



South African Reserve Bank

Research themes and objectives

February 2020

Key objectives

- Produce high-quality and policy relevant research to deliver on multiple mandates and engage with stakeholders.
- Build /Strengthen research capacity internally and externally to deliver on research and policy needs.
- Enhance quality and relevance of research with an effective review process for research proposals and working papers.
- Improve coordination within the division (Research committee) and with other departments (CDRC) on research outputs



Themes and projects

SFA 1, SFA 4			
Theme	Enhancing monetary policy efficiency	Supporting economic growth and resilience	Maximizing the growth and stability benefits of the financial sector
Research area	<ul style="list-style-type: none">• Potential growth and the neutral interest rate• Macro policy coordination• Improving forecast and modelling capabilities	<ul style="list-style-type: none">• Climate change and central banking• Micro policy interventions and their impact on inflation	<ul style="list-style-type: none">• Macroprudential regulation and its impact• Impact of financial sector competition and innovation



Theme: *Enhancing monetary policy effectiveness*

Top Priority Theme



Potential growth and the neutral interest rate

- **Problem :**

- The economy has been subject to several supply and demand side shocks that are hard to disentangle quantitatively and creates uncertainty about potential growth
- The neutral interest rate is policy benchmark that is subject to shocks. The level needs to be assessed on ongoing basis, especially to ensure its continuous relevance for policy setting.

- **Research questions/Projects:**

- What is the impact of supply side shocks on potential growth?
 - What is the outlook for specific supply constraints i.e electricity or water?
 - How do supply side shocks affect specific sectors through the supply and demand of inputs?
 - Are there viable alternative sources of demand that are not subject to supply constraints?
 - What role can monetary policy play in supporting other sources of demand?
- What are the drivers of the risk premium and what is its likely trajectory (equilibrium level) over the next three years?
- Given the persistent saving-investment gap and rising real bond yields, is the neutral interest rate a useful benchmark for policy?
- What explains the volatility of GDP growth and how do we improve the measurement of economic activity?



Macro policy coordination

- **Problem**

- Fiscal conditions affect monetary policy and the real economy more broadly. How can we improve policy coordination to get better economic outcomes?

- **Research questions/projects**

- Is the tax system supportive of growth? How can it be improved?
- What is the optimal level of inflation for South Africa?
- What are the drivers of inflation expectations?
- What are the long-term impacts of macroeconomic policies?
- What is the optimal macro (including macroprudential policy) policy mix to support stronger growth and higher resilience to external shocks?

- **Current projects**

- What are the macroeconomic policy options for a savings constrained economy? (Chris, David Faulkner and Konstantin)
- What exchange rate policy should South Africa have? (Chris)
- Can we tax property rather than income and profits? (Michael Sachs)
- What is the impact of monetary policy on inequality ?(Serena)
- What is the impact of Switch Auctions on the yield curve? (Daan, Thembi, Luchelle and Mulalo)



Improving forecast and modelling capabilities

- **Problem**

- Equilibrium/steady state values in the Quarterly Projection Model as well as relationships such as the Taylor rule evolve over time and need anchoring at appropriate, tested long-run levels.
- We have forecast errors that we can explain only partially.
- The QPM model is missing important relationships such as the interaction between monetary and fiscal policy.
- QPM models are difficult to modify and to incorporate some key relationships
- Data updates require the re-estimation of the core model.

- **Several interventions to improve and develop models**

- Review the steady states/equilibrium values in the QPM model.
- Develop a hybrid model, similar to new forecasting models of leading central banks.
- Several smaller improvements to the assumptions and core model such as the specification of exports and imports of services and changes to the trade model
- Big-data machine learning forecasting models for predicting monthly inflation – (Daan, Byron, Neil Rankin and Kevin Kotze).
- Develop a model automation tool Sparta to simultaneously generate forecasts from different models..



Theme: *Supporting economic growth and resilience*



Micro policy interventions and their impact on inflation and growth

- **Problem**

- Microeconomic policy and regulatory interventions, working through wages and prices, impact on inflation and the ability of the SARB to anchor inflation expectations. We need to understand the impacts and identify possible changes to policy.
- South Africa's growth remains low and inflation high in part due to weak productivity growth: what are the impediments to stronger growth in productivity?

- **Research questions/projects**

- What are the economic impacts of trade policy (ITAC) decisions?
- What regulatory areas/admin prices have the largest impact on inflation and growth and can we improve their methodologies?
- Can we improve the setting of municipal tariffs and are there alternative sources for municipal revenues?
- How do we increase the demand for low skilled workers and the supply of high skilled workers?
- How do we increase productivity in the economy?
- When do countries implement structural reforms?

- **Current projects**

- What is the impact of recent trade policy decisions on food inflation? (Neva Makgetla)



Climate change and central banking

- **Problem**

- Climate change is leading to structural changes and large supply side shocks with implications for financial stability and inflation. There is no research in South Africa on the implications of climate change for the policy mandate and operations of the Reserve Bank.

- **Research questions/projects**

- What are the likely financial and macroeconomic impacts of climate change in South Africa?
- How should the Reserve Bank respond to climate changes risks? What changes are required to monetary and macroprudential policy?
- How should the Reserve Bank facilitate the transition to a greener economy?
- What tools does the Reserve Bank need to analyze climate change risks and internalize climate change in its operations?

- **Current**

- Climate change and its implications for emerging markets central banks (framework paper by Channing Arndt, Chris and Konstantin)



Theme: *Maximizing the growth and stability benefits of the financial sector*



Macroprudential regulation and its impact

- **Problem**

- The transition to Basel III has been largely completed and we need to understand how it has changed bank behavior and the cost of lending. International evidence suggest large changes in the composition of balance sheets, increased demand for government debt and a decrease in credit extension. Lending spreads have also increased.

- **Research questions/projects**

- What has been the impact of specific BASEL III recommendations on the South African financial sector, in particular, with respect to stability, credit extension and competition?
- Are the BASEL III risk weights for government debt justified given the deterioration in the fiscal metrics?

- **Current projects**

- What is the impact of fiscal risks on banks' capital buffers? (Konstantin, Bojosi and Neryvia)
- How have bank funding costs changed in South Africa? (Daan and Mpho, 2020Q1)



Impacts of financial sector competition and innovation

- **Problem**

- Behaviour and conduct of banks shape the cost structure of the economy. From a monetary policy point of view, it is important to understand (1) the nature and drivers of competition in the sector, and (2) the relationship between bank competition and interest rate pass-through.
- Fintech is changing the competitive landscape for banking, not least by reducing the cost of providing financial services.
- Fintech will likely enhance the role of non-bank financial sector, blurring bank and nonbank financial sector functions, and requiring a better understanding of how the sector contributes to growth and how it acts in monetary policy transmission.

- **Research question/projects**

- What are the implications of increased competition in the financial sector for stability and the cost of banking?
- How (and through what channels) does financial sector innovation (CBDC) impact the functions and structure of the banking sector?
- What are the implications of central bank digital currencies for financial sector regulation and for monetary policy?
- What process do we follow to decide on the introduction of different Fintech products?

- **Current**

- How competitive is the South African banking sector? (Witness and Mpho)
- What is the impact of bank competition on the pass-through of monetary policy in South Africa ?(Mpho and Witness)

