Σrsa Economic Research Southern Africa

Keynote (Day 2)

Christoph Grosse Steffen (Banque de France)

Bio

Christoph Grosse Steffen is Deputy Head of the Monetary Policy Research Division at the Banque de France, which he joined in 2016 after completing a post-doctoral position at DIW Berlin. He holds a PhD in Economics from Freie Universität Berlin, an MSc in Economics from the University of Münster, and a Maîtrise from Université Paris 2 Panthéon-Assas. His research focuses on applied macroeconomics, with particular interest in monetary and fiscal policy, sovereign risk, and the role of ambiguity in the macroeconomy.

Title: Anchoring of Inflation Expectations: Do Inflation Target Formulations Matter?
Authors: Christoph Grosse Steffen (Banque de France)

Abstract:
Inflation target formulations differ across countries and over time. Most widespread are point targets, target ranges, hybrid combinations of the two, or mere definitions of price stability. This paper proposes a novel empirical measure of expectations anchoring based on the cross-sectional distribution of private sector inflation point forecasts. Applying this to a panel of 29 countries, it finds three main results. First, a numerical target definition per se does not improve anchoring compared to a definition of price stability, while the formulation of a numerical reference point increases the degree of anchoring. Second, point targets and hybrid target formulations are associated with better anchoring than target ranges. Third, periods of persistent target deviations lead to an increase in tail risks to the inflation outlook. Conditional on such periods, point targets and hybrid targets attenuate tail risks to the inflation outlook, with a stronger quantitative effect for point targets. The results are consistent with models suggesting that targets ranges are interpreted as zones where monetary policy is less active.

Title: External shocks, inflation, monetary policy and macroeconomic regime change in South Africa
Authors: Ruthira Naraidoo (University of Pretoria)

Abstract:
South Africa has seen recent looming of disinflationary and inflationary pressures. The global financial crisis and the Covid19 pandemic, among other macroeconomic developments are characteristics of the emerging macroeconomic regime and the policy challenges ahead. In this research, we estimate a structural VAR to investigate the relative role played by macro-shocks and monetary policy and the potential effect on inflation. Key to our approach is transitioning Markov processes between states, following shifts in macro-volatility and the subsequent reaction of monetary policy. The estimations show that commodity prices shift to high volatility around 2007 and 2019, during the Global Financial Crisis and post- Covid periods, respectively. Monetary policy experiences shifts during these periods with a higher response following the high volatility regimes, most probably to control the macro volatility. The variance decomposition consequently shows that commodity prices play a role in inflation determination, especially in the high volatility regime.

Title: The Macroeconomic Relevance of Mobile Money to Inflation Dynamics

Authors: Mphatso Elias Ackim (University of Pretoria), Nicola Viegi (University of Pretoria), Vincent Dadam (University of Pretoria), Omogolo Mighty Maripe (The Bank of Botswana and University of Essex), Marietta Mpingasa (The Reserve Bank of Malawi)

Abstract:
Mobile money has become a prominent financial service in developing economies, with more registered accounts than conventional bank accounts. This structural shift may entail revisiting monetary policy conduct, analysis, and forecasting techniques, given the innovation's potential to impact monetary stability. This study, therefore, employs sign-restricted Bayesian structural vector autoregressive (B-SVAR) models to disentangle shocks from in-sample quarterly money growth, real output growth, inflation rate, and policy rate data before (2003-2011) and after (2012-2020) the emergence of mobile money in Botswana, Namibia, Malawi, and Zambia. Based on log predictive scores, the study finds that the inclusion of mobile money improved inflation and real output growth forecasts over the horizon 2021-2023. The study also finds that after the emergence of mobile money, money growth shocks accounted for a larger proportion of inflation forecast errors, and inflation became more resilient to real and monetary policy shocks. The outcome of the analysis suggests the relevance of mobile money for macroeconomic analysis, underscoring the need for monetary authorities to revise their frameworks to adapt to the changing macroeconomic landscape shaped by digital financial innovations.

Title: Quantifying the impact of international food price spillovers on South Africa domestic market: Short- and long-term dynamics and transmission channels

Authors: Gisele Mah (North-West University), Christian Urom (Paris School of Business), Denis N. Yuni (National University of Lesotho), and Realoboga Mahapa (National School of Lesotho)

Abstract:
This study quantifies the degree of return and volatility risk transmission from the global food market to the South African food market for the period from January 2010 to December 2023. It employs the TVP-VAR-based frequency connectedness to quantify and observe the evolution of both return and volatility risk transmission from the global food market to the South African food market. It also uses the Quantile Regression technique to identity the main driving factors of both return and volatility spillover from the international food market into the South African market. Results show a slightly higher level of return connectedness than volatility connectedness among the food markets and that shocks from the global food market dominate shocks from the South African food market. While return shocks appear to be more of a short-term phenomenon, volatility shocks are mainly driven by long-term factors. The degrees of shocks transmission are significantly higher when we use the five main global food types (Meat, Dairy, Cereals, Oil and Sugar) instead of the composite index of global food prices, expecially in terms of volatility. Moreover, increase in geopolitical risks, equity market returns in South Africa, oil prices and the COVID-19 pandemic were the main drivers of return risk transmission from the global food market into the South African food market. However, the depreciation of value of Rand decreased the level of spillovers. Regarding volatility risk transmission, gold price, the South African equity and the fixed income market return are the main drivers of volatility shocks transmission from the global food market into the South African food market.

Title: Monetary Policy Shocks, Agricultural Growth, and Food Inflation in Developing Agrarian Economies: Misled Central Banks?
Authors: Edward Leman (University of Malawi)

Abstract:
Implementation of tight monetary policy by central banks is theoretically expected to cool down the economy through subdued output and demand, hence inflation. This paper assesses the response of agriculture sector growth and food inflation to increased policy rate in Malawi, a typical low-income agrarian economy. We use the Bayesian Structural Vector Auto-regressive (B-SVAR) model on data from 1986 to 2023 to analyze the response of agriculture sector growth and food and overall inflation to positive monetary policy shock (increased policy rate by the central bank). Our results reveal a rather interesting picture where tight monetary policy reduces the growth of the sector and fuels both food and overall inflation. In essence, the implementation of unconventional monetary policy by reducing policy rate can actually spur growth of the agriculture sector which would translate into an increased supply of food on the market and controlled food and overall inflation in developing agrarian economies where the agriculture sector is the main contributor to Gross Domestic Product and overall inflation is largely driven by food prices.

Title: Are South Africa's Household Inflation Expectations Subjectively Rational?
Authors: Katrien Smuts (Stellenbosch University)

Abstract:
Household inflation expectations play a crucial role in economic decision-making and monetary policy effectiveness. However, these expectations often exhibit systematic biases, including an upward bias and heightened sensitivity to changes in salient prices rather than prices of goods or services that make up a large share of their total expenditure. This paper investigates the formation of inflation expectations among South African households, analysing whether expectations are more responsive to the prices of frequently purchased items than to the proportion of income allocated to different expenditure categories. Using data from Statistics South Africa's Income and Expenditure Survey (IES) and the Bureau for Economic Research's (BER) Household Inflation Expectations Survey, we assess the relationship between expenditure shares and inflation expectations across four income groups within the household sample. We also examine how inflation expectations differ in the face of increasing versus stable inflation, shedding light on the role of the inflation environment in expectation formation. Our findings contribute to the understanding of inflation expectation biases in an emerging market context and have important implications for monetary policy.

Title: Governance, and regional dynamics of inflation persistence: Evidence from South Africa
Authors: David Fadiran (University of Cape Town) Tutsirai Sakutukwa (RMIT University, Australia)

Abstract:
Regional inflation patterns within a single economy can have important implications for the effectiveness of fiscal and monetary policy. Yet, much of the existing research has focused on cross-country or monetary union dynamics, under the assumption that intercountry regions are sufficiently homogenous for national policy to transmit uniformly. This assumption may be particularly problematic

in countries like South Africa, where significant regional disparities in economic activity, infrastructure, and governance exist—each of which affects how policy is transmitted to the subnational level. This study uses consumer price index (CPI) data from 27 local municipalities between 2008 and 2023 to examine the extent of variation in inflation and inflation persistence across South African regions. Employing an autoregressive model, we then assess the role of municipal governance, measured by audit outcomes from the Auditor-General of South Africa, in mediating this persistence. The results indicate marked regional differences in both inflation levels and persistence. Regions with lower economic activity tend to experience higher inflation persistence, suggesting a compounding vulnerability for already marginalised populations. Governance quality appears to mitigate inflation persistence, particularly in market-determined prices, while its effect is weaker in administered price categories—likely due to slower adjustment processes. The findings contribute to understanding the sub-national drivers of inflation and inform the development of targeted policy interventions to address regional disparities and enhance overall economic stability in South Africa.

Title: Accounting for Regional Dynamics and Global Influences in South Africa's Inflation Problem
Authors: Shakirudeen Taiwo (University of Johannesburg)

Abstract:
Evolving global productivity and inflationary pressures, particularly from advanced economies, have revealed new evidence of the international transmission of economic shocks to emerging markets. This study focuses on the inflationary impacts on South Africa, exploring how output and price level shocks from key trading partners, including advanced and emerging economies, affect its macroeconomic performance. Utilising a Global Vector Autoregressive (GVAR) model, the analysis highlights the significant influence of these shocks on key macroeconomic variables, including inflation. South Africa's unique position as a non-oil resource-rich economy provides a distinct lens for assessing these spillover effects. The study also contextualises the findings within the broader macroeconomic landscape of South Africa, while focusing on inflationary pressure only. Results suggest that South Africa's inflation is affected by productivity and inflationary shocks from the U.S., China, and the Eurozone, while South Africa's response patterns underscore the importance of its diversified economic structure in mitigating such external pressures.

Title: Global Shocks and Local Response: Currency Risk and Monetary Policy
Authors: Husnu Cagri Dalgic (University of Mannheim

Abstract:
An economy's response to global shocks plays a key role in determining the riskiness of its currency. In countries where exchange rates offer less insulation from global risks, currency depreciations tend to be more recessionary. In these economies, countercyclical exchange rates reduce the value of local currency assets during downturns, leading investors to demand higher excess returns. To explore these dynamics, we develop a small open economy model where high export dollar invoicing and significant dollar-denominated debt in the banking system amplify currency risk. This increases exchange rate volatility and deepens the recessionary effects of global shocks. As a result, investors require larger excess returns to compensate for the heightened risk. Moreover, firms reduce local investment due to heightened risk, raising marginal costs and pushing prices upward, contributing to persistently high

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inflation Our findings highlight how financial and trade structures determine currency risk and provide key implications for monetary policy economies exposed to global financial fluctuations.

Title: Gaps in the South African Inflation Targeting Debate
Authors: Adain Horn, Martin Lisa; Jan-Hendrik Pretorius and Steenkamp, Daan

Abstract:
This paper presents a primer on assessing South Africa's optimal inflation target and the implications of the economy's structural characteristics for the conduct of monetary policy. The paper assesses what would need to be done to lower the inflation target without imposing a disproportionate cost on the economy. The main finding is that there needs to be supportive fiscal policy aimed at reducing South Africa's debt burden and government policies that reduce inflation pressures. This will, in turn, require a social compact between government, the central bank, state owned enterprises, relevant regulators, and labour unions to galvanise support for structural reforms that reduce government-related inflation and align public sector wage demands to productivity growth. Such a compact is unlikely without clear articulation of the benefits of a lower target and what is required to counterbalance the short-term costs of reducing inflation.

Title: Trend Inflation, Price Dispersion, and the Costs of Disinflation in a Fiscal DSGE Model
Authors: Hylton Hollander (University of Cape Town) and Clinton Joel (University of Cape Town)

Abstract:
This paper evaluates the economic and welfare implications of reducing South Africa's inflation target using a New Keynesian DSGE model with trend inflation and price dispersion. A baseline model following Ascari and Sbordone (2014) demonstrates how positive trend inflation introduces steady-state distortions through relative price misalignments, leading to output losses, markup variability, and increased volatility.

We extend the model to include nominal wage rigidity and two types of households: optimising (Ricardian) and financially constrained (non-Ricardian) (Garin, Lester, and Sims, 2016). A fiscal block incorporates distortionary taxation, a debt feedback rule, and a maturity structure for government debt (Krause and Moyen, 2016). A sovereign risk premium that responds to debt levels links borrowing costs to inflation dynamics and public debt sustainability.

To examine the dynamics of disinflation, we simulate a transition of the inflation target from 4.5% to 3%and show that macroeconomic responses display persistence due to structural frictions such as nominal rigidities and fiscal feedback. These effects may be further amplified in settings with adaptive expectations or imperfect information.

Welfare analysis using a Ramsey policy framework shows that while a lower inflation target yields long-term benefits by reducing price and wage dispersion, transitional costs and fiscal constraints are nontrivial. These findings underscore the importance of accounting for fiscal structure and inflation-induced distortions when designing credible and welfare-improving inflation targeting strategies.

Title: Navigating Optimal Inflation Targeting in South Africa: A Regime-Switching DSGE Approach

Authors: Ruthira Naraidoo (University of Pretoria), Christian Tipoy (University of KwaZulu-Natal) and Junior Maih (Norges Bank)

Abstract:

This paper examines the optimal inflation target strategy of the South African Reserve Bank (SARB) using a regime-switching DSGE model. In particular, we explore the interplay between the inflation target and the central bank's monetary policy reaction function, which adjusts based on commodity price volatility. The model incorporates a commodity sector with heteroscedastic prices, modelled as a two-state Markov process, and a monetary policy rule where the central bank's response parameters depend on the volatility regime. By optimizing the Taylor rule, we determine the inflation target that minimizes the central bank's loss function. Our results show that the optimal target is closely tied to the central bank's reaction function, and any estimates of the optimal target must consider the parameters governing the policy response. This analysis provides valuable insights into how the SARB could rene its ináation targeting framework, considering both the ináation target and the necessary policy adjustments.

Title: Macroeconomic effects of lowering South Africa's inflation target: an SVAR analysis

Authors: Richard Kima (UNU-WIDER/SA-TIED) and Keagile Lesame (National Treasury)

Abstract:

We estimate the macroeconomic effects of shifting to a lower inflation target for South Africa, within a Structural Vector Autoregressive (SVAR) framework identified using the Max Share Identification strategy and estimated with Bayesian methods. We find that a decrease of 1% (in terms of percentage points change) in the inflation target leads to output expanding over the next few quarters after an initial muted response, with a peak of about 1.20% after about two years and remains positive and statistically significant for nearly three years after the shock. We also observe a short- and medium-term co-movement of inflation and the nominal policy rate in response to the inflation target shock, reminiscent of Neo-Fisherian effects. However, unlike most of the findings in the literature whereby the effects of inflation target shocks are persistent, we find that they are less persistent for the South African economy, implying that the often-cited gains linked with permanent lower borrowing costs may not apply to South Africa. Finally, we investigate the transmission mechanism of the inflation target shock and find a strongly operative sovereign credit risk and asset price channels through which lower inflation target increases output. These findings are relevant for emerging markets where sovereign credit risks tend to be elevated compared to developed economies.