Carry-trade and transission

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Outline

Introduction

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  - US monetary policy
  - International risk aversion
  - International liquidity
- This paper seeks to assess their relative importance

Literature

There are three international factors that can affect internatioanl capital flows

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Where z_{t+1} are the profits from the carry trade, $i^* - i$ is the interest rate differential (overseas less home) and Δs_{t+1} is the change in the exchange rate.

Hidden Markov Chain

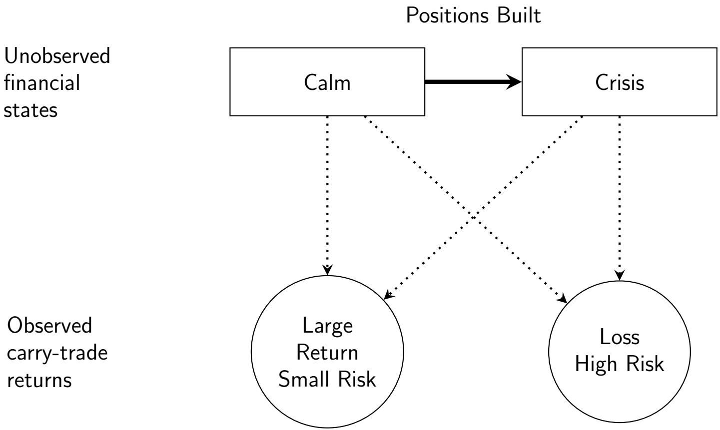

Figure: Two-Regime Hidden Markov Model (HMM)

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Where there are n states or regimes; y_t are the observed carry-trade return; and θ_{prior}, θ_{trans} and θ_{resp} are the parameters of the prior, transition and response models respectively.

Transition matrix

The transition matrix is

$$\begin{bmatrix} P(S_t = 1|S_{t-1} = 1), & P(S_t = 2|S_{t-1} = 1) \\ P(S_t = 1|S_{t-1} = 2), & P(S_t = 2|S_{t-1} = 2) \end{bmatrix}$$

For Hungary, it is

$$\begin{bmatrix} 0.75, & 0.25 \\ 0.95, & 0.05 \end{bmatrix}$$

Response

For the base case, a linear response is modelled as

$$y_t = \beta_0 + \sum_{i=1}^{i=n} S_{i,t} + \varepsilon_t$$

For, Hungary Poland, Romania and Czech, there are the following results.

Regime		HUF	PLN	CZK	RON
Calm	Mean	1.0165	1.0173	1.0129	1.0150
	St-Dev	0.0519	0.0486	0.0542	0.0433
Crash	Mean	0.9905	0.9862	0.9963	0.9969
	S-Dev	0.1085	0.1026	0.0886	0.0878

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   - transition model $log(a_{ij})/a_{i1} = \alpha_j + \beta_{j,z_t}$

Transition and risk aversion

The VIX is scaled to have a mean of zero and Sd of 1.

	-3sd	-1sd	Mean	+1sd	+2sd	+3sd
HUF	0.0020	0.0242	0.0807	0.2375	0.5249	0.7967
PLN	0.0004	0.0063	0.0242	0.0887	0.2766	0.6003
CZK	0.0000	0.0034	0.0717	0.6367	0.9755	0.9989
RON	0.0014	0.0131	0.0392	0.1119	0.2799	0.5453

The probability of switching to a crash once in a state of calm.

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  - US short-term interest rate, TED spread. LSAP?
- Assess the relative importance of these factors

Bibliography I

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