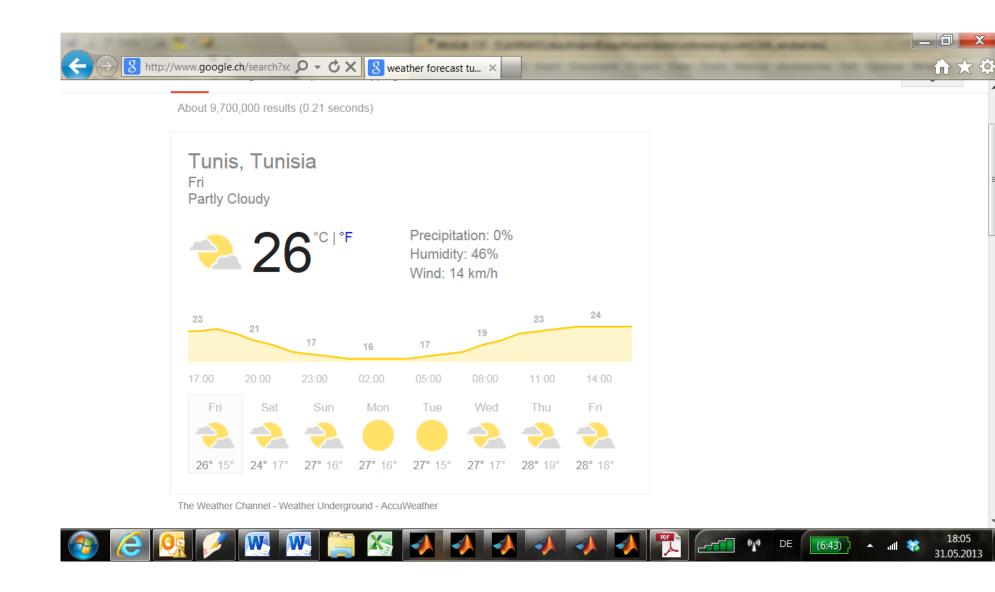
Monetary policy transmission in the Tunisian banking sector

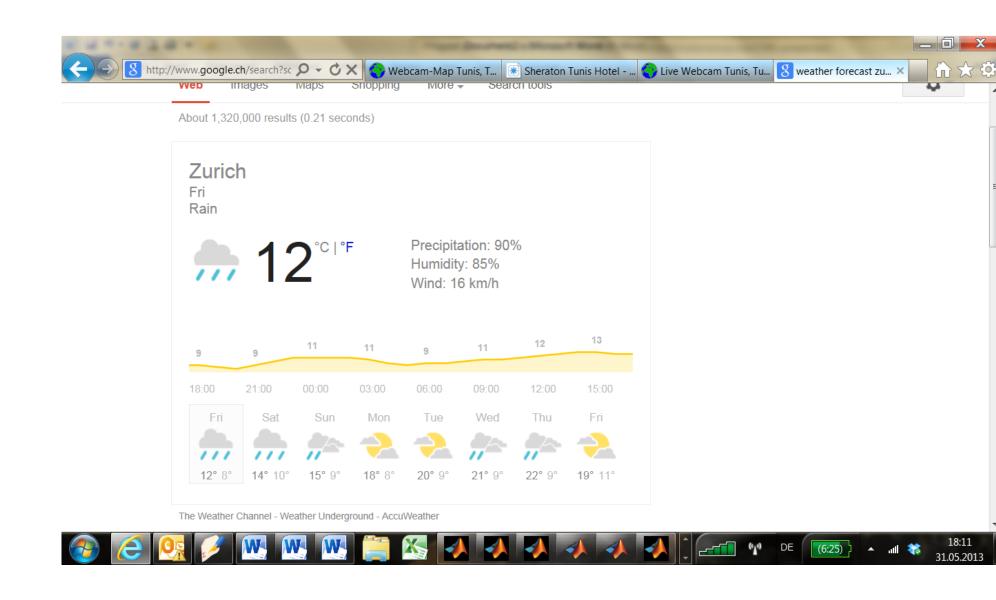
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I enjoyed reading the paper ...





Contribution of the paper

- Overview of the Tunisian banking sector and the Tunisian financial system
- Three kinds of analyzes:
 - transmission over the yield curve
 - loan demand and supply estimation
 - policy transmission (impulse responses from VAR systems)
- Policy conclusions

Comments: Financial sector and monetary policy regime

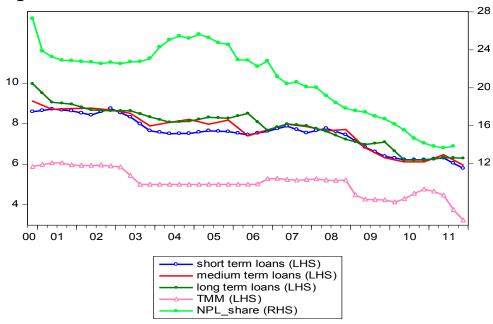
- Monetary policy regime in place should be described more precisely right away from the start
 - pegging the exchange rate usually renders interest rates endogenous
 - \rightarrow it is only on p. 18 that the reader gets to know that asymmetric capital controls are in place
- Describe the principles (if there are any) which justify the choice of policy instruments and the use of them in achieving specific goals
 - is there another central bank using interest rates or the required reserve ratio to achieve financial stability?
 - full liquidity sterilization in the required reserve ratio renders policy action at best ineffective

- Features of the banking sector have implications for the shape of loan demand and supply curves and therefore for the effectiveness of monetary policy
 - high dependency of firms on loans (low stock market capitalization of non-financial institutions) renders loan demand inelastic to lending rate
 - few alternatives for banks to lending to firms (bonds are mainly issued by banks) renders loan supply inelastic to lending rate

Analyses: Transmission over the yield curve

- Given that the required reserve ratio has been an important instrument, why not include it in the pass-through estimations? May be interacted with TMM changes?
- You might calculate a correlation coefficient between the output gap and non-performing loans' share

• Include a trend in the cointegration vector to account for decreasing spread over time. Implicitly, a coefficient larger (lower) than 1 on TMM implies an increasing (a decreasing) spread over time



• Always include the *share* of non-performing loans (non-performing loans proxy also loan growth)

• The timing of variables in the ARDL equations (instantaneous reaction of lending rate to TMM rate, but only lagged reaction to non-performing loans or output gap) implies a structural form where the lending rate is ranked before the TMM and where the output gap and non-performing loans are ordered last.

Analyses: Estimation of loan demand and loan supply

• Your exclusion restrictions determine the instruments for the interest rate spread.

$$l_t^d = 0.5_{(6.7)} y_t - 0.5_{(12.7)} (i_t^{LS} - i_t^{MM})$$

$$l_t^S = 0.7_{(7.4)} (i_t^{LS} - i_t^{MM}) - 0.07_{(21.6)} npl_t + 0.03_{12.8} trend$$

• The first equation implies a unit elasticity of the spread to GDP

Analyses: VAR transmission estimation

- Removing autocorrelation in residuals is important to obtain unbiased estimates
- An increase in prices after a shock in the required reserve ratio might also be due to cost channel effects (although they might be small as a shock in TMM leads to a decrease in prices)

Policy conclusions

- No full sterilization of increase in reserve ratio if credit markets are to be impacted. An increase in the required reserve ratio:
 - decreases the multiplier
 - needs a larger amount of reserves to sterilize the liquidity
 needs of the banks
 - leads to an increase in loan supply and decreases the loan rate
- Take into account risk-taking channel literature:
 - measuring risk by the share of non-performing loans is backward-looking, banks adjust lending rates too late
 - risky portfolio accumulates during good times
- To achieve financial stability, use other instruments (like regulation) than those used to achieve price stability