

# Does China Complete Its Financial Marketization Transition?

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# Motivations

- By the end of 2016, there has been 1134 banks, 129 security companies, 189 insurance firms and over 150 other financial intermediaries in China.
- The marketization of China's interest rates system was finally finished on Oct 23th 2015 when PBOC lifted the ceiling on the deposit rates and allowed the interest rates of deposit to float freely.
- Zhou Xiaochuan, Governor of PBOC, said at China Development Forum that China has basically finished the financial liberalization transition.

- Over 50% of financial assets is owned by central or local governments.
- State-owned enterprises can enjoy the privileged access to credit at the lower cost.
- Private-owned enterprises are often charged by banks with higher loan rates.
- The spread between loan rate for POE and one-year benchmark lending rate is unchanged (Ferri and Liu, 2010; NBS data).

Hence, the interest rates liberalization does not result in a more efficient credit allocation. Then What causes the distortion of capital allocation in China?

- Interest rate control.(Feyzioglu, Porter and Takats, 2009)
- Implicit guarantees.(Anzoategui, Chivakul and Maliszewski, 2015)
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# Benefit of State Capital Control, BSCC

The government can get some benefit from controlling the capital accumulated in State sector.

- political benefit.(Hong and Hu, 2017; Wang, 2014)
- economic benefit.(Yergin and Stanislaw, 1999; Hsieh and Song, 2016)

We build a simple two-sector growth model to explore the effects of BSCC on capital allocation and TFP growth. The main findings are as follow:

- state-owned banks have to set dual-track interest rates in order to keep their account balanced.
- state-owned enterprises will not disappear even they are less efficient than their counterpart.
- it is BSCC that leads to less efficient allocation of capital and lower output.

# Model Setup

- Two-period overlapping generation.
- In each period, a cohort of agents of mass 1 is born.
- There is only one good in the economy which could be consumed or invested.
- Only young agents have one unit of labor endowment and supply it inelastically.



# Model Setup

## Preference

$$\text{Max } \log(c_{1t}) + \beta \log(c_{2t}) \quad (1)$$

s.t.

$$c_{1t} + \frac{c_{2t}}{r_t} = w_{1t} \quad (2)$$

$$s_t = \frac{1 + \beta}{\beta} w_t \quad (3)$$

Assume that young agents can choose either as workers employed by SOE or starting his own business. So there are two sectors: SOEs and POEs.

- SOEs have the technology  $f(k_t) = Ak_t^\alpha$ .
- private entrepreneurs operate the production function  $f(k_t) = A\chi k_t^\alpha$  and here  $\chi > 1$ .
- the objective of SOEs is to maximize their profits and BSCE.

$$\text{Max}_{k_t^s} Ak_t^{s\alpha} + bAk_t^{s\theta} - r_t^s k_t^s \quad (4)$$

F.O.C:

$$\alpha Ak_t^{s\alpha-1} + b\theta k_t^{s\theta-1} = r_t^s \quad (5)$$

$$\pi_t^s = -bAk_t^{s\theta} \quad (6)$$

Assuming  $\chi > 1 + b$  and  $\theta < \alpha$

$$\text{Max}_{k_t^p} A\chi k_t^{p\alpha} - r_t^p k_t^p \quad (7)$$

F.O.C:

$$\alpha A\chi k_t^{p\alpha-1} = r_t^p \quad (8)$$

$$\pi_t^p = 0 \quad (9)$$

# State-owned Bank

State owned bank keeps its account balanced and clears the loan market. For simplicity, we just assume  $r_t^S = r_t$ .

$$\pi_t^S + (r_t^P - r_t)k_t^P = 0 \quad (10)$$

$$k_t^S + k_t^P = S_t \quad (11)$$

# State-owned Bank

Let  $z_t = \frac{k_t^p}{S_t}$  and substitute (11) into (10),

$$f(z_t) = \alpha \chi z_t^\alpha S_t^{\alpha-\theta} - \alpha(1-z_t)^{\alpha-1} z_t S_t^{\alpha-\theta} - b\theta(1-z_t)^{\theta-1} z_t - b(1-z_t)^\theta = 0 \quad (12)$$

# Some Results

- There exists dual-track interest rates in the equilibrium and we have  $r_t^P > r_t$ .
- $S_t \uparrow z_t \downarrow r_t^P - r_t$ .
- $\chi \uparrow z_t \downarrow r_t^P - r_t$ .
- $b \downarrow z_t \downarrow r_t^P - r_t$ .

# Equilibrium

$$k^{*1-\alpha} = \frac{\beta}{1+\beta}(1-\alpha)A[\chi z^{*\alpha} + (1-z^*)^\alpha] \quad (13)$$

here,  $z^* = \frac{\chi^{\frac{1}{1-\alpha}}}{1+\chi^{\frac{1}{1-\alpha}}}$



$$TFP_t = A[\chi z_t^\alpha + (1 - z_t)^\alpha] \quad (14)$$

and,  $z_t$  could reach the value which maximizes the above TFP only if the dual-track interest rates disappears.

# Conclusions

- Compare with the case without BSCC, capital misallocation would still exist even if interest rates are liberalized.
- The mixed transition cannot achieve the efficient capital allocation, but we can alleviate this inefficiency through reducing BSCC or prompting the productivity of private firms.