably designed fiscal packages or a temporary price level target could have generated a partial lift-o¤ from the ZLB following the financial crisis. However, under the latter two devices we would have returned to the ZLB. We find that the duration of the ZLB of 2020 was two quarters too long, and the Biden fiscal stimulus was inflationary, but even taken together, these factors do not wholly explain the recent hike in inflation, which instead is predominantly due to the lingering effects of Covid-era shocks.

The Effects of Uncertainty on the Current Account

Georgios Karras (University of Illinois at Chicago, USA), Davide Furceri (International Monetary Fund, USA) and Khatereh Yarveisi (University of Palermo, Italy)

This paper uses the World Uncertainty Index (WUI) to estimate the dynamic effects of uncertainty on the current account balance for a large sample of 143 developed and developing countries, during the period 1973-2021. Our analysis shows that higher uncertainty is associated with an increase in the current account balance which reflects both increased saving and reduced investment. These effects are sizable and statistically significant, peaking one year after the uncertainty shock, and gradually dying out in the long run. The effect varies across countries, being larger in countries characterized by lower social expenditure, less developed financial markets, and during periods of high financial stress.

Parallel Session 5B: Financial Economics II

Financial Constraints and Firm Size: Micro-Evidence and Aggregate Implications

Timo Haber (De Nederlandsche Bank, The Netherlands), Miguel H. Ferreira (Queen Mary University London, UK) and Christian Roerig (QuantCo)

Using a unique dataset covering the universe of Portuguese firms and their credit situation we show that financially constrained firms are found across the entire firm size distribution, including the top 10%. Incorporating a richer, empirically supported, productivity process into a standard heterogeneous firms model generates a joint distribution of size and credit constraints in line with the data. The presence of large constrained firms in the economy, together with their elevated capital share and higher elasticity of capital, explains about 66% of the response of output to a financial shock.

Household Debt Demand and Negative Reference Rates

Tomi Soininen (University of Jyväskylä, Finland), Juha-Pekka Junttila (University of Oulu, Finland) and Kari Heimonen (University of Jyväskylä, Finland)

This study investigates the impact of unconventional monetary policy actions and the negative interest rate policy (NIRP) on the determinants of household debt demand. We used the combined household-level microdata and macro-level variables, which enabled us to disentangle the household factors from the macroeconomic variables in loan demand. We lent support that the determinants of loan demand depend on the sign of interest rate and varied depending on positive and negative reference rates. Our robust evidence stresses the important role of financial literacy in loan demand especially. The unprecedented and controversial period of monetary policy featuring negative reference rates inadvertently led to an increased debt demand, especially among the less-educated households.

Financial Inclusion: Does Cultural Heterogeneity Matter?

Jeremie Bertrand (IESEG School of Management, France) and El Ghassem El Ghassem (IESEG School of Management, France)

Culture is an important determinant of many human decisions. However, most research articles consider culture as a homogeneous element. In this paper, we lift the assumption of cultural homogeneity, and look at how individualism heterogeneity, i.e., individualism ICV, affects household financial inclusion. Using the Global Findex database between 2011 and 2021 on more than 300,000 households, we show that while national individualism has a positive impact on financial inclusion, ICV tends to reduce it. This suggests that when there's a high degree of heterogeneity in cultural values, it diminishes both the cohesion of the culture within a country and the prevalence of individualistic values among its residents. Furthermore, our research demonstrates that in countries characterized by a strong culture of individualism, the influence of ICV outweighs that of the national culture. This highlights the significance of considering cultural diversity in understanding financial inclusion. Our results are robust to several alternative specifications.

The Unequal Distribution of Credit: Is there any Role for Monetary Policy?

Samuel Ligonnière (University of Strabourg, France) and Salima Ouerk (National Bank of Belgium)

Is current monetary policy making the distribution of credit more unequal? Using french household level data, we document credit volumes along the income distribution. Our analysis centers on assessing the impact of surprises in monetary policy on credit volumes at different income levels. Expansionary monetary policy surprises lead to a surge in mortgage credit exclusively for households within the top 20% income bracket. Monetary policy then does not impact mortgage credit volume for 80%of households, whereas its effect on consumer credit exists and remains consistent across the income distribution. This result is notably associated with the engagement of this particular income group in rental investments. Controlling for bank decision factors and city dynamics, we attribute these results to individual demand factors. Mechanisms related to inter temporal substitution and affordability drive the impact of monetary policy surprises. They manifest through the policy's influence on collaterals and a larger down payment.

Parallel Session 5C: Emerging Markets

Monetary Policy and Market Reactions: Evidence from South Africa

Charl Van Schoor (University of Pretoria, South Africa) and
Nicola Viegi (University of Pretoria, South Africa)

A contemporary problem facing monetary authorities is the puzzling combination of tools to set market expectations. The perception is that the economic movements over the past decade and a half have depleted the power of conventional monetary policy tools. The current view is thus that more information is better, as it is observed to reduce policy shocks. In this work, we observe these effects and therefore consider the role of information for the South African Reserve Bank. Using forecast data, we show that disagreement drives forecast errors, but does not drive shocks to long-term expectations. However, we find evidence of a bounded process of overreaction to underreaction, possibly driven by information shocks. The results show that markets significantly move after expected and unexpected policy decisions. When policy contracts and it is exactly expected, long-term rates expand. The results are robust to relative and absolute movements on the yield curve. Moreover, the result holds when accounting for the release of private information and forecast disagreement.

Sovereign Bonds Purchases in Emerging Market Economies: A Remedy to the Influence of the Global Financial Conjuncture on Sovereign Risk?

Anatole Meunier (Université Paris-Dauphine PSL, France)

In this paper, we delve into the intriguing question of whether the central bank's announcements of sovereign bond purchases can mitigate the influence of the global financial conjuncture on sovereign risk in emerging market economies, by reducing the losses expected by investors. We find that the sensitivity to the global financial conjuncture of our measure of relative sovereign risk decreases significantly after announcements of sovereign bonds purchases. This impact is nevertheless heterogeneous across economies, and seems to depend on the initial level of sensitivity of the affected sovereign bond market.

Asymmetric Monetary Policy Spillovers: The Role of Supply Chains, Credit Networks, and Fear of Floating

Jakub Mistak (European Central Bank, Germany) and F. Gulcin Ozkan (King's College London, UK)

The evolving international financial landscape and the changing dynamics of international trade have fostered a profound interconnectedness within the global economy, driven by the global financial cycle and intricate global supply chains. This paper presents a two-country general equilibrium model with cross-country trade and credit linkages that incorporates occasionally-binding balance sheet constraints faced by banks. Our research centers on investigating the transmission of US monetary policy shocks to emerging market economies (EMs), with a focused examination of the spillover effects. Our findings yield several important insights: (i) financial linkages and supply chains play a central role in driving aggregate fluctuations in EMs following US-originated monetary policy shocks; (ii) monetary policy contractions exert more substantial absolute effects in both countries compared to symmetrical expansions due to the benign credit conditions of banks following the latter; (iii) the sensitivity of monetary policy in EM to exchange rate fluctuations magnifies the negative spillover effects, with varying magnitudes contingent on the sign of the shock. Our analysis enhances the understanding of the global economic system, offering valuable insights for policy formulation in an increasingly interconnected world.

Inflation in Emerging Market Economies: Domestic and Global Drivers Through the Lens of the Phillips Curve

Christofer Schroeder (European Central Bank, Germany), Larry Cui (International Monetary Fund, USA), Marcel Tirpak (European Central Bank, Germany)

Recent developments in inflation in many Emerging Market Economies (EMEs) have renewed interest in the global influences on inflation in EMEs. A large literature has emerged studying the role of global factors on domestic inflation, yet these studies largely focus on advanced economies. This paper uses a standard New Keynesian Phillips curve to study the impact of global factors on inflation in a large sample of countries, including many EMEs. To go beyond aggregate impacts, we exploit detailed data on countries' participation in global value chains (GVCs) to study how GVC integration regulates the impact of global factors on domestic inflation. Our findings suggest that global factors are an important driver of inflation, particularly in EMEs compared to more advanced economies. Countries which are more heavily integrated in GVCs on the downstream end, and are – to a greater degree – price takers in global markets, experience a greater impact from global factors on inflation. Our findings help to reconcile the apparent disconnect between domestic factors and inflation that has been observed in some EMEs and helps policy makers better understand the tradeoffs between economic activity and inflation.

Parallel Session 5D: Banking and Finance II

The Impact of Eurozone Exit Risk on Banks and Non-Financial Firms, Stefan Eichler (TU Dresden, Germany)

Jantke de Boer (Ruhr University Bochum, Germany) and Ingmar Roevekamp (TU Dresden, Germany)

We analyze the effects of eurozone exit risk on banks and non-financial firms. Using a novel stock market based measure, we find that European banks are negatively affected by exit risk of Greece, Ireland and Portugal, channeled through bilateral credit risk. Non-financial firms in the GIIPS countries respond negatively to domestic exit risk, particularly during the subsample from 2008 till the 'whatever it takes' speech in July 2012. A lower ratio of short-term debt to cash and larger company size reduce companies' exposure to exit risk.

Do Macroprudential Policies make Firms more-or-less Discouraged to apply for a Bank Loan?

Dimitrios Anastasiou (Alpha Bank and Athens University of Economics and Business, Greece), Fotios Pasiouras (Montpellier Business School, France), Anastasios Rizos (Bank of Greece) and Artemis Stratopoulou (Athens University of Economics and Business, Greece)

This paper investigates the effect of macroprudential policies (MAPs) on discouraged small and medium-sized firms (bank borrowers). Employing confidential firm-level survey data for the Euro area countries and estimating Probit models, we find that several MAPs significantly reduce firm discouragement. In other words, the implementation of MAPs raises demand for corporate loans as the firm owners become more encouraged to apply for a loan. The marginal effects are, in most cases, highly significant, while the economic magnitude of implementing financial institutions-targeted MAPs is also significant. However, this finding is highly dependent on the degree of firm's credit quality. Our results are driven by the demand side; a more stable and better capitalized banking system could improve business confidence and make firms less discouraged to apply for a bank loan.

Determinants of Currency Choice in Cross-border Bank Loans

Lorenz Emter (European Central Bank, Germany), Peter McQuade (European Central Bank, Germany), Swapan-Kumar Pradhan (Bank for International Settlements, Switzerland) and Martin Schmitz (European Central Bank, Germany)

This paper provides insights into the determinants of currency choice in cross-border bank lending, such as bilateral distance, financial and trade linkages to issuer countries of major currencies, and invoicing currency patterns. Cross-border bank lending in US dollars, and particularly in euro, is highly concentrated in a small number of countries. The UK is central in the international network of loans denominated in euro, although there are tentative signs that this role has diminished for lending to non-banks since Brexit. Offshore financial centres are pivotal for US dollars loans, reflecting, in particular, lending to non-bank financial intermediaries in the Cayman Islands, possibly as a result of regulatory and tax optimisation strategies. The empirical analysis suggests that euro denominated loans face the “tyranny of distance”, in line with predictions of gravity models of trade, in contrast to US dollar loans. Complementarities between trade invoicing and bank lending are found for both the euro and the US dollar.

The State-dependent Impact of Changes in Bank Capital Requirements

Jan Hannes Lang (ECB) and Dominik Menno (Deutsche Bundesbank)

Based on a non-linear structural banking sector model, we show that the impact of changes in bank capital requirements on lending is strongly state-dependent. When banks make profits or hold voluntary capital buffers, the impact on lending works through a "pricing channel" which is small: 0.1% less loans for a 1pp capital requirement increase. When banks are capital-constrained, the impact on lending works through a "quantity channel" which is large: 10% more loans for a 1pp capital requirement reduction. Our results provide a theoretical justification for building up a positive countercyclical capital buffer in "normal" macro-financial environments.

Parallel Session 5E: International Finance and Trade

Reshaping Trade: A Gravity Approach to the Role of Geopolitical Tensions

Costanza Bosone (University School of Advanced Studies, Italy)
and Giovanni Stamato (European Central Bank, Germany)

Rising trade tensions, a spate of trade-inhibiting policy measures and a weakening of multilateral institutions have sparked growing concern about the potential implications of global trade fragmentation. Yet, empirical evidence that geopolitical concerns are already materially affecting trade patterns is scant. This study addresses the issue, using a structural gravity model augmented with a geopolitical distance measure based on UN General Assembly voting to investigate the role played by geopolitical factors for trade of manufacturing goods over the period 2012-2022. We find that the degree of geopolitical alignment is playing an increasing role at determining bilateral trade flows. The impact of geopolitical distance on trade is heterogeneous across country pairs: out of the world three largest economies, the US is found to be the main driver of this global trend, while European trade is found to be affected by geopolitical considerations in strategic products.

The Impacts of Global Risk and Fiscal Policy on the US Dollar Exchange Rate

Kerstin Bernoth (DIW Berlin, Germany), Helmut Herwartz (University of Goettingen, Germany) and Lasse Trienens (University of Goettingen, Germany)

Using a data-driven identification approach of structural vector autoregressive models, we examine the causal relationship between US interest rates, long-term inflation expectations and US Dollar exchange rates for a sample of eight advanced countries over the period 1980M1 to 2022M11. We find that the exchange rate is significantly affected not only by US monetary policy, but also by shocks to inflation expectations stemming from shifts in fiscal credibility and sustainability concerns. We find evidence that monetary and fiscal dominance have alternated over time, affecting the response of the US dollar exchange rate. Furthermore, the exchange rate of the US dollar is significantly influenced by global risk aversion and the convenience yield that investors are willing to forego for holding US dollar assets.

Sentiments and Dollar Exchange Rate

Kari Heimonen (University of Jyväskylä, Finland), Heikki Lehkonen (University of Jyväskylä, Finland) and Kuntara Pukthuanthongk (University of Missouri, USA)

This paper examines the impacts of media tone on exchange rate determination. As a media tone we utilize the versatile TRMI (Thomson Reuters Markets Psychology Indices, today Refinitiv Market psych indices RMI) index which provides tone of currency news of public and social media real time data from 2000 media and 800 social media sites. The impacts of the media tone on dollar exchange rate were significant but currency and time dependent. Our results provide novel evidence that public news, social media, tweeds constitute a tone, which have explanatory and forecasting power for nominal exchange rate changes of the US dollar vis-à-vis major currencies.

Dealer Risk Premiums in FX Forecasts

Joscha Beckmann (FernUniversitaet Hagen, Germany) and
Stefan Reitz (University of Kiel, Germany)

In this paper, we investigate the role of risk premiums in long-run foreign exchange (FX) survey forecasts. Given that market makers in foreign exchange are both price setters and contributors to surveys such as Consensus Forecasts or FX4Casts we may expect risk premiums of FX liquidity provision to emerge in forecast data as well. Consistently, the empirical analysis shows that FX forecasts are strongly correlated with dealer balance sheet factors as well as risk premiums calculated from FX derivatives.

Parallel Session 6A: European Economic Review III

Do Climate Change Policies affect Prices? Empirical Evidence using Macro, Regional and Sectoral Data

Luca Bettarelli (University of Palermo, Italy), Davide Furceri (International Monetary Fund, USA), Loredana Pisano (University of Palermo, Italy) and Pietro Pizzuto (University of Palermo, Italy)

This article investigates the impact of climate change policies on inflation, for a large sample of 177 developed and developing countries, 78 subnational units and 17 sectors, over the period 1989-2022. We show that carbon taxes lead to inflationary pressure. The effect is not negligible: a one standard deviation carbon tax shock—roughly corresponding to an increase in emission-weighted carbon tax—leads to an increase in price levels of about 0.7 percent one year after the implementation of the policy, and between 1.5 and 4 percent in the medium term. These results hold at the national, sub-national and sectoral level. In contrast, we find that emission trading systems as well as non-marked based climate change policies (such as subsidies) do not have statistically significant effects on prices. Finally, we find that the effect of carbon taxes on inflation is non-linear, doubling when inflation is initially high.

Monetary Policy Surprises, Firm Level Climate Risk and Investment Efficiency

Konstantina Agoraki (University of Piraeus, Greece), Maria Giaka (University of West Attica, Greece), Dimitrios Gounopoulos (University of Bath, UK) and Dimitrios Konstantios (ALBA Graduate Business School, The American College of Greece)

This study ventures into three critical domains of academic inquiry, focusing on the intersection of monetary policy effects, central bank information asymmetries, and firm-level climate risk exposure. It extends existing research by examining the impact of financial market reactions to monetary policy announcements on asset values and the broader economy, as well as exploring disparities in economic insights between central banks and the public. The research employs quarterly-frequency monetary and information shocks data to analyze their influence on corporate investment behavior and efficiency, particularly under climate risk exposure. The findings aim to clarify the compounded effects of monetary policy surprises and climate risk on corporate investment dynamics.

Reallocation, Productivity, and Monetary Policy in an Energy Crisis

Boris Chafwehe (Bank of England), Andrea Colciago (De Nederlandsche Bank, The Netherlands; and University of Milan-Bicocca, Italy) and Romanos Priftis (European Central Bank, Germany)

This paper builds a New Keynesian multi-sector industry dynamic model with entry and exit of heterogeneous firms, where energy is produced with both fossil resources and renewables. We study the effects of a persistent rise in the price of fossil resources on the relative size of sectors, labor productivity, and inflation. A higher cost of fossil resources affects the profitability of sectors asymmetrically and leads to a greener mix of resources in the production of energy. At the same time, it triggers a selection and cleansing process, which leads to higher labor productivity, but to a permanent contraction in business dynamism. A central bank with a strong anti-inflationary stance mitigates the increase in the price of energy in response to the shock, limits the increase in marginal costs of production, and, through this channel, dampens the decline in business dynamism.

Energy Prices, Monetary Policy and Inequality

Michael Dobrew (European Central Bank, Greece), Amalia Repele (Bocconi University, Italy) and Alina-Gabriela Bobasu (European Central Bank, Germany)

We study how monetary policy shapes the aggregate and distributional effects of an energy price shock. Based on the observed heterogeneity in household wealth and consumption exposures to energy, we build a quantitative small open-economy HANK model matching salient features of Euro Area data. Our model features energy as both a consumption good for households with non-homothetic preferences as well as a factor input into production with input complementarities. Independently of policy, energy price shocks always lead to a reduction in aggregate consumption with lower income house- holds being more adversely affected through both a decline in labor income as well as negative direct price effects. “Active” monetary policy raising rates in response to rising energy prices amplifies aggregate outcomes through a reduction in aggregate demand but helps speed up the recovery by enabling households to rebuild wealth through higher returns on savings. However, low income households are adversely affected by active monetary policy because they have little savings to rebuild wealth and instead loose further due to further declining labor income.

Parallel Session 6B: Macroeconomic Theory and Policy IV

Endogenous Persistence at the Effective Lower Bound

Chunbing Cai (National University of Singapore), Jordan Roulleau-Pasdeloup (National University of Singapore) and Zhongxi Zheng (National University of Singapore)

Existing tractable DSGE models at the lower bound have been celebrated for their analytical clarity and associated graphical representations. We show that expectations in these models are crucial, but conflict with Professional Forecaster's data. We develop a new stochastic algorithm that nests these contributions, but can accommodate the necessary endogenous persistence to match expectations data. We derive stability conditions for policy multipliers and show that one can do everything that was possible with simpler models: analytical solutions, graphical representations, and more. We apply these to a DSGE model with habit formation that is consistent with U.S/Japanese expectations data.

Tourism and Trust: Unraveling the Complex Relationship in Indigenous Societies

Despina Gavresi (University of Luxembourg), Anastasia Litina (University of Macedonia, Greece), Andreas Sintos (University of Luxembourg) and Skerdilajda Zanaj (University of Luxembourg)

A significant scholarly focus has been directed towards understanding cultural norms, their evolution, and their impact on economic and societal aspects. However, the profound cultural implications of tourism have been notably underexplored. This paper addresses this gap by examining the effects of tourism on the trust attitudes of indigenous populations. The study uncovers a complex, non-linear relationship between tourism and trust in institutions and organizations. It reveals that up to a certain threshold, tourism decreases the distance between the trust exhibited by natives and the average trust level of the initial native population. Beyond this threshold, the distance in trust begins to widen, indicating a significant influence of tourism on cultural evolution and trust parameters within societies. These findings underscore the necessity of integrating cultural dimensions, specifically the effect of tourism, into the formulation of effective public policies, thereby contributing novel insights into the interplay between cultural economics and social trust.

The International Transmission of Asset Market Shocks in Liquidity Traps

Philippe Bacchetta (University of Lausanne, Switzerland; SFI, Switzerland; and CEPR, UK), Kenza Benhima (University of Lausanne, Switzerland; CEPR, UK), Yannick Kalantzis (Banque de France) and Maxime Phillot (Swiss National Bank, Switzerland)

We build a two-country heterogeneous-agent non-Ricardian model featuring asset scarcity and financial frictions in international capital markets. Due to the non-Ricardian nature of our framework, a demand for liquidity emerges, and the supply of bonds matters. We show that shocks affecting the supply or demand of assets have very different international spillovers for an economy in a liquidity trap. A decrease in the supply of assets issued abroad leads to an asset shortage domestically. In normal times, the nominal interest rate decreases, stimulating investment and output. In a liquidity trap, deflation hits instead, and the currency appreciates, causing a recession.

Mixing it up: Inflation at Risk

Maximilian Schröder (BI Norwegian Business School; Norges Bank, Norway)

Measuring and monitoring macroeconomic uncertainty has become a key concern of contemporary monetary policy and an active field of academic research. In this paper, a joint approach is proposed that allows to construct risk measures that capture the unknown and non-standard distribution of inflation in a way that is consistent with central bank preferences. In addition, two algorithms are proposed that enable to monitor how economic predictors affect the risk outlook and how they shift probability mass across the forecast distribution. Both are widely applicable,enhance the interpretability of a broad class of models, and are suitable for real-time applications. In the empirical exercises, the model yields superior point and density forecasts of U.S. CPI inflation. During the recent high-inflation period, inflation risk predominantly increased due to a recovery of the U.S. business cycle and rising commodity prices and was in part balanced by monetary policy and credit spreads.

Parallel Session 6C: Monetary Theory and Policy III

Currency Crisis and Monetary Policy in a Small Open Economy

Augier Laurent (LéP Laboratoire d'économie de Poitiers, France) and Aquarini Narita (LéP Université de Poitiers, France; ITB Bandung, Indonesia)

This note presents an analysis of monetary interest rate policy in the face of a currency crisis caused by an exogenous exchange rate shock. The basic setup is a small open-economy model with micro-foundations. The entrepreneurs net worth is the key variable that determines the investment subject to market constraints due to price rigidity. Corporate indebtedness in foreign currencies is the factor behind the crisis. We examine the role of interest rate policy according to a real or monetary wholly unanticipated shock, considering the degree of financial integration of the economy. In the real sector, we study the effect of a productivity shock and on the financial side we analyse the impact of changes in the international interest rate or the consequences of institutional change in the financial system. It appears that the increase in the interest rate, often recommended, is not always efficient. Also, the process of financial integration of economies can facilitate interest rate policy.

Monetary Policy and Risks to Growth: The Role of Institutional Quality

Afonso S. Moura (Banco de Portugal and Nova SBE, Portugal), Lorenz Emter (European Central Bank, Germany), Ralph Setzer (European Central Bank, Germany) and Nico Zorell (European Central Bank, Germany)

This paper analyses how country-specific institutional quality shapes the impact of monetary policy on downside risks to growth in the euro area. We first confirm that short-term growth at risk in euro area economies is primarily driven by financial stress, while medium-term growth at risk is associated with macro-financial vulnerabilities. Then, using high-frequency identified shocks, we show that monetary policy has a higher impact on short-term risks to growth than on medium-term ones, and that transmission is therefore stronger through the financial stress channel. However, this conclusion hides significant heterogeneity across countries. In economies with high institutional quality, medium-term growth risks remain relatively stable following contractionary monetary policy shocks. In contrast, these risks increase substantially in countries with low institutional quality. This suggests that improvements in institutional quality could significantly enhance euro area countries' economic resilience.

The Financial Instability - Monetary Policy Nexus: Evidence from the FOMC Minutes

Dimitrios Kanelis (University of Münster, Germany), Lars Kranzmann (University of Münster, Germany) and Pierre L. Siklos (Wilfrid Laurier University, Canada; Balsillie School of International Affairs, Canada; and Centre for Applied Macroeconomic Analysis, Australia)

This study explores the Federal Reserve's integration of financial stability concerns into its monetary policy framework, particularly in the face of potential trade-offs with its mandate objectives. We analyze FOMC minutes from 1993 to 2022, employing structural topic modeling and sentiment analysis via advanced Large Language Models (LLMs) to quantitatively evaluate how financial stability deliberations influence policy decisions and communication. Our findings indicate an uptick in financial stability discussions post-GFC, with a notable increase during monetary tightening and the COVID-19 crisis. We present novel sentiment analysis results that suggest a more cautious tone in discussions as financial stability becomes more prominent. Methodologically, we contribute a new labeled dataset tailored for LLMs to comprehend the central bank's formal language, enhancing the analysis of FOMC communication.

Monetary Policy Shock, Financial Frictions and Heterogeneous Firms

Jin Cao (Norges Bank, Norway), Masashige Hamano (Waseda University, Japan) and Junior Maih (Norges Bank, Norway)

This paper examines the influence of financial constraints on the transmission of monetary policy shocks across heterogeneous firms. To this end, we develop a Dynamic Stochastic General Equilibrium (DSGE) model incorporating firm hetero- geneity, nominal rigidity, and financial frictions. Financial constraints hinder firms from expanding production, even under expansionary monetary policy shocks. This dynamic discourages the growth of competitive firms and exerts downward pressure on factor prices, leading to the proliferation and entry of less efficient firms. Such a scenario results in the creation of ""zombie"" firms, a phenomenon less prominent in scenarios devoid of financial frictions. The prevalence of these ""zombie"" firms be- comes more significant in economies with higher granularity, where the withdrawal of large firms from the market opens up space for less productive entities.

Parallel Session 6D: Climate Risk II

The CO2 Content of the TLTRO III Scheme and its Greening

Chiara Colesanti Senni (CEP, UK; and University of Zurich, Switzerland), Maria Sole Pagliari (De Nederlandsche Bank, The Netherlands) and Jens van 't Klooster (University of Amsterdam, The Netherlands)

This paper investigates the climate impact of central bank refinancing operations, with a focus the ECB's TLTRO III program. Notably, we construct a novel database that combines i) confidential data on loans granted by EU banks to non-financial corporations; ii) confidential data on TLTRO III participation and iii) data on sectoral emissions. We find that the emissions content of bank loans granted over the TLTRO III reference period amount to 8% of overall Euro Area 2019 emissions and that more than 80% of total cumulated loans issued in the reference period was directed towards polluting companies. We then investigate the effectiveness of a green credit easing scheme via a general equilibrium model. Our findings are twofold: first, the central bank policy can increase the costs for lending to polluting companies, thus re-directing loans to less-polluting firms; second, the financial stability implications of such a policy should be carefully considered. Finally, we address legal and operational challenges to such a policy by outlining three alternative ways of implementing a "green" TLTRO programme.

A Heterogeneous Agent Model of Energy Consumption and Energy Conservation

Volha Audzei (Czech National Bank, Czech Republic) and Ivan Sutoris (Czech National Bank, Czech Republic)

In this paper, we investigate whether inflation-targeting monetary policy affects households' incentives to build resilience against energy price shocks.We utilize a stylized heterogeneous agents new Keynesian model with search and matching frictions in the labour market and nominal asset holdings. We modify the model to contain energy in consumption and production, and energy conservation capital, so that energy price fluctuations affect both supply and demand side of the economy. In such a framework, we study responses of energy conservation to monetary policy, rising energy prices and their interaction. We find that monetary policy influences consumption energy intensity through both the intertemporal elasticity of substitution and labour market allocations.Our model predicts that weaker policy response to rising energy prices is beneficial to all agents as it stimulates employment, despite of larger consumer price inflation. Furthermore, weaker policy response stimulates energy conservation. We further find that a policy of looking-through energy prices does not bring welfare benefits as it under-reacts to consumer prices initially, but over-reacts in the later periods.

Climate Risks and Economic Activity in France: Evidence from Media Coverage

Oussama Houari (Nantes-Université, France), Hamza Bennani (Nantes-Université, France) and Quentin Bro de Comères (Central Bank of Ireland)

This paper investigates the impact of climate risks as reflected by French media on financial and real economic spheres. Using Correlated Topic Modelling and sentiment analysis of three major French newspapers for the period January 2000 – September 2023, we construct measures of physical and transition climate risks. Our measures capture several key climate change events that are likely to increase risks about climate change and negatively impact the economy. As a next step, using local projections, we provide evidence on their impact on French macro-dynamics. Findings suggest the existence of heterogeneous responses of the considered economic and financial variables to physical or transition climate risks measures. In particular, financial conditions are mostly affected by high transition risks, as compared to physical risks. Moreover, physical (transition) risks are found to impact headline inflation (core inflation). This is owed to the fact that physical risks are associated with short term shifts to food and energy prices, while transition risks are associated with policy decision or technology shifts that implies long-lasting inflationary effects. Finally, the dictionary-based approach shows that positive media sentiment related to climate risks is associated with enhanced economic conditions.

Using Short-Term Scenarios to Assess the Macroeconomic Impacts of Climate Transition

Annabelle de Gaye (Banque de France), Thomas Allen (Banque de France), Stéphane Dées (Banque de France), Mathieu Boullot (Banque de France), Noëmie Lisack (Banque de France and European Central Bank, Germany), Camille Thubin (Banque de France) and Oriane Wegner (Banque de France)

This paper proposes a set of short-term scenarios that reflect the diversity of climate transition shocks : increase in carbon and energy prices, increase in public or private investment in the low carbon transition, increase in the cost of capital due to uncertainty, deterioration of confidence, accelerated obsolescence of part of the installed capital, etc. Using a suite-of-model approach, we assess the implications of these scenarios for the dynamics of activity and inflation. By considering multiple scenarios, we therefore account for the uncertainty around future political decisionsregarding climate change mitigation. The results show that the magnitude and duration of the macroeconomic effects of the transition to carbon neutrality will depend on the transition strategy chosen. While a number of short-term scenarios being inflationary or even stagflationary, there are also factors that could curb inflation and boost economic growth.

Parallel Session 6E: Fiscal Policy II

Government Consumption, Government Investment, and Public Debt in a Heterogeneous-Agent New Keynesian (HANK) Model

Matija Lozej (Central Bank of Ireland)

The paper analyses the interaction of government spending, with a focus on government investment, with household decisions in a heterogeneous-agent New Keynesian (HANK) model. It shows that an increase in government investment can be expansionary in the short run and recessionary and deflationary in the medium run when public capital crowds out private labour. This holds under both tax and debt-financing, time-to-build and under various fiscal rules, as long as there is sufficient amount of government bonds for households to partially self-insure.When this is restricted, such as in the case of no initial public debt, financing of government investment spending with taxes is recessionary and deflationary, while financing with debt is expansionary and inflationary. The effects are also quantitatively large, because households are at their borrowing constraint when the steady-state public debt is zero.

Optimal Fiscal Spending and Reserve Accumulation Policies under Volatile Aid

Ioana R. Moldovan (University of Glasgow, UK), Shu-Chun S. Yang (Institute of Economics, Academia Sinica, Taiwan), Luis-Felipe Zanna (International Monetary Fund, USA)

We assess the optimal Ramsey policies in terms of spending and saving decisions on volatileaid. Using a simple two-period model, we first show how transfers (spending) and reserveaccumulation (saving) policies can address two key frictions—Dutch disease and consumptionfluctuations—related to aid spending in low-income countries. The optimal policies consist ofpartial spending and partial savings to reduce exchange rate appreciation and smooth consumption. Simulations with a quantitative model further shed light on optimal spending betweengovernment transfers and public investment. While transfers directly support hand-to-mouthhouseholds' consumption, public investment helps smooth consumption indirectly by sustainingproduction and income through capital buildup over time. Higher aid volatility implies higherpublic investment, illustrating its importance as a precautionary saving instrument.

Can Monetary and Fiscal Policy account for South Africa's Stagnation?

Tumisang Loate-Ntsoko (University of Pretoria, South Africa) and
Nicola Viegi (University of Pretoria, South Africa)

This paper examines the interaction between macroeconomic variables and the fiscal and monetary policy mix between 2012 to 2019, a period characterised by increases in public debt and the sovereign risk premium and low economic growth. Using a large Bayesianvector autoregressive model, we find that monetary and fiscal policy fail to account for the observed lower real gross domestic product between 2012 and 2019. Based on their historical relationship, the results indicate that we should have observed much higher growth, especially during the 2015 to 2019 period. In addition, we find little evidence the low growth during the period can be rationalised by the much-criticised "anti-growth" monetary policy.

Monetary and Fiscal policy Interactions in a Tractable HANK Model: A Tale of Two Ricardian Consumers

Vasileios Rafail Karaferis (University of Edinburgh; and University of Glasgow, UK)

We study optimal monetary policy and fiscal policy mix in a tractable HANK environment. The model admits both idiosyncratic and aggregate risk. We assume that there exists a consolidated monetary-fiscal policy authority. The monetary authority pursues optimal (Ramsey) monetary policy whilst the fiscal authority follows a simple non- linear tax rule. Our aim is to provide a clear distinction between the notions of discontinuous labour market participation (DLMP) and infrequent asset market participation (IAMP), which are typically intertwined in the literature. Unlike the standard HANK- IAMP model, all households in our framework can use assets to smooth their consumption. As such, both the long run equilibrium and the dynamics of our HANK- DLMP model are different from both the nested representative agent model and from the HANK- IAMP. We demonstrate that DLMP frictions are an important source of consumption inequality on their own merit and should not be overlooked. Finally, we find that as was the case with the representative agent model, the policy maker in our framework will not deviate from price stability in steady state (Woodford, 2003). This is result is unaffected by the tax instrument available or the presence of direct redistribution. The model is calibrated for the US economy, for the period 1985- 2021.

Parallel Session 6F: Prices and Inflation III

From Linear to Nonlinear: Rethinking Infation Dynamics in the Calvo Pricing Mechanism

Ales Marsal (National Bank of Slovakia)

Modern macroeconomics is increasingly leaning towards nonlinear solution methods. Our paper addresses the importance of nonlinearities in price set-ting. We demonstrate how nonlinearity in endogenous price adjustments, due to misalignments in relative prices, can trigger a price dispersion inflation spiral. This phenomenon yields globally unstable dynamics, even in instances where the model is locally stable around the non-stochastic steady state. We introduce the concept of the stability region as a nonlinear counterpart to the determinacy region. Our findings indicate that in a nonlinear world, the Taylor principle alone does not guarantee inflation stability and stable macroeconomic model moments. This new understanding not only challenges the conventional wisdom on inflation stabilization but also underscores the urgency for recalibrating monetary policy strategies in response to these dynamics.

Inflation: Persistence and Central Bank Independence

Angelos Athanasopoulos (Central Bank of Ireland), Donato Masciandaro (Bocconi University, Italy) and Davide Romelli (Trinity College Dublin, Ireland)

This paper provides novel evidence of the long-run effects of central bank independence on inflation. We show that improvements in central bank independence have a much larger effect on inflation in the long-run, as compared to the short-run. Our results also show that the long-run effects of central bank independence on inflation are larger in developing countries. We find similar effects using linear local projections as well as doubly robust and instrumental variable local projection methods.

Going Viral: Inflation Narratives and the Macroeconomy

Max Weinig (Universität Hamburg, Germany) and Ulrich Fritsche
(Universität Hamburg, Germany; KOF ETH Zürich, Switzerland)

In recent years, there has been increasing interest in the analysis of narratives in macroeconomic research. Our paper contributes to this research by proposing a way to extract identified economic narratives from media reports. Therefore, this paper applies state-of-the-art text mining methods to a large news dataset covering five years of news coverage in combination with results from a survey study on recent inflation narratives in the US. Our approach enables us to measure the prevalence and spread of inflation narratives over time and to examine the role of these narratives in aggregate macroeconomic expectations and economic fluctuations. Using Granger causality tests and local projections, we provide empirical evidence on the dynamics between inflation narratives and rising inflation expectations. Our analysis demonstrates the spread of different narratives on the causes of inflation during a period of five years. By taking into account more than 160000 documents on inflation and combing text-as-data methods to measure tone-adjusted inflation narratives, we present evidence that the volume of supply narratives, as well as narratives on monetary policy, demand shift, and profits, increased since 2021. Moreover, bivariate Granger causality tests suggest predictive power for the majority of narratives towards macroeconomic variables, such as inflation expectations or CPI inflation. To further investigate the effects of increasing narrative diffusion, local projections are applied. For all three considered supply narratives, our findings indicate that narratives can be seen as drivers of inflation expectations, especially one-year expectations. Equivalent effects are found for narratives on monetary policy, pent-up demand, demand shift, taxes, and profits. In summary, our paper supports the theoretical argument (e.g. "narrative economics" by Robert Shiller), that narratives in media reports can be seen as an important role in shaping economic expectations and decision-making.

Long Run Inflation and Financial Panics

Nikolay Hristov (Deutsche Bundesbank and CESifo, Germany)
and Dominik Menno (Deutsche Bundesbank, Germany)

We employ a medium scale New Keynesian model with banks and endogenous financial panics (system-wide bank runs) to study whether and how (non-zero) average trend inflation affects the risk of bank runs. We find that trend inflation substantially affects the probability of banking panics. This probability is hump-shaped in trend inflation which is the result of two opposing forces. First, trend inflation depresses earnings on asset in the case of a run which leads to a larger drop in asset prices and thus, a stronger drag on banks' balance sheets. Second, higher trend inflation erodes the relative comparative advantage of banks in intermediating credit to the real sector thus, attenuating the asset price drop in a run. The first channel dominates for low to medium rates of trend inflation. Both, macroprudential and monetary policy, should be aware that a trend inflation in a certain range is likely associated with a substantially higher fragility of the financial system.

Parallel Session 7A: Journal of Forecasting IV

Time-varying US Government Spending Anticipation in Real-time

Pascal Goemans (University of Hagen, Germany) and Robinson Kruse-Becher (University of Hagen, Germany)

Due to legislation and implementation lags, forward-looking economic agents might anticipate changes in fiscal policy variables before they actually occur. The literature shows that this foresight poses a challenge to the econometric analysis of fiscal policies. However, most of the literature uses fully revised data to quantify the degree of fiscal foresight. We, in contrast, use the Survey of Professional Forecasters (SPF) and the Real-Time Data Set for Macroeconomists to analyze government spending anticipation. We also consider relative fiscal foresight compared to other national account variables. We find that real-time data matters for the predictability of federal and state \& local government spending. We document remarkable time-variation in the foresight of the SPF and its information advantage against (augmented) autoregressive models over different US presidencies. This finding highlights the relevance of policy communications.

Predictive Power of Key Financial Variables During Unconventional Monetary Policy Era

Petri Kuosmanen (University of Vaasa, Finland) and Juuso Vataja (University of Vaasa, Finland)

This study deals with the forecasting power of the three most established financial predictors – the term spread, the short-term interest rate, and the stock returns for the future GDP growth in the U.S and the Euro area. Our out-of-sample forecasting analysis focuses solely on the unconventional monetary policy era when the short-term rate is effectively bounded or stick to zero lower bound. The paper is motivated by the possibility that during such circumstances the information content of the term spread changes and this may affect its predictive ability. The same applies to the short-term interest rate. We modify the short rate to better capture the effects on unconventional monetary policy by using the shadow short rate due to Krippner (2020). The forecasting analysis is conducted over the period 2009:1 – 2022:3. The forecasting results show unambiguously that the predictive power of the term spread vanishes completely during the zero lower bound. The modified short rate contains some minor predictive ability, but the strongest predictive ability is contained robustly in the stock returns. The key results of the study are novel given term spreads prime role as the most reliable financial predictor for economic activity in previous literature.

Explaining and Predicting Momentum Performance Shifts Across Time and Sectors

Mamais Konstantinos (National and Kapodistrian University of Athens, Greece), Dimitrios Thomakos (National and Kapodistrian University of Athens, Greece) and Prodromos Vlamis (University of Piraeus, Greece)

How does momentum perform and behaves across time and across sectors? Can we relate such an examination to particular periods of economic activity and, importantly, can we use an analysis of this sort to predict future financial performance? In this paper we carefully analyze the momentum of NASDAQ and its major sectoral components across some well-defined economic periods, that include recessions, expansions, wars and crises, explain how and why it works or not as an investment strategy and then showcase that our analysis can be used, out-of-sample, to suggest a sectoral portfolio composition that works very well. The novelty of our approach rests in the identification and exploitation of momentum characteristics that lead to rankings of sectors depending on the period of economic activity that we are in; these rankings are found to be very robust in-sample and out-of-sample and this is why our approach can be used to formulate a particular, and successful, investment strategy.

Common Shocks and Climate Risk in European Equities

Andrea Cipollini (University of Palermo, Italy) and Fabio Parla (University of Palermo, Italy)

In this study, we evaluate the performance of the constituents of a portfolio of green stocks, in terms of cumulative expected and unexpected returns, relative to a brown portfolio benchmark for Europe. The stock returns cross-sectional dependence is modelled through common shocks estimated by fitting a Structural VAR to the cross-sectional averages of one-month stock returns and realized volatilities. In a second stage of the analysis, the estimation of a Panel VAR with cross-sectional dependence allows to retrieve the anticipated and unanticipated components of the stocks' cumulative returns through historical decomposition. The Mean Group estimation allows to evaluate the performance for the equally weighted portfolio. The observed out-performance of the green stocks, given an under-performance of the cumulative expected return, is then ascribed to the unanticipated component. The contribution of the different shocks to the historical decomposition of the unexpected cumulative returns allows us to interpret the first common shock as an innovation to climate concern.

Parallel Session 7B: Macroeconomic Theory and Policy V

The Term Structure of Judgement: Interpreting Survey Disagreement

Federica Brenna (Bank of Lithuania; Vilnius University, Lithuania) and Zymantas Budrys (Bank of Lithuania; Vilnius University, Lithuania)

Consensus forecasts by professionals are highly accurate, yet hide large heterogeneity. We develop a framework to extract the judgement component from survey forecasts and analyse the extent to which it contributes to respondents' disagreement. For the average respondent, we find a substantial contribution of judgement about the current quarter, which often steers unconditional forecasts towards the realisation, thereby improving accuracy. We identify the structural components of judgement exploiting stochastic volatility and give an economic interpretation to expected future shocks. For individual respondents, about a third of disagreement is due to differences in coefficients or models used, and the remainder is due to different assessments about future shocks; the latter mostly concerns the size of shocks, while there is a general agreement on their source.

Do we need Firm Data to understand Macroeconomic Dynamics?

Michele Lenza (European Central Bank, Germany) and Ettore Savoia (Riksbank, Sweden)

We study the role of heterogeneity in the investment of individual firms for euro area macroeconomic dynamics. To this end, we specify two models: a standard aggregate vector autoregressive model (VAR) and an "heterogeneous VAR" (HVAR). The VAR includes only aggregate data, while the HVAR also takes into account the feedback loop between the investment distribution and the aggregate variables. We show that the dynamics in the distribution of firms' investment play a relevant role in explaining the dynamics of the core euro area macroeconomic variables.

Measuring Political Instability at a High Frequency – A Text Mining Approach

Niklas Benner (RWI – Leibniz-Institute for Economic Research, Germany), Boris Blagov (RWI – Leibniz-Institute for Economic Research, Germany) and Maximilian Dirks (RWI – Leibniz-Institute for Economic Research, Germany)

This study introduces a novel monthly index of political instability, the WIPI, covering four dimensions for 182 countries from 1996 to 2023. Employing text mining techniques, we extract data from the Economist Intelligence Unit's country reports. We show that our monthly index carries the same information as other frequently used indices of political instability but with a much higher frequency. Using local projections, we identify that political instability reduces economic output significantly. Decomposing the index into its dimensions reveals that instability within the political regime and mass civil protests are the key drivers of the sizable decline in prosperity. We further show that estimates of models employing annual data suffer from a sizeable temporal aggregation bias.

Reverse Cross-Fitting and Macroeconomic impact of Basel Capital Requirements

Milos Ciganovic (Sapienza University of Rome, Italy), Federico D'Amario (Sapienza University of Rome, Italy) and Massimiliano Tancioni (Sapienza University of Rome, Italy)

This paper introduces an innovative cross-fitting technique named Reverse Cross-Fitting, which leverages the time reversibility of time series data. Through an extensive simulation study, it is shown that Reverse Cross-Fitting is particularly well-suited for small sample sizes and outperforms benchmark techniques when dealing with highly autocorrelated time series. We employ double debiased machine learning in conjunction with reverse cross-fitting and Local Projections to estimate the average and dynamic causal effect of an increase in total regulatory capital on the Italian GDP. The estimated average causal effect is −0.1439. Upon examining the impulse response of GDP to a shock in total regulatory capital, a negative effect on impact is observed, which further amplifies for the subsequent two quarters.

Parallel Session 7C: Climate Risk III

Weather Shocks and Optimal Monetary Policy in a Climate-Vulnerable Economy, Barbara Annicchiarico (Roma Tre University, Italy)

Cédric Crofils (LEDa, Paris-Dauphine and PSL Research Universities and Aix Marseille Univ, France)

This paper examines optimal monetary policy in response to weather shocks in a two-sector New Keynesian model calibrated for Peru, a climate-prone economy where a rural agricultural sector coexists with a modern manufacturing sector. While adverse weather shocks disproportionately impact the agricultural sector, monetary policy primarily influences the modern sector. Following an adverse weather event that triggers a recession and inflationary pressures, targeting the production price index (PPI) inflation in the manufacturing sector rather than the consumption price index (CPI) inflation appears to be optimal for the Central Bank, as it reproduces the dynamics of the Ramsey planner.

Pollution Havens? Carbon Taxes, Globalization, and the Geography of Emissions

Christofer Schroeder (European Central Bank, Germany), Livio Stracca (European Central Bank, Germany)

This paper studies the impact of national carbon taxes on CO2 emissions. To do so, we run local projections on a cross-country panel dataset, matching measures of emissions of carbon dioxide with information on the introduction of carbon taxes and their implied price. Importantly, we consider both measures of territorial emissions—emissions emitted within a country's borders — and consumption emissions — emissions emitted anywhere in the world to satisfy domestic demand. We find that carbon taxes reduce territorial emissions over time, but have no significant effect on consumption emissions. Our estimates are robust to propensity-score weighting adjustments and are driven by countries which are more open to trade. Carbon taxes also lead to a modest increase in imports, suggesting that international trade may imply a negative carbon externality. Together, our findings highlight the limitations of national carbon taxes in isolation and the importance of international cooperation in reducing global emissions.

Sovereign Debt Sustainability, the Carbon Budget and Climate Damages

Caterina Seghini (Swiss Finance Institute, Université de Genève, Switzerland)

The paper investigates the trade-offs between managing the financial sustainability of public debt and addressing climate change. Mitigation efforts and increasing temperatures imply economic costs that reduce countries' growth rates, respectively in the short and in the long term. This can make the repayment of outstanding debt more difficult. I explore and quantify the evolution of debt limits –maximum sustainable debt-to-GDP– for advanced economies, under various scenarios, which respect, or not, the carbon budget constraints of the Paris Agreement. Various scenarios are analysed according to the costs of emissions' abatement and the political coordination among countries in the transition. The evidence shows that failing to enforce a slowdown in emissions at a global level, and to stabilize climate damages, generate plunging debt limits in the medium-long term and shrinking fiscal spaces for all countries, even for the few ones actuating the transition. On the contrary, if the green transition is coordinated globally, debt limits converge to stable and higher levels, despite an initial and temporary decrease, given by the negative impact of emission reductions on GDP growth rates. From the evidence presented, it results as significantly more beneficial for countries to collaboratively and promptly transition towards mitigating climate impacts on growth and fiscal spaces. This will support sustainable public debt and the potential to finance the green evolution of our economies.

Pollution, Public Debt and Growth: The Question of Sustainability

Marion Davin (CEE-M, Univ Montpellier, CNRS, INRAE, SupAgro, France), Mouez Fodha (University Paris 1 Panthéon-Sorbonne and Paris School of Economics, France) and Thomas Seegmuller (Aix Marseille Univ, CNRS, AMSE, France)

This paper examines the interconnected relationships among the debt, environmental factors, and economic growth within an endogenous growth framework. We develop a model that allows us to consider the dynamic evolution of debt with climate issues. Debt evolves due to financing adaptation and mitigation efforts, and due to the decrease in fiscal revenue resulting from the damages caused by global pollution. We identify the conditions such that debt and pollution increase indefinitely and those such that the economy converges to a BGP with low pollution and high debt per unit of capital.

Parallel Session 7D: Fiscal Policy III

Fiscal Policy during the Energy Crisis

Alexandra Gutsch (Halle Institute for Economic Research; and Martin Luther University Halle-Wittenberg, Germany) and Christoph Schult (Halle Institute for Economic Research, Germany)

Witnessing the recent unprecedented surge in energy inflation, we are analysing the distributional as well as welfare effects of energy supply shocks and fiscal policy intervention considering different objectives. In addition to addressing distributional issues by providing support for the most vulnerable groups, the contradicting goals are stabilising economic activity, fighting inflation, and keeping national debt in mind. We build-up a Ten-Agents New-Keynesian (TENK) Model to simulate different policy scenarios and compare the aggregate, distributive and welfare effects to a scenario without any fiscal policy reaction during an energy crisis. It shows that targeted transfers to low-income deciles are dominating an energy cost brake in terms of mitigating losses in consumption and distribution effects as well as from a welfare perspective.

The complementarity between structural and tax reforms: the case of Britain

George Economides (Athens University of Economics and Business, Greece and CESifo, UK), Apostolis Philippopoulos (Athens University of Economics and Business, Greece and CESifo, UK) and Anastasios Rizos (Bank of Greece)

We develop a microfounded dynamic general equilibrium macroeconomic model that incorporates the key features of the Britain economy. Our aim is to examine the implications of the growth plan proposed by the former government of prime minister Mrs Truss and investigate the reasons behind the negative reaction by markets and independent institutions that led to the cancelation of this programme and the resignation of the government. After calibrating the model to UK data over 1960-2021, we solve for the steady state solution. To mimic Britain in the post Brexit period, we assume an increase in the costs associated with transactions with the rest of the world. Also, we introduce cuts in corporate tax rates as Ms Truss announced to implement. Then, we quantify the growth effects of a reduction in corporate tax rate combined with product market liberalization. Our results imply that the growth footprint of a reform on corporate taxation is rather poor. However, significant growth benefits may emerge if reforms on corporate taxation are accompanied by product market liberalization. Finally, debt stabilization matters; otherwise the adoption of tax reforms without a fiscal policy reaction function leads to dynamic instability.

Do Higher Public and Private Debt Levels benefit the Wealthy? An Empirical Analysis of the Top Wealth Shares in the UK

Glauco De Vita (Coventry University, UK), Yun Luo (University of Southampton, UK), Khine S. Kyaw (Cardiff Metropolitan University, UK) and Kexing Li (Coventry University, UK)

High debt levels and growing inequality are two of the most concerning political, economic and social issues in Western Europe. In the UK these trends have been particularly pronounced, stimulating academic research and attracting much public interest. This article contributes to the literature studying the wealth distribution of the UK by investigating the impact of both public and household debt on the wealth shares of the top 1% and 10% of UK households. The inequality debate gained momentum with the publication of Thomas Piketty's (2014) Capital in the Twenty–First Century, in which he warned that the tendency of returns on capital to exceed the rate of economic growth – viewed by Piketty as the main driver of wealth concentration at the top – threatens to generate extreme inequalities. Piketty alerts to a situation whereby wealth becomes more concentrated among those whose earnings come from capital/assets rather than labour. Due to issues related to the measurement of the uneven distribution of personal wealth, several studies since have, therefore, focused on the evolution of the top wealth shares, which is now the measure of choice. We use UK annual data over 1970-2019 from the World Inequality Database (WID). WID can be regarded as the most reliable database in tracking the evolution of wealth levels and, therefore, it is the one we draw from to collect data of the top wealth shares. We find that higher levels of public and household debt increase, on average, wealth concentration at the top 1% and 10%. The effect is stronger for household debt. Important policy implications flow from these findings.

Sovereign Regulatory Risk-weight Privilege and Constitutional Fiscal Rules

Oliver Hülsewig (Munich University of Applied Sciences, Germany) and Armin Steinbach (Ecole des hautes ´etudes commerciales de Paris, Germany)

The global financial crisis exposed the sovereign-bank nexus as a driver of financial instability and an impediment to economic growth. Less attention has been paid to fiscal effects. Accordingly, this study analyzes the interaction between the macroprudential regulation of banks' capital requirements and fiscal rules. We hypothesize that a conflict occurs between the regulatory privileged treatment of sovereign bonds held by banks and the market exposure logic enshrined in constitutional fiscal rules. This is particularly problematic in currency unions such as the US and the euro area. We estimate local projections to examine the reaction of sovereign fiscal positions in euro area member states to a restrictive macroprudential capital regulation shock. We find that peripheral euro area governments increase their debt following an unanticipated tightening in macroprudential capital regulation. This result lays bare that the macroprudential treatment is at odds with constitutional fiscal rules.

Parallel Session 7E: European Economics IV

New Trends in Macro-financial Linkages in EU: The Role of Digital Technology

Małgorzata Pawłowska (Warsaw School of Economics, Poland) and Georgios P. Kouretas (Athens University of Economics and Business, Greece; IPAG Business School, France)

The aim of this paper is to investigate the impact of digital technology on the relations between the financial sector and the real economy in EU. The IT revolution brought new factors that influenced the traditional banking market. Banks were forced to compete not only with other players from the banking sector but also with unregulated FinTech companies. Based on into two models using simple panel data regression and the interacted panel vector autoregression model this paper confirms the impact of FinTech on credit grow. Finally, based on the quantitative analysis this paper confirms that modern technology has had an impact on bank lending especially our findings confirm the leading role of loans for households in the use of new digital technologies. Finally, this paper confirms the increasing role of digital technology finance in bank lending.

Inflation Differentials in the Euro Area at the Time of High Energy Prices

Mirko Licchetta (DG ECFIN European Commission, Belgium) and Leonor Coutinho (DG ECFIN European Commission, Belgium)

Inflation differentials in the euro area widened in 2022 to historically high levels in the context of a surge in energy and other commodity prices. On the one hand, some degree of inflation differentials within the euro area may be seen as a natural part of an adjustment process, rather than a problem per se for economic policy. On the other hand, persistent inflation differentials can adversely affect competitiveness in higher inflation countries. This paper uses principal component and panel regression models to investigate the drivers of inflation differentials. Our empirical estimates suggest the impact of a common shock - asymmetric across Member States and mostly related to the increase in energy and food prices - can explain up to two thirds of the increase in headline inflation in 2022. The estimated responses to the common factor increase with energy intensity, reflecting the important role of energy prices in driving global shocks to inflation, and decline with the share of services in Gross Value Added (GVA), suggesting that countries with a larger manufacturing sector have been more sensitive to common factors. The common factor is also found more prominent in 2020-22 than in previous periods. The remainder of inflation developments can be explained by more local and crisis related factors. Results are robust to including a lagged dependent variable in the model, instead of account for the autocorrelation in the residuals with GLS estimates. The lagged dependant variable captures some of the effect of the common factor, suggesting that persistence may be associated with a relatively long pass-through for the energy shock, related to the staggered nature of supply contracts and price setting in the euro area.

Market Power and Profit Margins in the Euro Area Countries in the Post-pandemic Period

Dimitris Sideris (Bank of Greece) and Georgia Pavlou (Bank of Greece)

The rise in profit margins has been a major factor driving price inflation in the post- pandemic period, in most euro area (EA) economies. In the present paper, we attempt to analyze the factors behind this rise. We investigate whether the degree of market power of firms, related to the market structure of the economies, played any role on the extent to which firms raised prices by raising their profit margins. We also test whether the labor market regulations had any effect on the profit margins rise, by keeping labor costs contained. We use annual panel data for the EA economies for the post pandemic years 2021 and 2022. The econometric results confirm our theoretical hypotheses. The empirical evidence implies that certain structural features of the product and labor market may make ECB's monetary policy against inflation less effective.

The Economic Impact of Russia's Invasion of Ukraine on European Countries - A SVAR Approach

Jonas Bruhin (University of St. Gallen, Switzerland), Rolf Scheufele (Swiss National Bank, Switzerland) and Yannic Stucki (Swiss National Bank, Switzerland)

We quantify the economic impact of Russia's invasion of Ukraine on Germany, the United Kingdom, France, Italy and Switzerland using data on historical geopolitical events. Employing a structural VAR approach based on zero, sign and narrative sign restrictions, our analysis reveals a drag on real activity and a considerable increase in inflation due to the war. In a counterfactual scenario without the invasion, we find a more substantial impact on inflation compared to economic activity. In the absence of the conflict, CPI inflation in European countries would have been 1.2 to 3.1 percentage points lower in 2022Q4. Additionally, global inflation would have risen 2 percentage points less, and energy prices would have been 20 percent lower. The war also triggered a significant decline in both global and local economic sentiment, resulting in lower consumer sentiment and reduced global demand.

Parallel Session 7F: Monetary Theory and Policy IV

Monetary Policy and the Long-run Effects of Fiscal Consolidations

Iván Medrano Escalada (University of Zaragoza, Spain) and
Marcos Sanso (University of Zaragoza, Spain)

Synthesizing the monetary policy by its inflation target, and taking as point of departure the empirical conclusions of Alesina et al. (2017) and Fatás and Summers (2018) that the effects of the fiscal consolidations are permanent, results of the simulation of their long-run effects in a New Keynesian DGE model with Schumpeterian endogenous growth and sticky wages are presented. Simulations confirm the conclusion of Alesina et al. (2017) that government spending cuts are less harmful than tax hikes, and significantly widens the range of possibilities because of considering monetary policy: it is possible that there will be an increase in the growth rate and a decrease in the unemployment rate, as well as an improvement in welfare, for some values of long-term inflation target.

Doubling Down: The Synergy of CCyB Release and Monetary Policy Easing

Cristina Jude (Banque de France) and Gregory Levieuge (Banque de France)

At the height of the COVID-19 crisis, many countries have reduced their countercyclical capital buffer (CCyB) for the first time since its implementation, while also cutting key policy rates. In this paper, we exploit this quasi-natural experiment to gauge the combined effects of these two policies on banklending rates (BLRs). Our analysis first relies on a dynamic macroeconomic model embedding a banking sector with financial frictions. We theoretically show that the joint action of CCyB release and monetary policy easing lowers BLRs by more than the sum of their individual effects. We then empirically confirm this synergy by a difference-in-difference analysis comparing countries that released their CCyB with countries that did not. On average, for one percentage point release of the CCyB, corporate BLRs decreased by around 11 basis points more compared to countries without CCyB relief. The effect appears stronger for economies close to their effective lower bound. Furthermore, the CCyB relief improved the pass-through of monetary policy to lending rates. Mortgage rates also benefited from this synergy, but to a much smaller extent.

The Effect of Monetary Policy Shocks on Income Inequality across US states

Steven Yamarik (Califonia State University, USA) and Makram El Shagi (Henan University, China)

This paper examines the impact of Federal Reserve policy on income inequality across US states. We use the local projections method of Jorda to estimate impulse response functions for each state. We find that a monetary contraction increases income inequality in almost all states, but with differing magnitudes. Subsequent panel analysis examines state-level transmission mechanisms that can account for these differences. We find that the increase in inequality is enhanced by higher inflation, home ownership and earnings in finance, insurance and real estate (FIRE), but reduced by higher housing prices, unionization rates, educational attainment and minimum wage.

The Fiscal Channel of Monetary Policy

Max Breitenlechner (University of Innsbruck, Austria), Martin Geiger (Liechtenstein Institute, Liechtenstein) and Mathias Klein (Sveriges Riksbank, Sweden)

This paper studies the fiscal channel in the monetary policy transmission. We document that a contractionary monetary policy shock besides lowering output and prices leads to a pronounced adjustment in fiscal measures and a significant increase in the fiscal deficit. We then investigate different scenarios in which we shut down the endogenous responses of fiscal measures following a monetary policy shock. The impact of a monetary policy shock on output is more than halved by the endogenous adjustment in tax revenues, whereas the public transfer system significantly reduces the impact on prices. Thus, to maximize the response of prices vis-a-vis monetary policy while minimizing the output loss, the fiscal authority should primarily respond via adjustments in taxes. By contrast, a maximum impact on output together with a low sensitivity of prices can be rather achieved through social transfer adjustments. In scenarios in which we assume a balanced budget after monetary policy shocks, we find that U.S. monetary policy shocks would have much larger output and price effects compared to the prevailing regime. Our findings reveal that fiscal policy matters a great deal for the overall macroeconomic impact of a monetary policy shock and can even enhance the monetary effects if appropriately designed.

Parallel Session 8A: European Economic Review IV

Monetary-Fiscal Interaction and the Liquidity of Government Debt

Cristiano Cantore (Sapienza University of Rome, Italy) and
Edoardo Leonardi (London School of Economics, UK)

How does the monetary and fiscal policy mix alter households' saving incentives? And what are the resulting implications on the evolution and stabilization of the economy? To answer these questions, we build a heterogenous agents New Keynesian model where 3 different types of agents can save in assets with different liquidity profiles to insure against idiosyncratic risk. Policy mixes affect saving incentives differently according to their effect on the liquidity premium- the return difference between less liquid assets and public debt. We derive an intuitive analytical expression linking the liquidity premium with consumption differentials amongst different types of agents. Our analysis highlights the presence of two competing forces on the liquidity premium: a self-insurance-driven demand channel and a policy-driven supply channel. We show that the relative strength of the two is tightly linked to the policy mix in place and the type of business cycle shock hitting the economy.

Monetary Policy in the Euro Area: An Assessment

Alice Albonico (University of Milano - Bicocca, Italy), Guido Ascari (De Nederlandsche Bank, The Netherlands; and University of Pavia, Italy) and Qazi Haque (University of Adelaide and Centre for Applied Macroeconomic Analysis, Australia)

We estimate a medium-scale Dynamic Stochastic General Equilibrium (DSGE) model for the euro area allowing and testing for (in)determinacy since the introduction of the euro until end of 2022. Additionally, we include energy as an input in consumption and in production to analyze the recent inflation surge as well as pre-COVID deflationary pressures. Our findings indicate that monetary policy in the euro area was passive, as the nominal interest rate response was less than proportional to changes in headline inflation from the target level. Furthermore, sunspot shocks and self-fulfilling expectations play a pivotal role in shaping the business cycle and inflation expectations. This result is crucial if we consider that most of the models designed for monetary policy analysis assume an active monetary policy as the standard assumption. Consequently, the interpretation and transmission of shocks under a passive monetary policy differ substantially. Moreover, following the surge in energy prices, the ongoing increase in inflation could potentially be attributed to self-fulfilling expectations.

Resolving Puzzles of Monetary Policy Transmission in Emerging Markets

Jongrim Ha (World Bank, USA), Dohan Kim (World Bank, USA), M. Ayhan Kose (World Bank, USA; Brookings Institution,USA; CEPR, UK and Centre for Applied Macroeconomic Analysis, Australia) and Eswar S. Prasad (Cornell University, Brookings Institution, and NBER, USA)

Empirical models of monetary policy transmission in emerging markets produce puzzling results: monetary tightening often leads to an increase in prices (*the price puzzle*) and the depreciation of the currency (*the FX puzzle*). We show that incorporating forward-looking expectations into the standard open economy structural VAR models solves these puzzles. Specifically, we augment the models with novel survey-based measures of expectations based on consumer, business, and professional forecasts. The rise in prices following monetary tightening is related to currency depreciation, so eliminating the FX puzzle helps solve the price puzzle. Our approach also has implications for modeling monetary policy transmission in advanced economies, particularly small open ones.

Parallel Session 8B: Exchange Rate Economics II

Relative Monetary Policy and Exchange Rates

Sören Karau (Deutsche Bundesbank, Germany)

I show that the majority of short-term nominal exchange rate fluctuations among large economies can be explained by changes in the relative stance of their monetary policies. Adapting recently developed instrumental variable techniques for shock identifiction, I find that monetary policy shocks of the US relative to the euro area account for 74 percent of the short-term fluctuations of the USD-EUR exchange rate over a one-month horizon – substantially more than previously documented. This share is significantly larger than that for other variables, including interest rate differentials at various maturities. Identifying US and euro area shocks separately reveals that the former is at least three times as important as the latter for the USD-EUR rate. Similar results are obtained for other exchange rates involving the British pound and Japanese yen. Taken together, these findings speak to the significance of (particularly US) monetary policy in driving frictions in interest parity relations that have recently been found to be crucial for understanding exchange rate behavior from a theoretical perspective.

Dollar Trinity and the Global Financial Cycle

Gernot Mueller (University of Tübingen, Germany), Georgios Georgiadis (European Central Bank, Germany) and Ben Schumann (FU Berlin, Germnay)

We develop a two-country business-cycle model of the US and the rest of the world with dollar dominance in trade invoicing, in cross-border credit, and in safe assets. The interplay between these elements---dollar trinity---rationalizes salient features of the Global Financial Cycle in the data: When its tide subsides, the dollar appreciates, financial conditions tighten, the world business cycle slows down, and emerging-market central banks face a trade-off between mitigating the recession and dampening price pressures. We find the dollar is no sideshow in this, but central for the transmission of the Global Financial Cycle to the world economy.

Monetary Policy and Exchange Rate Regimes under Dominant Currency Paradigm

Camelia Turcu (LEO, Univ. Orléans France), Vanessa Dovonou (LEO, Univ. Orléans, France) and Cristina Badarau (BSE, Univ. Bordeaux, France)

This paper revisits the traditional Taylor rule for the monetary policy under the dominant currency paradigm. Starting from empirical evidence for open economies, it proposes a new hybrid monetary rule able to characterize regimes with different degrees of monetary autonomy. We integrate it into the theoretical framework of Gopinath et al. (2020) and seek to identify an optimal degree of monetary autonomy/exchange rate flexibility that ensures the best stabilization of national variables in the case of adverse foreign monetary shocks. Contrary to the traditional trilemma, we find that this optimal situation corresponds to an intermediate regime with ”partial” central bank autonomy and ”managed” exchange rate. The adoption of such a regime can explain the high sensitivity of many countries’ interest rates to the US rates.

The RMB's Global Role as an Anchor Currency

Risto Rönkkö (Bank of Finland, Tampere University and University of Jyväskylä, Finland) and Kari Heimonen (University of Jyväskylä, Finland)

This study examines the role of the Chinese renminbi (RMB) as an international anchor currency. After China abandoned its tight US dollar (USD) peg in 2005, the RMB found greater popularity as a reserve currency. This change in the RMB's role reflected China's growing presence in the global economy, even challenging the USD in some of the 155 countries that signed on to the Belt and Road initiative (BRI). Modifying the approach of Ahmed (2021) to estimate basket weights in exchange rate policy for the currencies of 63 advanced and emerging economy currencies, we account for potential drivers of the exchange rate omitted in previous studies to obtain unbiased anchor weight estimates. Unlike earlier studies, we find that the RMB's anchor weight in exchange rate policies remains low irrespective of China's global role. Overall, the weight of the RMB averaged 6 %, compared to an average share of 58 % for the USD and 35 % for the euro. We also find that the USD, euro and yen anchor choices are strongly interlinked. A change in the anchor weight of any of these three currencies results in a strong opposite change in the weights of other two. Changes in RMB anchoring, however, do not materially impact USD, euro and yen weights. An increase in financial markets volatility leads developing countries to increase anchor weights of the developed countries currencies USD, euro and yen. Heightened geopolitical uncertainty only increases the weights of the USD and euro.

Parallel Session 8C: Environmental, Social and Governance II

"S" as Social: Global Credit Market Responses to Corporate Social Irresponsibility Incidents

Iftekhar Hasan (Fordham University, USA and Bank of Finland), Miriam Marra (University of Reading, UK), Thomas Y. To (University of Sydney, Australia), Eliza Wu (University of Sydney, Australia) and Gaiyan Zhang (University of Missouri-St. Louis, USA)

Employing a difference-in-difference approach, we examine the responses of global credit markets to socially irresponsible incidents. Our findings reveal that the media coverage of social incidents can lead to an immediate and significantly greater increase in abnormal Credit Default Swap (CDS) spreads for the affected firms compared to unaffected firms. Notably, the market distinguishes between labor-related and community-related misconduct. Labor-related incidents are more severely penalized for firms in consumer-facing and highly competitive industries, suggesting an impact through the fundamental business risk channel. Communities-related incidents are more adversely perceived for firms in countries with poorer governance, regulatory frameworks, and information-flow environments, implying an impact channelled through investors' required risk premium.

Green and Glowing or Brown in Disguise? How do Monetary Policy Shocks Shape the Cross Section of Equity Returns?

Fabio Fornari (European Central Bank, Germany) and Johannes Gross (European Central Bank, Germany)

We use a large cross section of euro area and Unites States equity returns to examine whether the monetary policy actions undertaken in the two economic areas have had similar influence on green and brown equities. We look at a sample that goes back to 2014 - when the availability of indicators of firms' green performance increased - with monetary policy actions classified for the euro area according to the methodology in Altavilla et al. (2019) and in the United States as proposed by G ürkaynak et al. (2005). In our framework we identify the impact of monetary policy shocks identified through the two methodologies conditional on the reaction of the composite equity market indices in the two economic areas. After controlling for a number of economic variables, aggregate equity market factors and indicators and firm-specific information - including balance sheet variables and measures of financial constraints and distance to default, we find that: i) positive monetary policy shocks have a larger effect - i.e. equity returns are marginally more negative - on euro area green firms relative to brown firms and, similarly, that ii) negative monetary policy shocks lead to higher returns for green equities than for brown firms. At the same time, US monetary policy shocks produce effects on the equity market that are overall comparable to those estimated for the euro area, however tend to lead to more negative returns for brown firms than for green firms, when they are positive, and to broadly similar reactions in the two sets of firms when they are negative.

Making Environmental Policies Acceptable

Fabien Tripier (Université Paris Dauphine and CEPREMAP, France), François Langot (Le Mans University; Institut Universitaire de France; Paris School of Economics, and CEPREMAP, France), Selma Malmberg (Le Mans University and CEPREMAP, France) and Jean-Olivier Hairault (Paris School of Economics and CEPREMAP, France)

We assess the short-term consequences of a carbon tax in the French economy and compare alternative accompanying policies that could make it acceptable. We use a heterogeneous agent New-Keynesian model to assess the macroeconomic and redistributive effects of a carbon tax. The carbon tax acts as a negative supply shock to the economy, causing a slowdown in economic growth, an increase in inflation and a rise in household consumption inequalities. We then show how these short-term recessionary effects would be mitigated by a more accommodative monetary policy that would also reduce inequalities. We show that this policy mix dominates (i) a purely fiscal policy that would redistribute to households the revenues of the carbon tax or (ii) an expansionary policy using the tax carbon surpluses to finance energy renovations.

Idiosyncratic Asset Return Risk and Portfolio Choice - When does Social Security lead to Crowding IN of Capital?

Raphael Abiry (Bank of England)

When studying the welfare effects of pay-as-you-go social security systems, efficiency gains due to risk-sharing are contrasted to welfare losses due to distortions. In related literature distorted saving decisions leading to crowding out of capital are identified as a major source for welfare losses. By and large many studies find that the costs of introducing social security outweigh the benefits. But to my knowledge the literature so far disregards positive welfare effects of social security due to shifts in the asset portfolio of households. I study an overlapping generations model featuring idiosyncratic asset return risk and portfolio choice and find that social security benefits stipulate households to shift their savings to riskier assets with higher returns. On the one hand social security lowers the marginal propensity to save, but on the other hand it boosts returns on savings. The overall effect on savings and hence capital depends on which of these two effects dominates. Whether we encounter crowding in or out depends on the level of the risk-free rate and its elasticity with respect to changes in the quantity of the safe asset. Near-zero inelastic risk-free rates guarantee that crowding in prevails.

Parallel Session 8D: Prices and Inflation IV

State-dependent (Neo-)Fisher Effects: The Link between Inflation and Private Sector Wealth

Helmut Herwartz (University of Göttingen, Germany) and Lasse Trienens (University of Göttingen, Germany)

Recently, Uribe (2022) provided compelling evidence that changes in the common permanent component of treasury yields and inflation were central drivers of post-WWII inflation and generate neo-Fisherian effects. In this study we connect these changes with the inflation concept in the fiscal theory of the price level diagnosing their state-dependent relationship with private sector wealth to revert violations in the intertemporal government budget constraint. Being key for treasury holdings, a passive monetary stance disrupts the (neo-)Fisherian response to budget violations, leading to their reversal through a change in the real value of public debt, and hence, private wealth. Conversely, an active monetary stance fosters (neo-)Fisherian patterns that disrupt the link between inflation and private wealth, but requires fiscal backing to conventionally revert budget violations. Otherwise, neo-Fisherian patterns hinder their reversal through a yield-inflation spiral.

Narratives on the cCauses of Inflation in Germany: First results of a pilot study

Lisa Demgensky (University of Hamburg, Germany) and Ulrich Fritsche (University of Hamburg, Germany)

Since 2021, the inflation rate in Germany and the euro area has increased significantly. At the same time, there are increasing signs of ``de-anchoring'' of inflation expectations in Germany. This paper - building on the approach of Andre et al. (2022) - examines in a pilot study survey-based narratives for the rising inflation together with socio-economic factors. A mixed-methods approach is used to classify the narratives, with clustering based on statistical criteria. A regression analysis is used to examine the relationship between socio-economic factors and narratives on the one hand, and the relationship between narratives/clusters of narratives and a de-anchoring of inflation expectations on the other hand. We can associate certain narratives with socio-economic characteristics and political partisanship. Narrative complexity is a function of education and literacy. Narrative clusters correspond to certain milieus and dimensions of socio-economic stratification. Narratives of supply shortages and price gouging are positively correlated with anchored expectations; demand and government plus other narratives are negatively correlated with anchored expectations.

Threshold Cointegrated VAR Model with Structural Breaks. An Application to Modelling Asymmetries in the Price Formation Process

Emilia Gosińska (University of Lodz), Katarzyna Leszkiewicz-Kędzior (University of Lodz, Poland) and Aleksander Welfe (University of Lodz, Poland)

Unexpected events, such as global financial crises, pandemics or military conflicts, cause shocks that significantly influence economies and disrupt economic mechanisms. This calls for new approaches and the appropriate development of the existing methodology of modeling. Accordingly, a generalization of the threshold CVAR model for the presence of structural breaks is proposed and its application to the modeling of price-setting processes at producer and consumer levels is demonstrated. Although the empirical investigation is based on the Polish data, the proposed methodology is applicable to any economy suffering from external shocks.Asymmetry has been found in producer price adjustments to labor costs and the prices of intermediate imports, as well as in consumer prices determined in the long-run by producer prices and final imports' prices. In both cases, a structural break associated with the financial crisis was identified.

The Pricing Strategy of Multiproduct Firms: Are Alvarez and Lippi right?

Theodora Kosma (Bank of Greece), Pavlos Petroulas (Bank of Greece) and Huw Dixon (Cardiff Business School UK)

We analyse the price-setting behaviour of multiproduct firms with particular focus on the issue of within firm price synchronisation. As Alvarez and Lippi (2014) note firms pay a fixed cost in order to revise their prices. This assumption has implications both for price synchronization as well as for the size of price changes. First, once the menu cost is paid the firm can adjust the prices of all its products simultaneously and second , the small price changes are more prevalent in multi-product firms.We explore the predictions of the above menu cost model utilizing a unique monthly micro price data set, covering the period 2005-2020, which is used by the Hellenic Statistical Authority to calculate the Greek PPI. We view firm's pricing strategy from the angle of survival theory, developing hazard functions that give us the opportunity to estimate the probability of an additional price change given that the firm has changed other prices as well.Our results support the assumption of within-firm price synchronization. We also observe that smaller price changes tend to be more frequent in multiproduct firms. Our results are in line with the prediction of the Alvarez and Lippi (2014) model.

Parallel Session 8E: Central Banking II

Strategic Monetary Policies in a Monetary Union: A Dynamic Game Approach

Dmitri Blueschke (University of Klagenfurt, Austria), Viktoria Blueschke-Nikolaeva (Universit of Klagenfurt, Austria) and Reinhard Neck (University of Klagenfurt, Austria)

In this paper, we consider optimal monetary and fiscal policies in a monetary union with strategic uncertainty. We analyze a nonlinear macroeconomic model with three fiscal players (governments of countries) and a common central bank in the presence of exogenous shocks, employing both an algorithm based on linear-quadratic (LQ) dynamic game theory and a new meta-heuristic solution technique based on the differential evolution method. In the baseline game, where both techniques can be used in the same way, both algorithms work well. However, in two ‘non-standard’ extensions of this game, one with an asymmetry in an objective function, the other with a combination of a coalition scenario and asymmetry, it is not possible to obtain an equilibrium solution using classical solution techniques. We show that a cooperative Pareto and a non-cooperative Nash equilibrium solution can be obtained with the meta-heuristic technique. Thus, we demonstrate that the latter method allows studying more realistic problems and gaining better insights for economic policy. The importance of this result is argued to be relevant also for the optimal design of monetary policy under strategic uncertainty in a real monetary union like the Eurozone.

Central Bank Government Lending Restrictions increase Fiscal Space

Angelos Athanasopoulos (Central Bank of Ireland), Nicolò Fraccaroli (World Bank, USA), Andreas Kern (Georgetown University, USA) and Davide Romelli (Trinity College Dublin, Ireland)

This paper provides novel evidence of the medium-term relationship between central bank independence and government debt. We show that improvements in central bank independence are associated with an increase in government debt and a fall in the interest rate on the debt. These effects are pronounced in developing countries. We interpret the evidence as suggesting that central bank independence increases fiscal space. We also provide evidence that the increased central bank independence lowers the pro-cyclicality of fiscal policy for developing economies. The results complement the findings of Frankel 2013 graduation on the effects of institutions on ``graduating'' from developing status.

Does Household Heterogeneity across Countries Matter for Optimal Monetary Policy within a Monetary Union?

Benjamin Schwanebeck (Fern Universität in Hagen, Germany) and Luzie Thiel (University of Kassel, Germany)

Empirical evidence points to large variation of the share of financially constrained households across countries forming a monetary union. We examine the implications of this asymmetry for the conduct of optimal monetary policy in a currency union when money as liquid asset serves for insurance purposes. To this end, we build an analytically tractable Heterogeneous Agent New Keynesian model of a two-country monetary union with idiosyncratic risk of switching the household type and imperfect insurance. We take the heterogeneity across countries into account by different shares of financially constrained households across countries. Imperfect insurance leads to a liquidity-insurance motive for the central bank as it is welfare-enhancing to provide liquidity to stabilize consumption. While the nominal interest rate is a union-wide instrument, liquidity can be used as a country specific stabilization tool. We derive a welfare function and find that the asymmetry across countries matters for monetary policy as two additional objectives, consumption inequality within and between countries, arise. This implies a different weight on output stabilization compared to the standard welfare targets in a two-country monetary union. The importance of the additional objectives crucially depends on the share of financially constrained households. The higher this share, the less important becomes inflation stabilization since it is optimal to tolerate higher inflation in favor of stabilizing consumption inequality. Furthermore, we find that the greater the heterogeneity between countries in terms of the share of constrained households, the more important liquidity as an instrument of redistribution becomes. The higher this share, the more liquidity the central bank will provide, the better the central bank can close the arising relative country gaps since liquidity works as a country-specific instrument. Thus, the central bank can compensate for country differences. However, this comes at the cost of higher

aggregate welfare losses as the distance to the efficient equilibrium increases.

The ECB Strategy Review - Implications for the Space of Monetary Policy

Lucian Briciu (European Commission, DG ECFIN, Belgium), Stefan Hohberger (Munich University of Applied Sciences, Germany), Luca Onorante (European Commission, Belgium; Joint Research Centre, Ispra, Italy), Beatrice Pataracchia (European Commission, Belgium; Joint Research Centre, Ispra, Italy), Marco Ratto (European Commission, Belgium; Joint Research Centre, Ispra, Italy) and Lukas Vogel (European Commission, DG ECFIN, Belgium)

This paper investigates two important elements of the ECB's 2021 monetary policy strategy review in an estimated structural open-economy macro model of the euro area: (a) explicit symmetry of the 2% inflation target, which can be expected to lower the risk of hitting the effective lower bound (ELB) on short-term interest rates by raising average inflation towards the target, and (b) commitment to forceful or persistent monetary accommodation in a low interest rate environment, here interpreted as low-for-longer response in the recovery from the ELB. We simulate the model with draws from the estimated distribution of shocks. Both elements increase average inflation and reduce the average output gap. Stabilisation gains are modest in quantitative terms, however, for the given illustrative policy rules, and they are more pronounced when the economy operates at the ELB. Important in the current context, the low-for-longer policy in the model does not jeopardise inflation stabilisation in the event of (inflationary) negative supply shocks at the exit from the ELB. With private sector ` myopia' instead of fully rational expectations, the low-for-longer rule still yields stabilisation gains at the ELB, but they shrink in quantitative terms.

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