Friend or Foes: Foreign Flows in the Thai Government Bond Market

Discussion by Wasin Siwasarit

Contribution

- Disentangle the determinants of bond returns into Fundamental and Non-Fundamental components

  $\rightarrow$ This paper: The author looks at the movements of the different maturities of government bond yields (0-1, 1-5, 5-15, 15+)

  $\rightarrow$ High-Frequency Data: sample period:01/2010-07/2015, totally 1344 observations.
- What variables can explain the changes in bond yields?
  - Fundamental Factors: potential output growth, government debt-to-GDP ratio, exchange rate risk, global liquidity condition, global risk appetite etc.
  - Non-Fundamental Factors: Two forms of market frictions are investigated: Asymmetric Information and Inventory Channels.

Contribution

- This study finds:
  1. The policy rate expectation is the sole driver of yield at the short-end of the curve.
  2. For the medium and the 10-year tenors, both domestic (policy rate expectations,exchange rate uncertainty and country credit risk) and global (global monetary condition and perception of risk) factors are the important drivers of yield movements.
  3. Friction exits in the Thai bond market.
  4. The market ’s price discovery process has been dependent on foreign players whose activities are related to "Private Information."

Comment

1. Standard variables are not available because of studying the high-frequency dynamics of yield movements.
2. Do we need the daily data for the part of fundamental determinants ?
3. The work of Baele, Bekaert, and Inghelbrecht (2010) “The Determinant of Stock and Bond Return Comovements" , they pointed out that the quarterly frequency may be the highest frequency at which a fundamentals-based model is expected to have explanatory power.
4. Policy rate expectation : this paper uses the implied overnight forward rate obtained from Nelson-Siegle (1987) model or Svensson (1994).
   —-> Use the data of bond yields to estimate all parameters.
   —-> Highly correlated with change in Thai Bond Yield (bps) =0.46 (6M)
   —->Good proxy for the predictive model?

Robustness Checks of Impact of Fundamental Factors on Thai Bond Yields (0-1):

Model Specification

$$\Delta \text{yield}_t = \alpha + \Delta D_t' \beta + \Delta X_{t-1}' \eta + e_t$$

	[1]	[2]	[3]	[4]
Policy Rate Expectation (bps. Δ)	0.8116 (0.00)	0.8106 (0.00)	0.8118 (0.00)	0.8111 (0.00)
SET Index (%Δ)	0.0301 (0.34)	- -	0.0344 (0.32)	0.0242 (0.45)
Bond Supply (%Δ)	0.0295 (0.05)	0.0297 (0.05)	0.0294 (0.05)	0.0297 (0.05)
CDS Spread (bps. Δ)	0.0055 (0.46)	0.0032 (0.67)	0.0039 (0.66)	- -
Implied FX Volatility (%Δ)	0.0036 (0.45)	0.0034 (0.47)	0.0034 (0.48)	0.0036 (0.45)
UST Yield (bps. Δ)	-0.0551 (0.14)	-0.0552 (0.14)	-0.0566 (0.14)	 (0.13)
VIX (%Δ)	-0.0039 (0.60)	-0.0047 (0.54)	- -	-0.0032 (0.68)
Adj. R^2	0.43	0.43	0.43	0.43

Comment

1. Control Variables/Dummy Variables?
2. Liquidity factors can affect the pricing of bonds. The standard measurement is the average of quoted bid-ask spreads of bonds across all maturities.
3. This study finds out that the foreign activity can be a significant source of market volatility.
4. In literature, several papers study the links between macroeconomic fundamentals and stock market volatility (i.e Diebold and Lin (1996), Flannery and Protopapadavis (2002), Engle and Rangel (2008) but the study on bond market is limited (Baele, Bekaert, and Inghelbrecht (2010))
5. Can a better measure of volatility help us to better understand the fundamental and Non-Fundamental Drivers?

GARCH-MIDAS model

$$r_{i,t} = \mu_i + \sqrt{m_{i,\tau} \cdot g_{i,t}}\xi_{i,t}, \quad \forall t = \tau N_v^i, \ldots, (\tau+1)N_v^i \tag{1}$$

where $g_{i,t}$ follows a GARCH(1,1) process:

$$g_{i,t} = (1 - \alpha_i - \beta_i) + \alpha_i \frac{(r_{i,t-1} - \mu_i)^2}{m_{i,\tau}} + \beta_i g_{i,t-1} \tag{2}$$

while the MIDAS component $m_{i,\tau}$ is a weighted sum of K_v^i lags of the fundamental and non-fundamental drivers over a long horizon:

$$m_{i,\tau} = \overline{m}_i + \theta_i \sum_{l=1}^{K_v^i} \varphi_l(\omega_v^i)\mathbf{X}_{i,\tau-l} \tag{3}$$

Beta weights defined as:

$$\varphi_l(\omega_v^i) = \frac{(1 - \frac{l}{K_v^i})^{\omega_v^i - 1}}{\sum_{j=1}^{K_v^i}(1 - \frac{j}{K_v^i})^{\omega_v^i - 1}} \tag{4}$$

Concluding Remarks

- A very interesting paper!
- Suggestions/ Future Research
  1. Checking: the predictive regression with the quarterly data for the part of fundamental determinants.
  2. Studying the determinants of yield curve level, slope and curvature i.e. Diebold and Li (2006).
  3. Decomposing volatilities into short-and long-run components.
  4. What variables are responsible for Bond fluctuations in short-and long-run components?
  5. Studying the determinants of two markets's return (Bond and Stock) comovements