

# Fiscal and Monetary Policy Responses to Global Food Price Shocks

## Some thoughts on recent Tanzanian experiences

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IGC Growth Week

25 September 2012

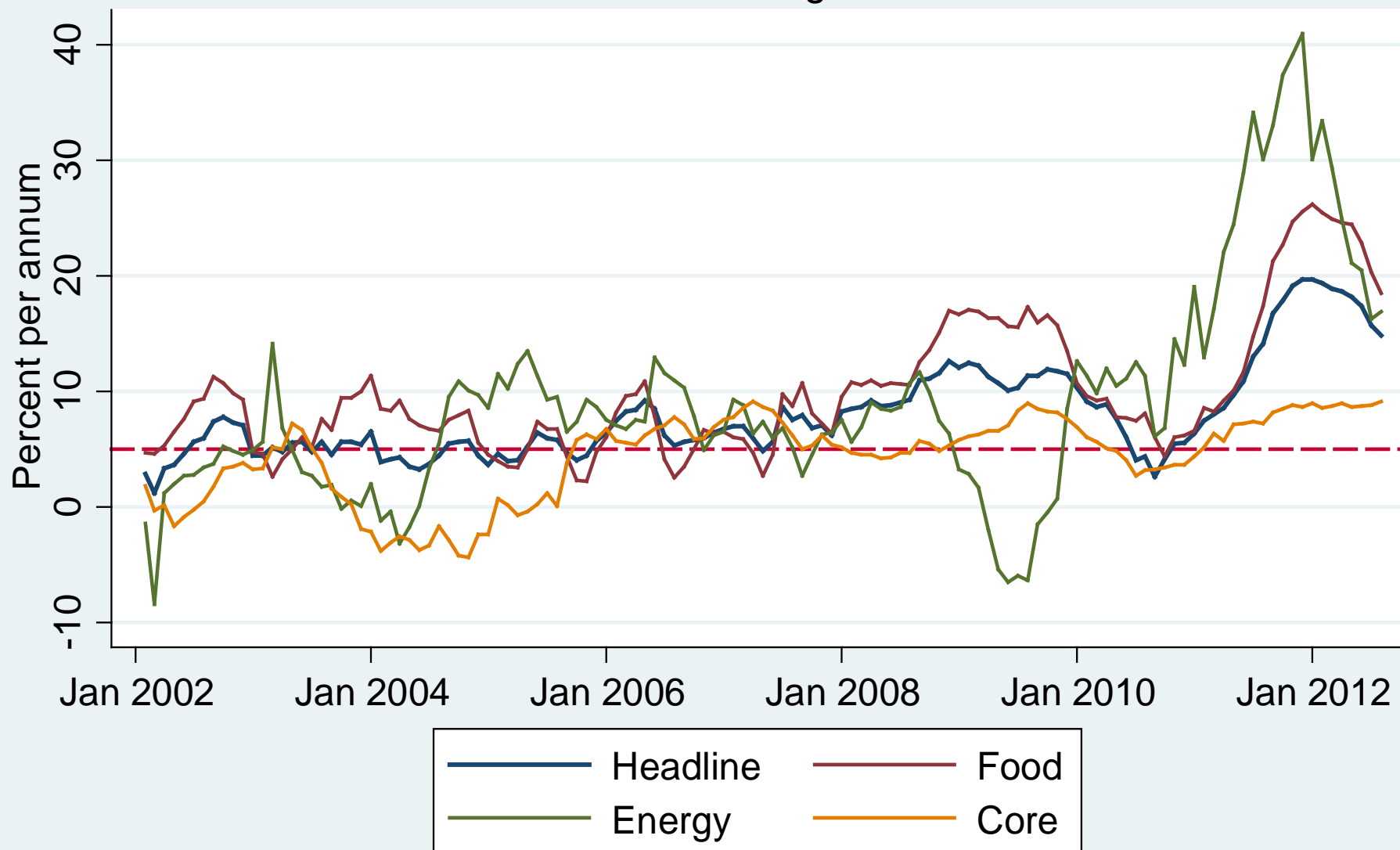
# The challenge and some research questions

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- Recent volatility in food prices has heightened a set of food security issues which have long been of central concern to governments in low-income countries.
- Monetary policy may have no leverage over food prices in long-run but central banks are intensely concerned about how to respond to food price shocks in the short-run.
- In 2008, and again recently, governments have reached for a range of fiscal / trade policy instruments  
(subsidies, tax changes, price controls, export bans, tariff reductions, cash-transfers).
- **Policy Question.** How do activist (but sustainable) policies towards food prices (e.g. buffer stocks and trade policy) alter the environment for MP?

# Tanzania: Headline inflation and principal components

Jan 2002 to August 2012



New series from October 2010

## Decomposition of inflation: January 2002 to July 2012

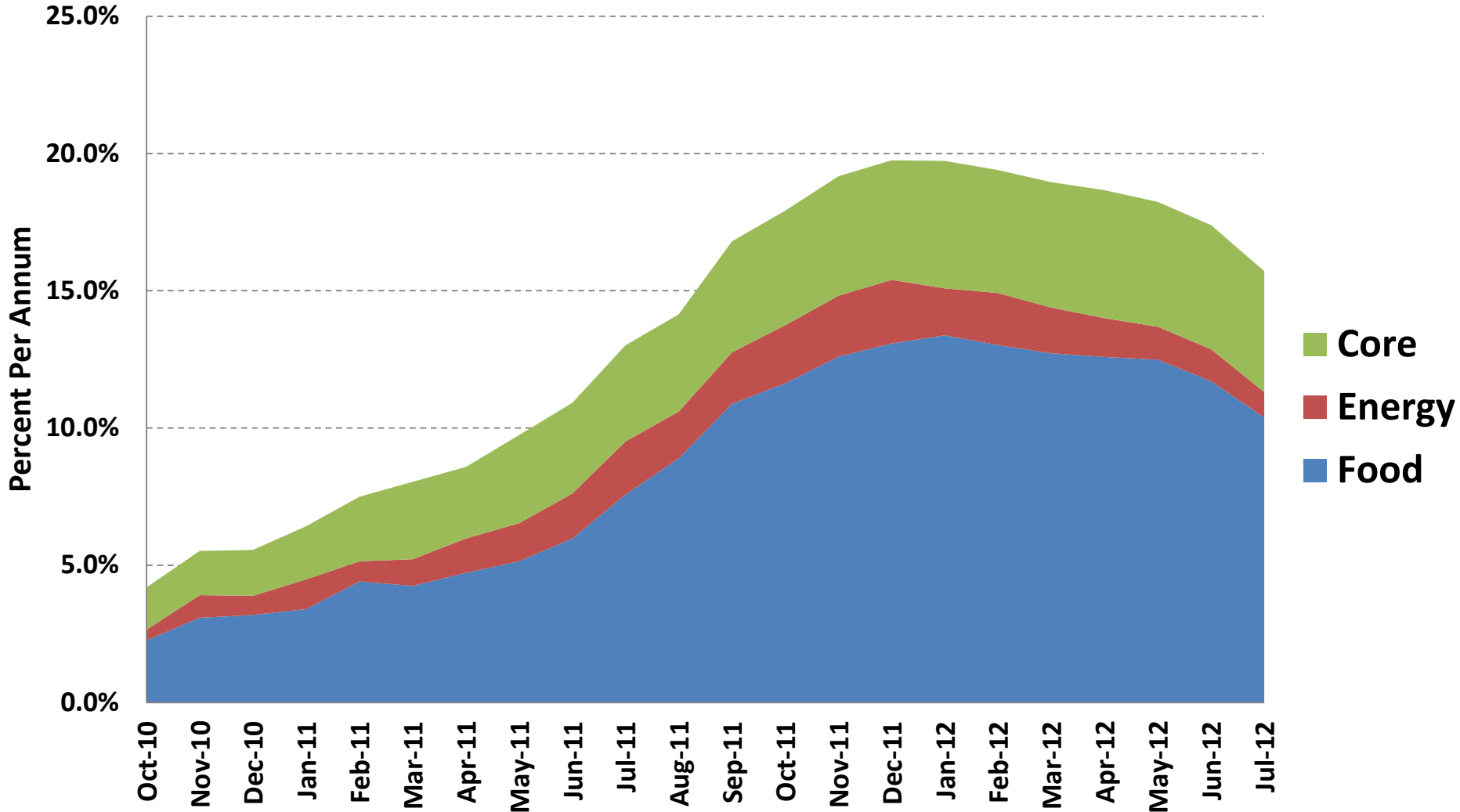
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Inflation Measure	Weight	Mean	Standard Deviation
Headline	1.000	7.51	4.01
Food	0.510	9.57	5.22
Energy	0.057	7.75	8.08
Core	0.433	4.27	3.61

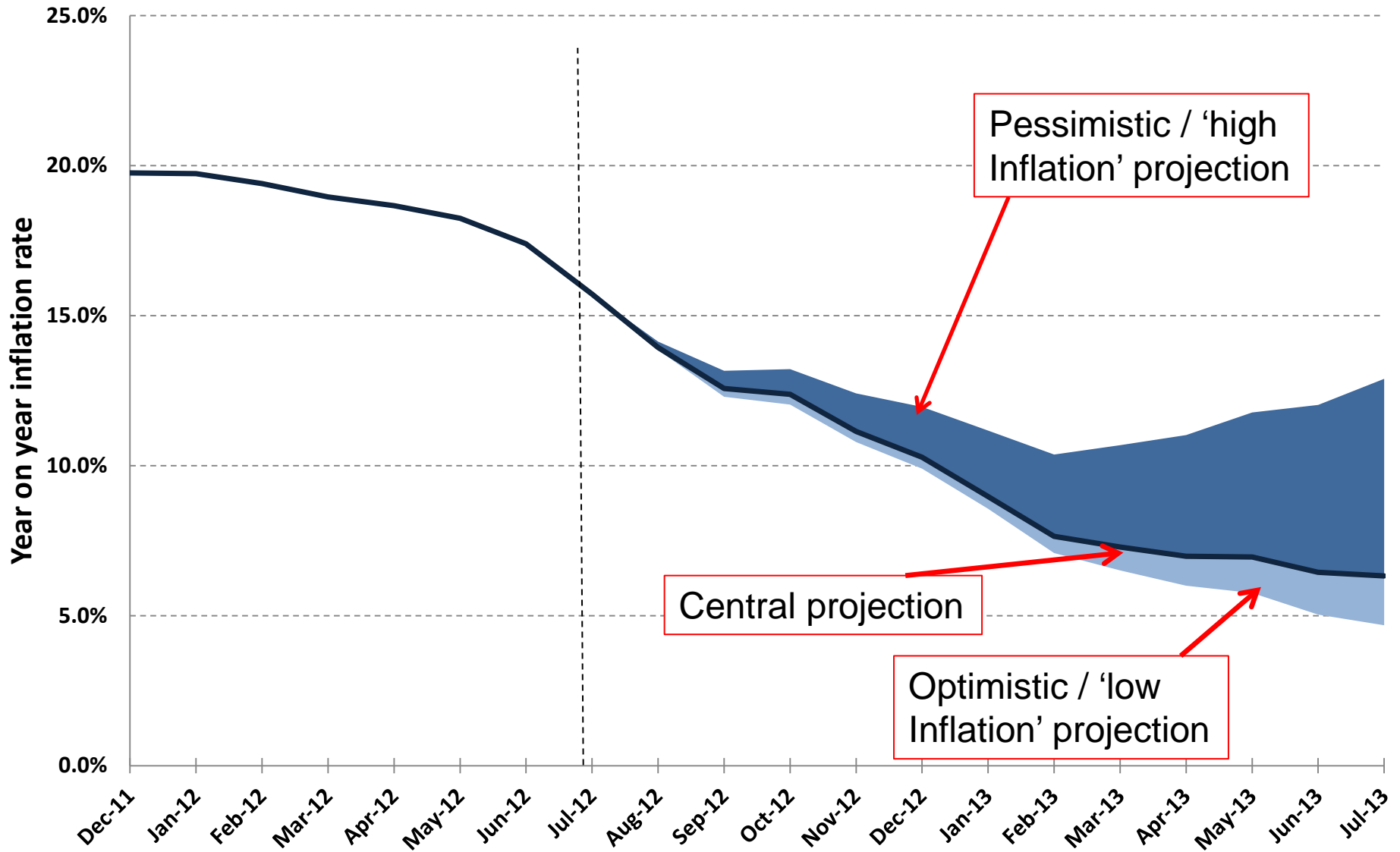
- Source: National Bureau of Statistics (new series released October 2010).
- Inflation measured as 12-month differences in log prices (x100).
- Weights based on 2007 Household Budget Survey. Food includes non-alcoholic beverages and restaurant-consumed food.

# Inflation has peaked as food and energy prices have declined...but relatively slowly

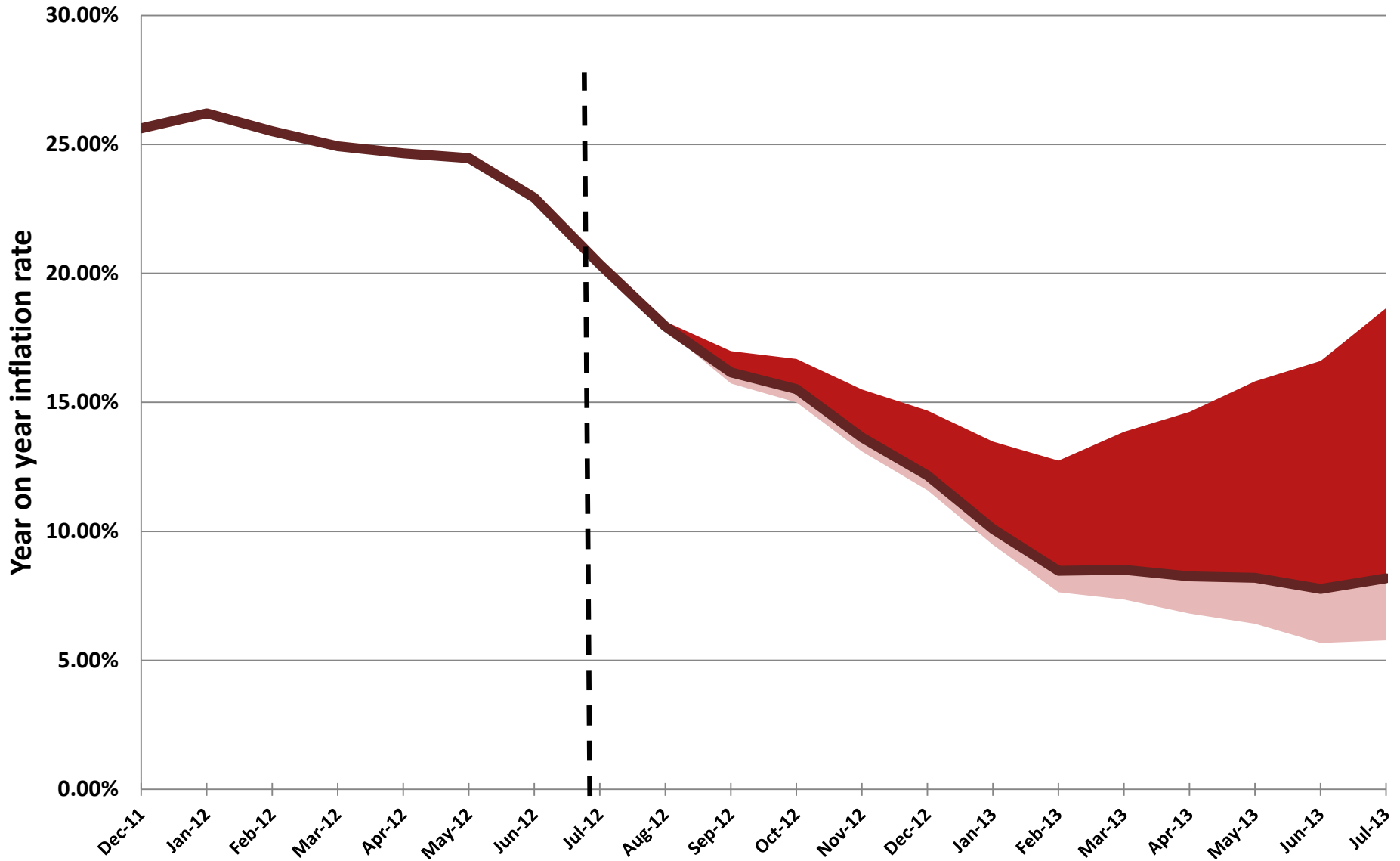
## The contribution to headline inflation



# Headline Inflation Fan Chart: August 2012-July 2013



# Food price inflation Fan Chart: August 2012-July 2013



## Conventional wisdom: an inflation targeting central bank should ignore food prices as long as price rigidities are in non-food sector.

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- Gali (2008) : intuition for the conventional wisdom (...and why we might be question this wisdom).

$$W = -g \left[ \pi_t^2 + \tau \tilde{y}_t^2 \right] + f[a_t^2]$$

The conventional domain  
of monetary policy  
(volatilities matter)

“t.i.p” “terms independent of  
(monetary) policy”

- Note if inflation is governed by a ‘New Keynesian Phillips Curve’

$$\pi_t = E_0 \left[ \pi_{t+1} \right] + \kappa \tilde{y}_t$$

- we get the ‘divine coincidence’: a policy that stabilizes inflation around its steady state level automatically stabilizes the output gap.



# Modifying the conventional wisdom (1)

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- Distortions in the ‘flex-price’ economy (e.g. real wage rigidity, credit market rigidities etc)

$$W = -g \left[ \pi_t^2 + \tau \tilde{y}_t^2 \right] + f \left[ \phi(\tilde{y}_t), a_t, a_t^2 \right]$$



- Problem now is that with distortions, “t.i.p” includes first order (level) terms of the output gap.
- A conventional ‘developed country’ perspective assumes that fiscal policy can be set optimally so that the first term in  $f[.]$  vanishes.
- Important issues arise when fiscal policy is constrained in some fashion.

# Policy research questions

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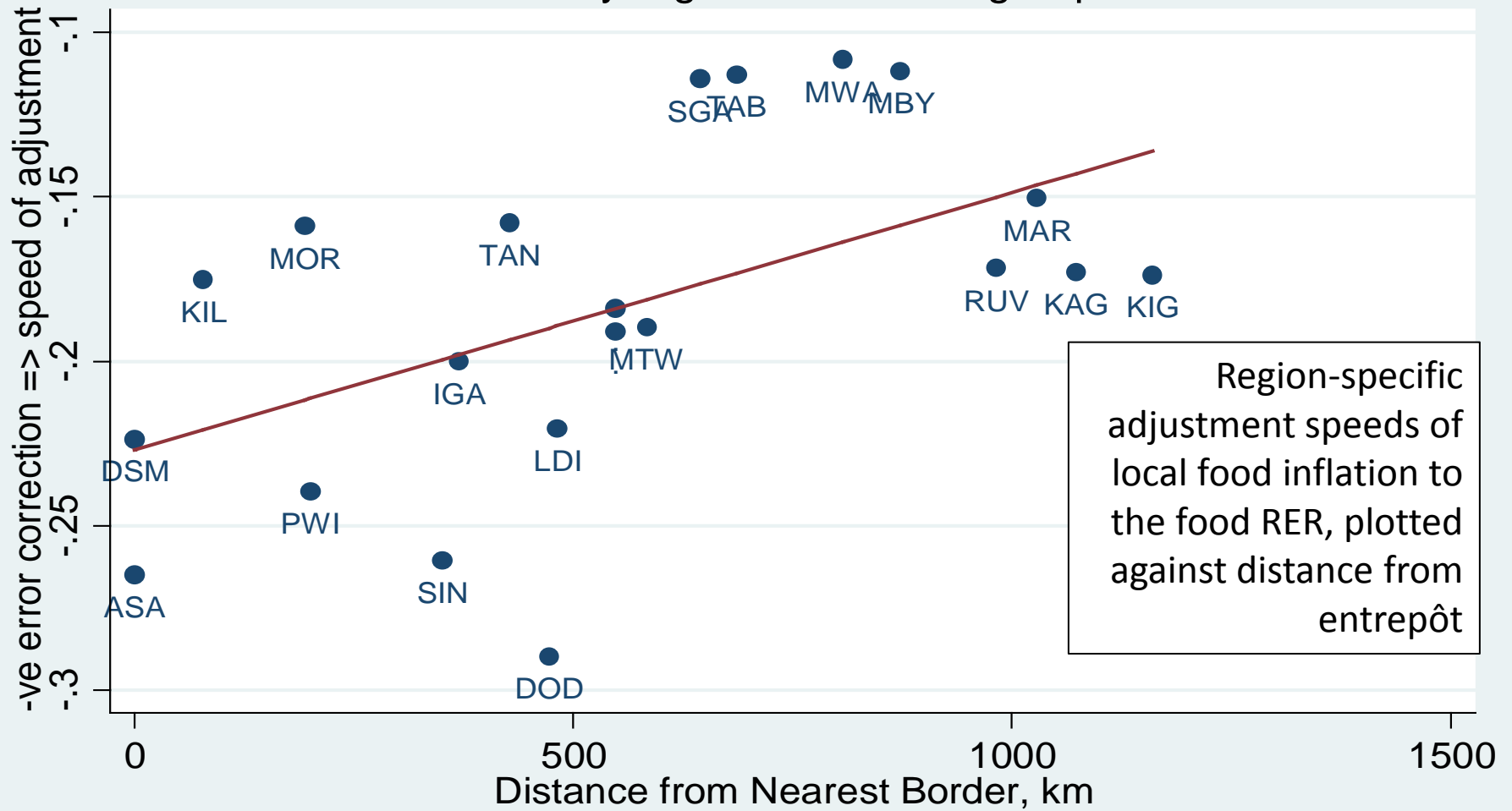
- The focus on volatility forces us to ask how private and public responses to price volatility alters the environment for monetary policy?
  - Private storage
  - Strategic grain reserves
  - Currency management with limited financial participation
- Once divine coincidence is broken – narrow targeting on inflation exposes trade-offs.
- Is there a case for additional instruments (e.g. exchange rate intervention).
- If fiscal policy ‘fails’ Central Bank may get drawn into targeting level of output gap (for legitimate welfare reasons) pitching it back into the inflation bias problem.

# Key distortions: what should we be concerned about?

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- Credit market imperfections (Anand and Prasad, 2010)
- Rigid real wages in urban economy (?)
- High transport costs
  - Monopoly profits in transport and distribution (possibly pro-cyclical mark up) => large endogenous welfare wedge.
  - SR pass through low (higher for rising than for falling prices)
  - Asymmetric impact of domestic food supply shocks on domestic food prices (stronger for positive shocks than for negative).

Figure A3: spatial distribution of adjustment to Food RER  
 ecm estimates by region from mean group estimates



$ecm = -0.22 + 0.0000237dist.$  (R-square = 0.28, both coefficients sig.)

# Actual policy responses

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- Monetary policy remains relatively ‘conventional’...possibly with high costs.
- Fiscal interventions to alter food price process
  - Generally not successful in SSA although examples from elsewhere.
  - Limited use of Strategic Grain Reserve for influencing aggregate supply
  - ‘Endogenous trade policy’ [not used in structured way]
- Supply side issues to Imperfect tradability of food both internally and externally
- The ‘big one’...promoting greater competition in (food) distribution and retail.

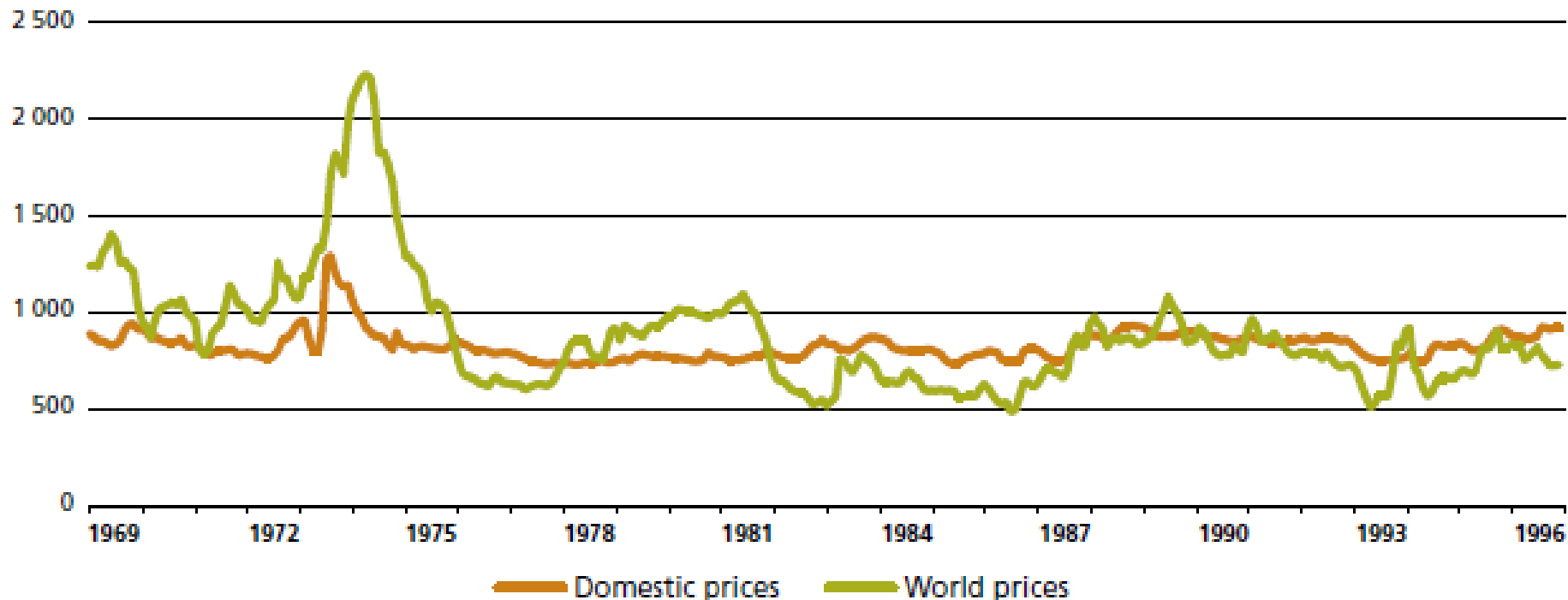
# Supplementary slides

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## But what is the impact on the monetary policy environment of using “fiscal” instruments to stabilize the real food price in a sustainable way?

Indonesia managed to stabilize its domestic price for rice from 1969 to 1996 through trade and buffer stocks

Inflation-adjusted price (1996 Indonesian rupiah/kg)



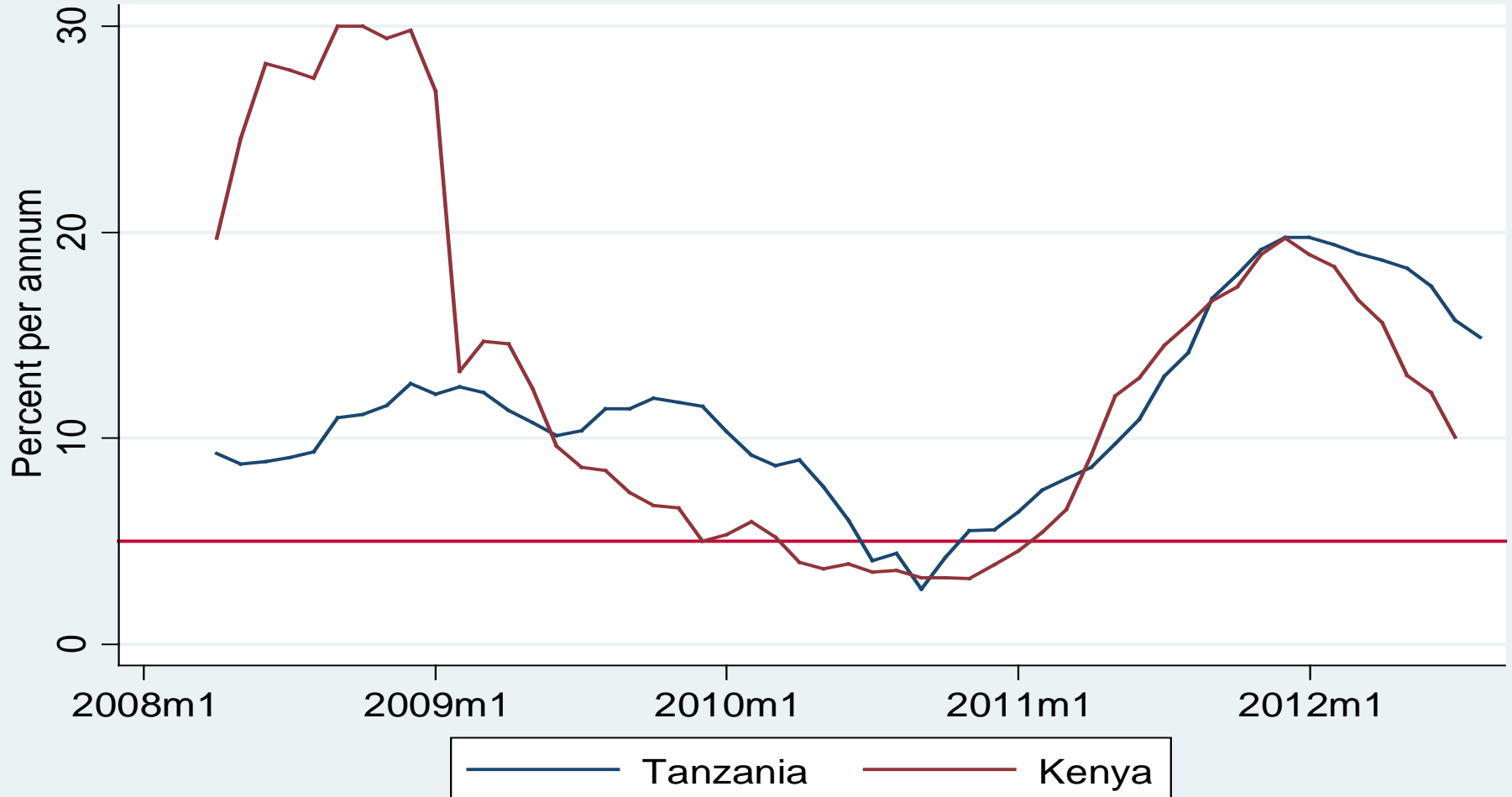
Sources of raw data: Indonesian Bureau of Logistics (BULOG); International Monetary Fund.

FAO, *The State of Food Insecurity in the World 2011*, p. 35

Note: The exchange rate was heavily managed \*most\* of this period, so we cannot readily construct an exchange rate counterfactual. However, they do not appear to have allowed the major depreciations of July 72 – June 74 to pass through, nor movements in the parallel rate through late 1978.

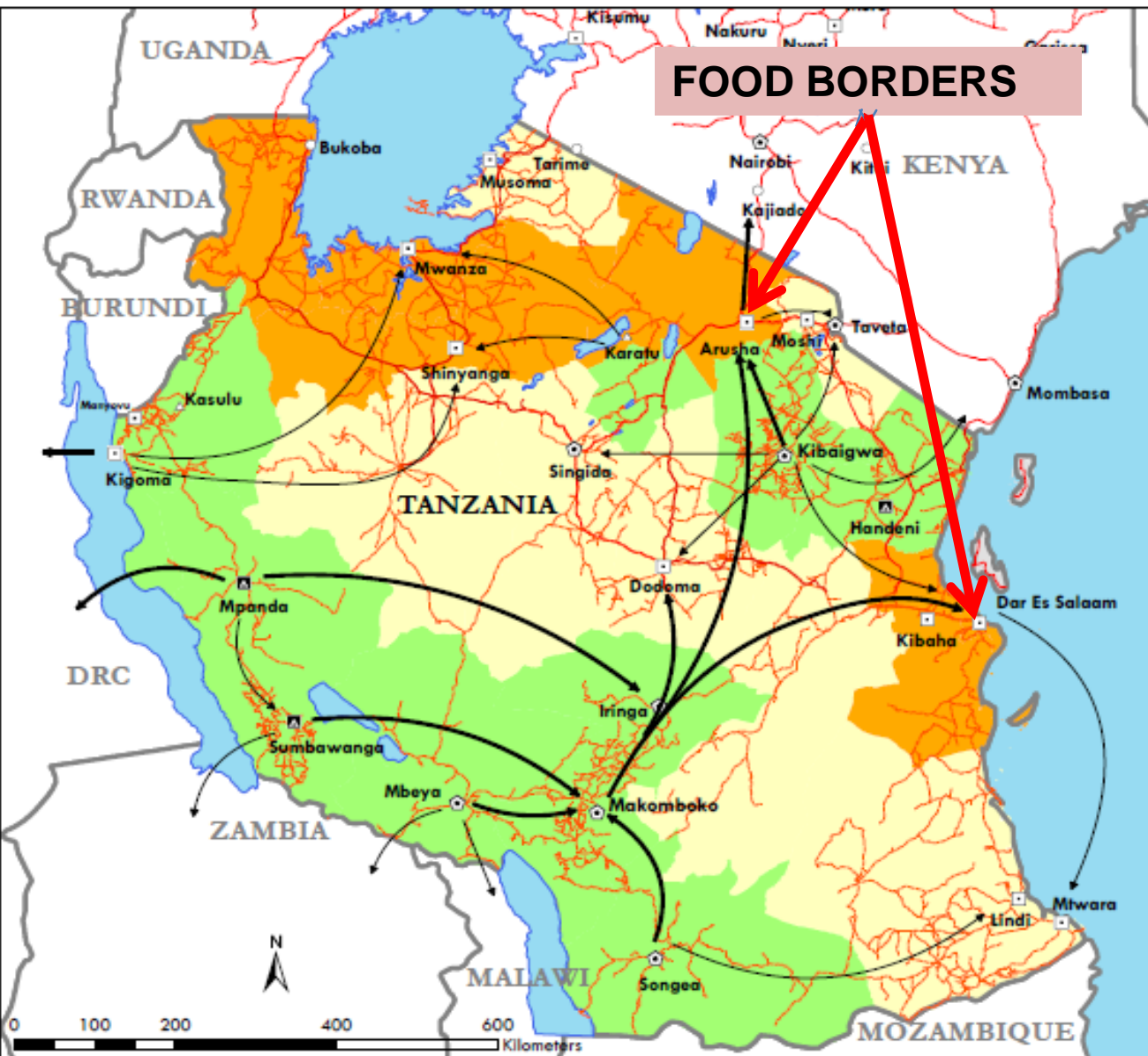
# Tanzania vs Kenya

## Headline Inflation Tanzania vs Kenya



Source: IFS All Items CPI





### Key Market Centres

- Retail
- Wholesale
- △ Assembly
- ◻ Retail & Wholesale
- ⊞ Assembly & Wholesale
- ⊕ Assembly, Wholesale & Retail

### All Season Maize

- Major Production/Surplus
- Minor Deficit
- Major Deficit

Trade Flow	Road Types
→ Large Flow	— Main Roads
→ Small Flow	— Minor Roads
	—+—+ Railways

⊖ Districts      ⊕ lakes



Produced 24 Jul 2008