CENTRAL BANK OF TRINIDAD & TOBAGO

Analysis of Risk-weighted Capital Requirements on the Commercial Banking Sector & Implications of New Capital Requirements in Trinidad and Tobago.

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Introduction

- Basel I: Risk-weighted Capital Rules
- Concerns of negative consequences of tighter capital requirements
- Impact of Basel capital rules on the level of economic activity in Trinidad and Tobago

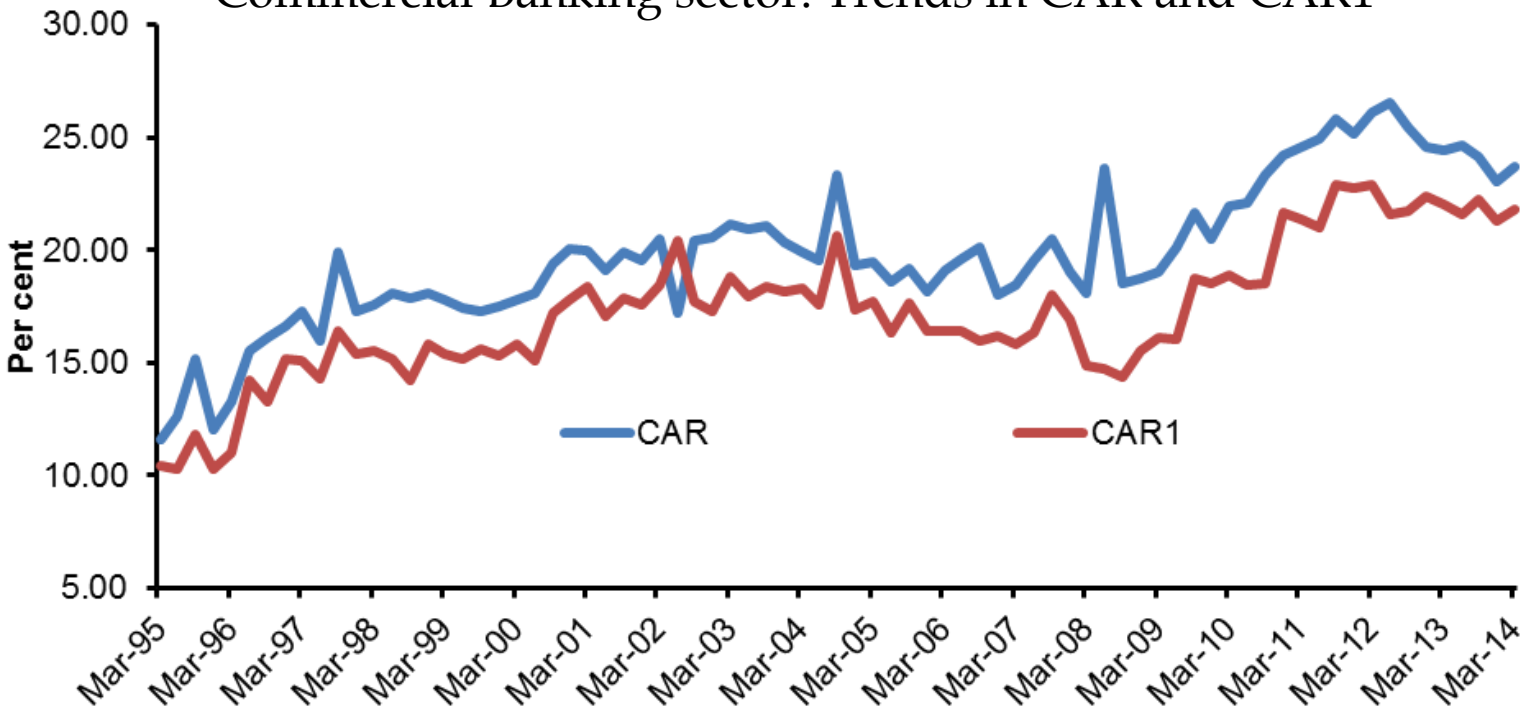
Literature Review

- Parcon-Santos and Bernabe (2012)
  - Macroeconomic effects of Basel III implementation in the Philippines
- Akram (2012)
  - Macro effects of higher bank capital requirements on the Norwegian economy
- Peek and Rosengren (1995)
  - Correlation between bank shrinkage and capital ratios
- Montgomery (2005)
  - Shift of asset portfolios from heavily weighted to zero weighted assets in low core capital ratio banks in Japan

Capital Adequacy Ratio (CAR): Trends in Trinidad and Tobago

» Trinidad and Tobago Financial Institutions Act of 1993 - Basel I Accord

Commercial Banking sector: Trends in CAR and CAR1



$$CAR\ 1 = \frac{Tier\ 1\ Capital}{Risk\ Weighted\ Assets} \qquad and \qquad CAR = \frac{Tier\ 1 + Tier\ 2\ Capital}{Risk\ Weighted\ Assets}$$

Source: Central Bank of Trinidad and Tobago

Capital Adequacy Ratio (CAR): Trends in Trinidad and Tobago

Commercial Banks: Decomposition of Risk-Weighted Assets
/Per cent/

Source: Central Bank of Trinidad and Tobago.

Note: Chart includes on-balance sheet assets only.

Data and Methodology

» VECM Representation

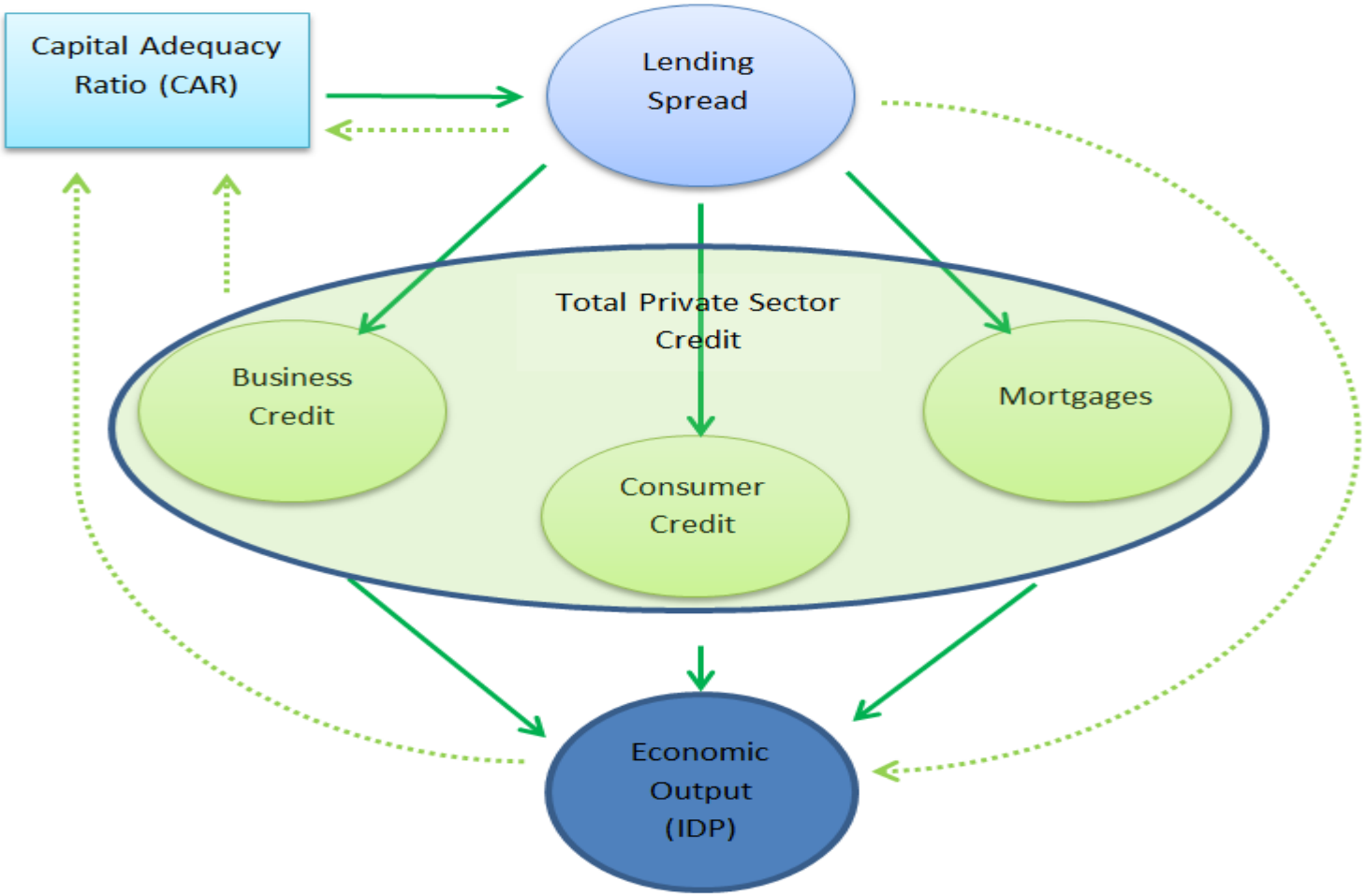
$$Y_t = \mu + \alpha\beta' Y_{t-p} + A_1 \Delta Y_{t-1} + \ldots + A_{p-1} \Delta Y_{t-p+1} + \delta X_t + \varepsilon_t$$

1. $Y_t' = [LSPREAD_t, LRTPSC_t, LIDP_t, LCAR_t]$
2. $Y_t' = [LSPREAD_t, LRBC_t, LIDP_t, LCAR_t]$
3. $Y_t' = [LSPREAD_t, LRCC_t, LIDP_t, LCAR_t]$
4. $Y_t' = [LSPREAD_t, LRMORT_t, LIDP_t, LCAR_t]$

Exogenous variable:
$X_t' = [LRWTI_t]$

Data and Methodology

» Model Transmission Channel



Source: A. Ramlogan, A. Dhanessar

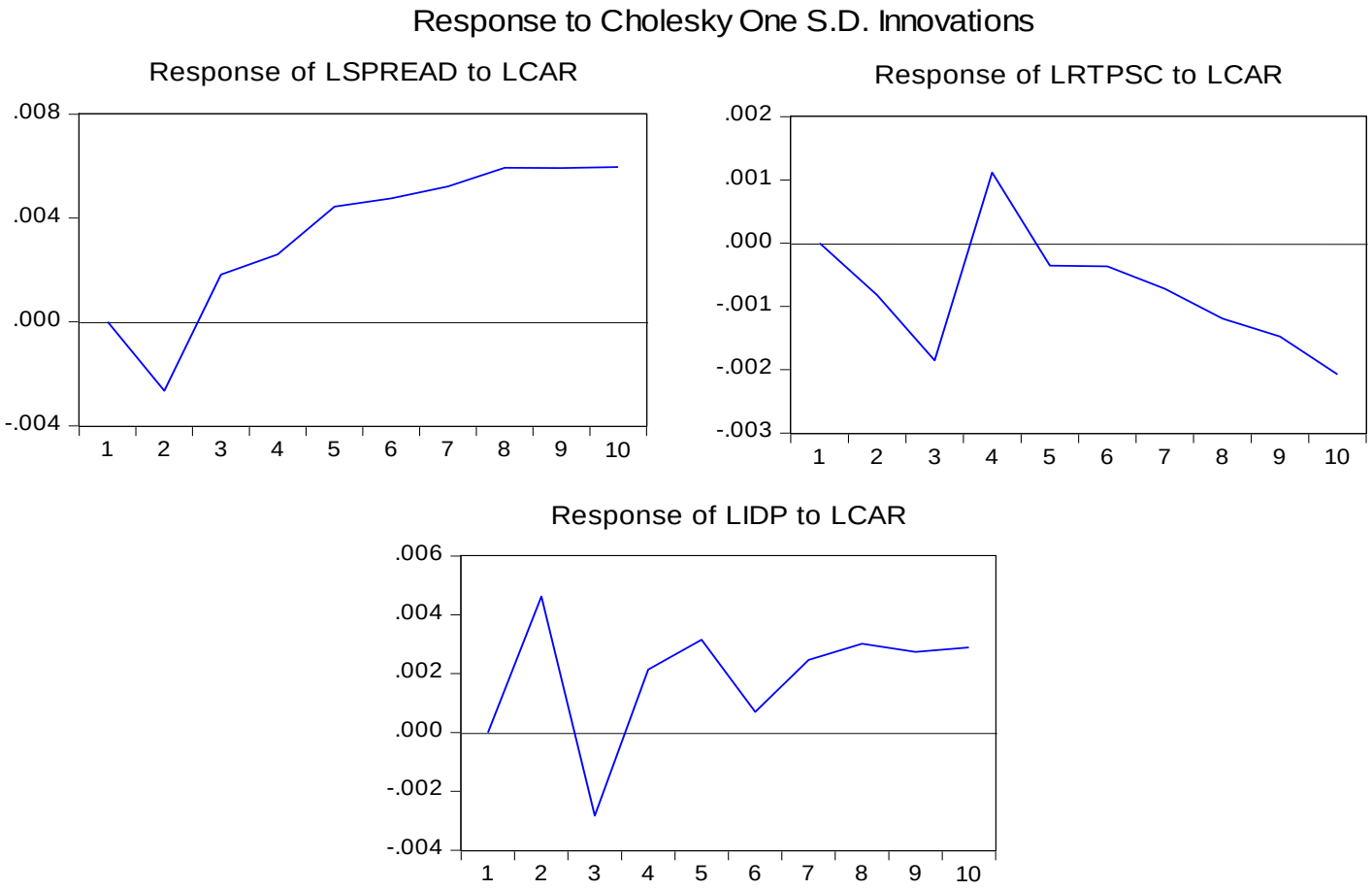
Data and Methodology: Model Robustness

LCAR, LSPREAD, LRTPSC, LIDP, LRBC, LRCC, and LRMORT

- Augmented Dickey-Fuller: variables are all I(1).
- Autocorrelation Lagrange Multiplier (LM): residuals are not serially correlated at 5 per cent level of confidence.
- Portmanteau Q-statistic: no material correlation.
- Heteroskedasticity tests (no cross terms): models are homoscedastic.

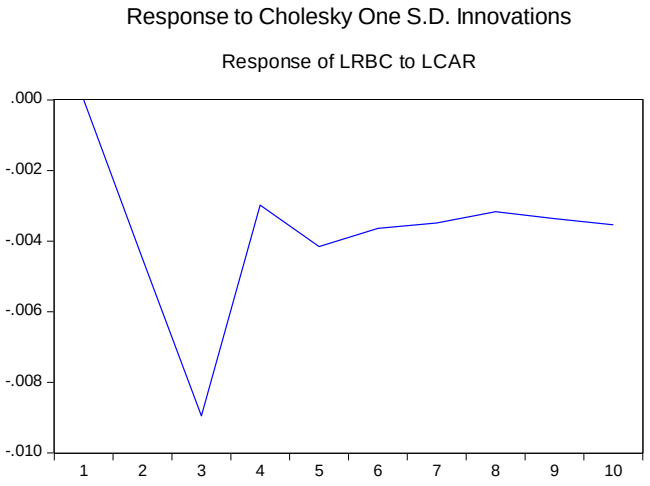
Results: Main Model

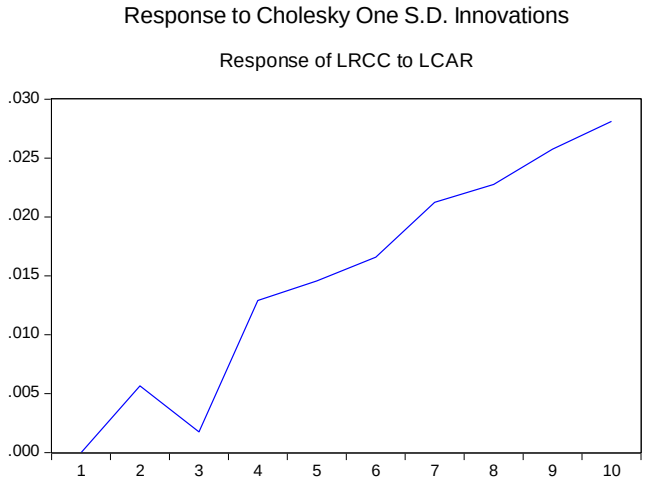
Plot of accumulated impulse response functions of the endogenous variables to a shock in Capital Adequacy Ratios.

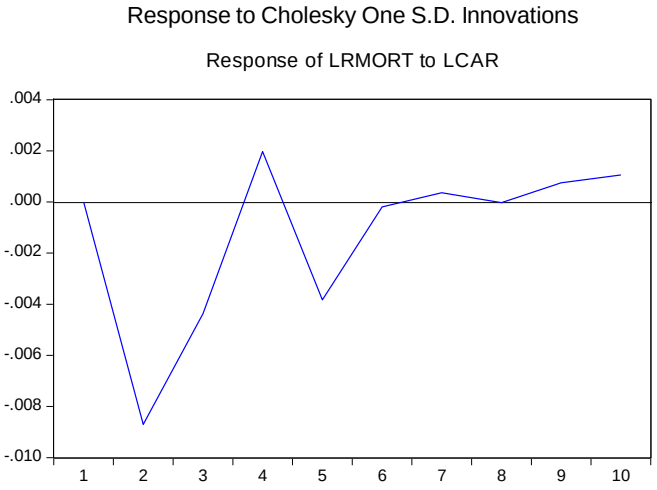


Results: Sub-Models

Plot of accumulated impulse response functions of the endogenous variables to a shock in Capital Adequacy Ratios.







Conclusion

- Capital adequacy ratios have become increasingly important in improving the resilience of the banking sectors to financial crunch.
- Long run relationship between the capital adequacy ratio and the endogenous variables, however an insignificant overall effect.
- Domestic banking sector is highly capitalized.
- Proposed adoption of Basel II and III rules should not have any significant negative effect on credit expansion and by extension, economic output.
- Policy action would only be necessary if banking sector's aggregate capital adequacy ratio was closer to the minimum 8 per cent

Thank You for your Attention