# Impact of Workers Remittances on the Stability of the CFA Franc Regime

*Preliminary results*

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# INTRODUCTION

## About the CFA Zone:

14 African countries who have formed a monetary union via an agreement with France (1948). Currency is pegged to the Euro at 655cfa/euro

## Benefits of the monetary Union:

common convergence criteria:

Low inflation

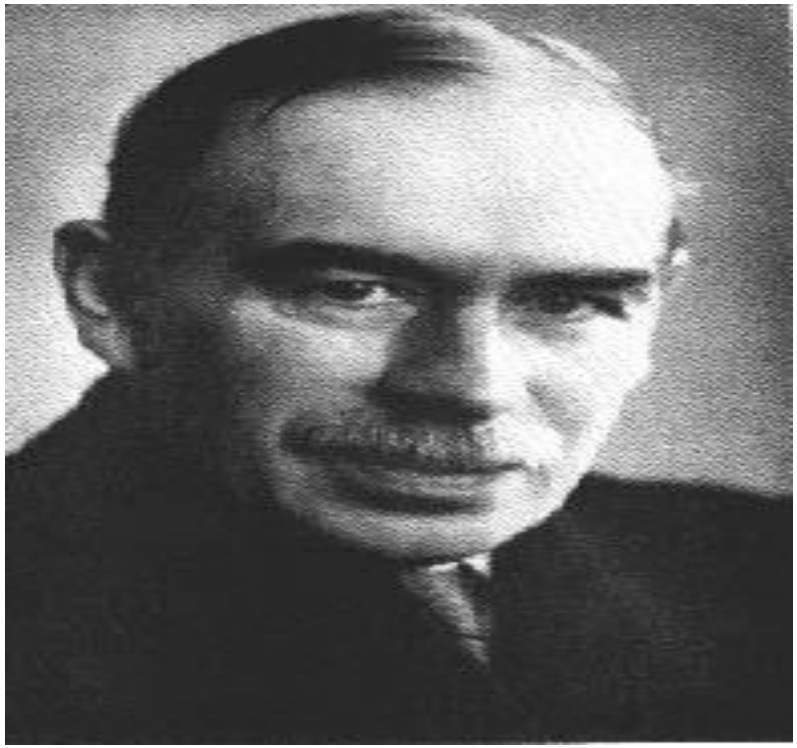
fiscal discipline

currency credibility (via euro)

exchange rate stability (no exchange rate risk),

guaranteed convertibility to the euro( no liquidity shortfalls),

# **What?** Impact of remittances on ERER goes back to the Keynes-Ohlin debate of 1929



# Who?

- ***Could remittances increase the likelihood of adopting/maintaining a FE regime? (Singer (2010))***
- ***Could remittances insulate FE regimes from foreign reserve shortages? (Conrad et al., (2018))***

# Why?

- ***Remittances to the CFA Franc Zone will continue to grow over the foreseeable future…***

| THE DATA – 2000-2022 |
|---|
| **Dependent Variables** |
| Real Effective Exchange Rate |
| Misalignment ( Authors' estimation) |
| **Independent Variables** |
| Remittance to GDP |
| Aid inflow |
| Government Spending |
| Broad Money ( money supply) |
| Investment spending |
| Trade Openness |
| Terms of Trade |

| Variables | Mean | Minimum | Maximum |
|---|---|---|---|
| Remit/ GDP | 3.12 | 0.04 Congo R | 12.58 G. Bissau |
| Remit ($) | 304.06 | 0.81 | 2740 Senegal |
| REER | 104.36 | 81.02 | 171 |
| | | | |

# METHODOLOGY

## Preliminary tests:

1. **Multicollinearity**

   ***Correlation analysis***

2. **Heteroscedasticity**

   ***Breusch-Pegan LM analysis***

3. **Autocorrelation**

   ***Durbin Watson analysis***

4. **Model specification**

   ***Likelihood test and F- test***

# The Model

## Determinant of the REER

$$R_{it} = B_0 + \sum_{i=1}^{n} BX_{it} + \delta R_{it-1} + E_{it} \qquad (1)$$

$$R_{it} = B_0 + \sum_{i=1}^{n} BX_{pit} + \sum_{i=1}^{n} BX_{tit} + E_{it} \qquad (2)$$

$$R^*_{it} = \sum_{i=1}^{n} BX_{pit} + E_{it} \qquad (3)$$

$$\mathrm{R}_{it} = R^*_{it} + \sum_{i=1}^{n} BX_{tit} + E_{it} \qquad (4)$$

$$Mis_{it} = R^*_{it} - \mathrm{R}_{it} \qquad (5)$$

# Panel GMM Results- Table 1
# Determinants of REER in the CFA Zone

| Variables | Model 1 | Model 1 ( plus Remit ) |
|---|---|---|
| Aid Inflow | -0.0053*** | 0.001 |
| Broad Money | -.2939* | -0.292* |
| Government Spending | 0.3706* | 0.117 |
| Investment | -.0738 | -0.368* |
| Terms of Trade | 0.0785* | 0.0987* |
| Trade openness | -.0329 | -0.082 |
| Covid – 19 | -3.338** | -1.852 |
| Remittance | | -0.007*** |
| Lagged Dependent variable | 0.5281* | 0.270* |
| | | |
| *R-Squared* | 0.67 | 0.49 |

Significance level: *=1%; **=5%; ***=10%

# The Model 6a – 6h

## Drivers of Misalignment – CFA Zone

$$Mis_{it} = \beta_0 + \beta_1 \text{Remit}_{it} + \beta_2 \text{Mis}_{it-1} + E_{it}$$

$$Mis_{it} = \beta_0 + \beta_1 \text{Remit}_{it} + \beta_2 \text{Aid}_{it} + \beta_3 \text{Mis}_{it-1} + E_{it}$$

$$Mis_{it} = \beta_0 + \beta_1.., \beta_2..., \beta_3 ..., \beta_4..,+ \beta_5..,+ \beta_6..,+ \beta_7 \text{Trade open}_{it} \beta_8 \text{Mis}_{it-1} + E_{it}$$

$$Mis_{it} = \beta_0 + \beta_1.., \beta_2..., \beta_3 ..., \beta_4..,+ \beta_5..,+ \beta_6..,+ \beta_7 \text{Trade open}_{it} \beta_8 \text{Covid19} + \beta_8 \text{Mis}_{it-1} + E_{it}$$

# Results – Table 2
# Drivers of Misalignment - CFA Zone

| Variable | Model 8a | Model 8b | Model 8c | Model 8d | Model 8e | Model 8f | Model 8g | Model 8h |
|---|---|---|---|---|---|---|---|---|
| Remittance | 0.004*** | 0.006*** | 0.003 | 0.003 | 0.005 | 0.005 | 0.005 | 0.007*** |
| Aid | | -3.07E-05 | -0.001 | -0.001 | -0.002 | -0.002 | -0.003 | -0.001 |
| Broad Money (M2) | | | 0.136*** | 0.108 | -0.006 | -0.001 | 0.046 | 0.933 |
| Government Spending | | | | 0.251 | 0.252 | 0.232 | 0.177 | 0.437 |
| Investment | | | | | 0.380* | 0.378* | 0.388* | 0.391 |
| Terms of Trade | | | | | | -0.008 | -0.021 | -0.029 |
| Trade openness | | | | | | | 0.087 | 0.018 |
| Covid – 19 | | | | | | | | 4.927* |
| Lagged Dependent variable | 0.737* | 0.726* | 0.617* | 0.620* | 0.595* | 0.596* | 0.591* | 0.572* |
| R- Squared | 0.79 | 0.79 | 0.78 | 0.78 | 0.78 | 0.77 | 0.78 | 0.80 |

Significance level: *=1%; **=5%; ***=10%

# Conclusion

1. Effect of remittance in causing misalignment of the CFA franc is marginal.

2. We also find that policies implemented following covid-19 contributed significantly to the misalignment of the real exchange rate.

3. Finally, our findings also reveal the persistent effects of misalignments, i.e. prior-year misalignments having lasting impacts, in CFA Franc Zone economies, which could be partly attributed to the notably slow speed of adjustment of the equilibrium real exchange rate to its long-run equilibrium in these economies, especially following shocks like the 2008-2009 financial crisis and the recent covid-19 pandemic.