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# **RMB internationalization: a playfield for speculators or a platform for real economy**

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# RMB internationalization

## Development of the Offshore Renminbi Market

- cross-border trade settlement in RMB
  - offshore RMB deposits
- Dim sum bonds

## Factors driving the internationalization of RMB

- RMB as invoicing currency
  - RMB internationalization arbitrage index

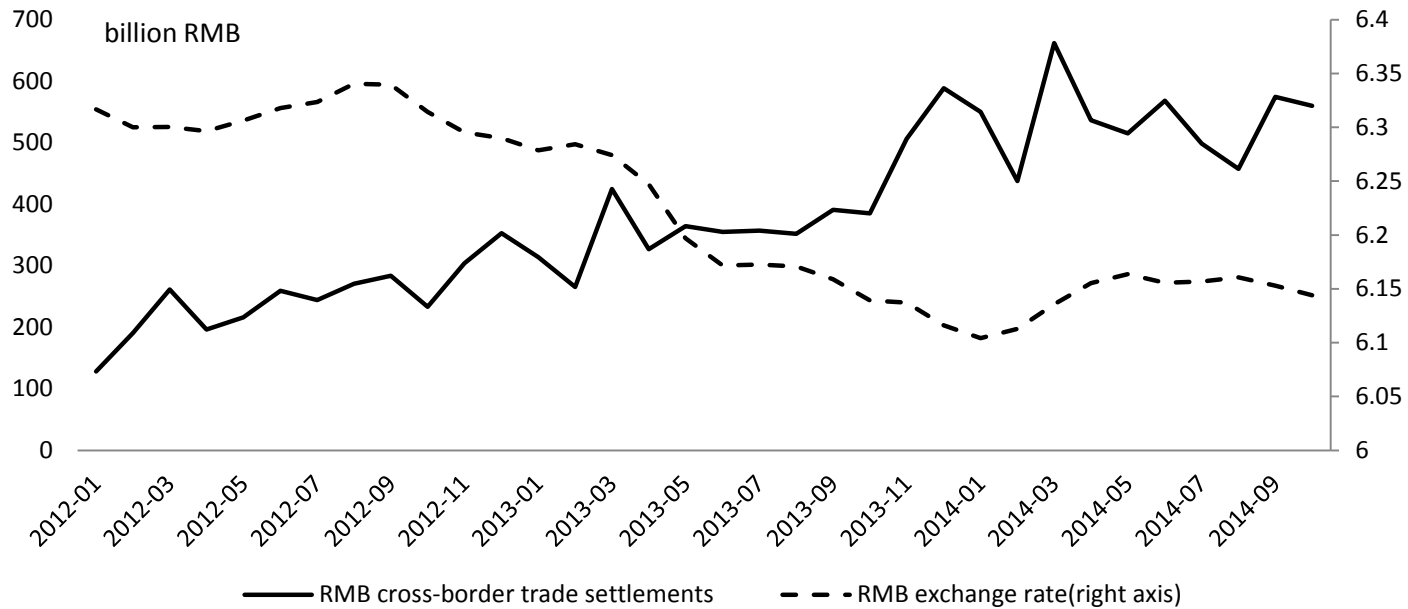
## Conclusions

- The government and private sector have different motivations to push and pull RMB internationalization.



# I. Development of the Offshore Renminbi Market

- 1.The volume of cross-border trade settlement in RMB has increased rapidly



Data Source: CEIC, Wind, hereinafter



# I. Development of the Offshore Renminbi Market

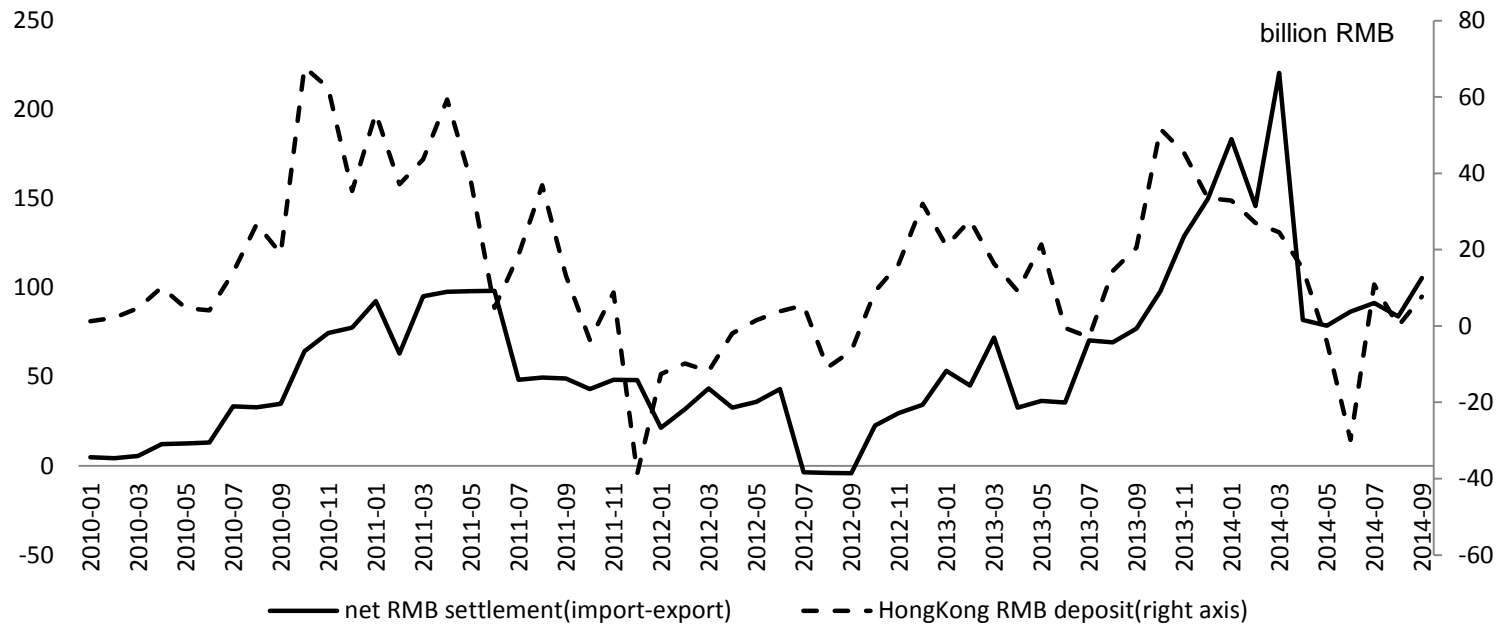
the scale of import trade settlement in RMB exceed the export trade settlement





# I. Development of the Offshore Renminbi Market

the growth of offshore RMB deposits are close to the growth of net RMB trade settlement import(import minus export).

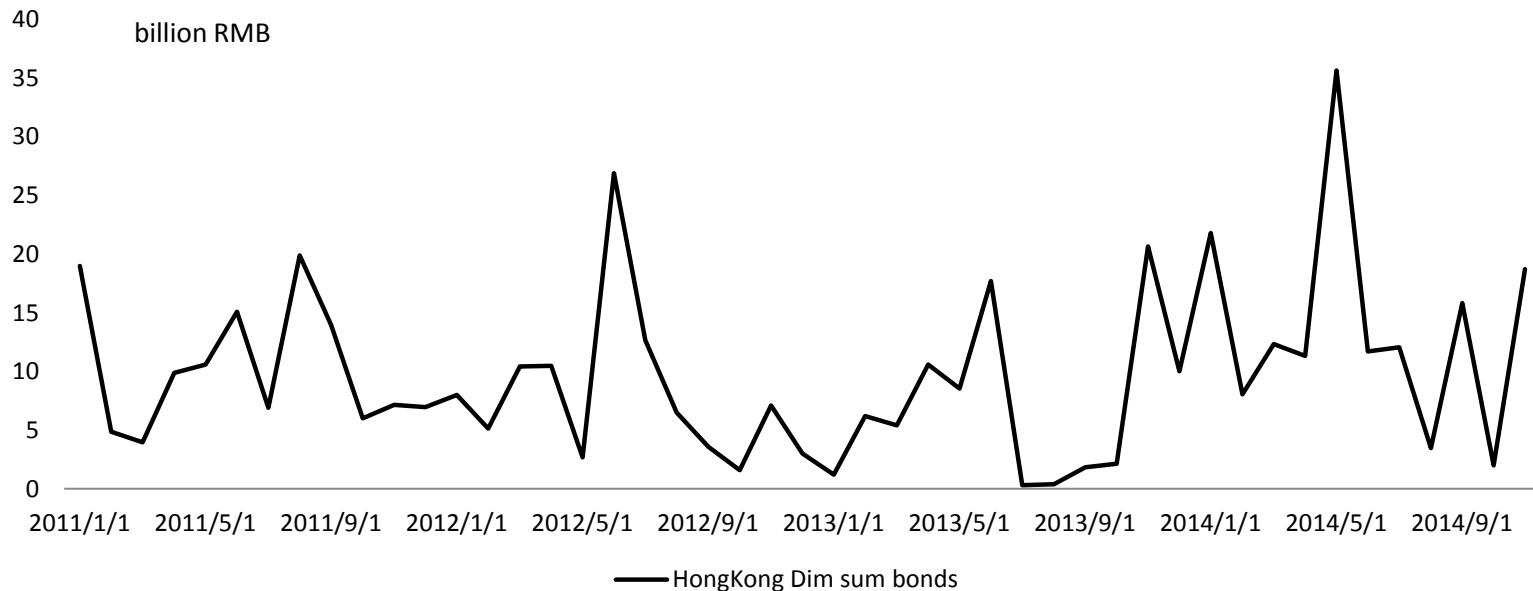




# I. Development of the Offshore Renminbi Market

Acceleration of the RMB's offshore financial markets

1. Most of the offshore RMB bond issued by mainland government and financial company.
2. the duration of Dim sum bonds are short. The 65% are 1-3 year.





## I. Development of the Offshore Renminbi Market

### Offshore market lack of RMB inflow channel

- First, the total account and the growth rate of RFDI is relatively low. There was only 62.4 billion Yuan in May 2014.
- Second, RQFII had suffered investment income problem.
- Third, the cross-border RMB loans are very small.



## II. Factors driving the internationalization of RMB

### Incremental opening up of the capital account

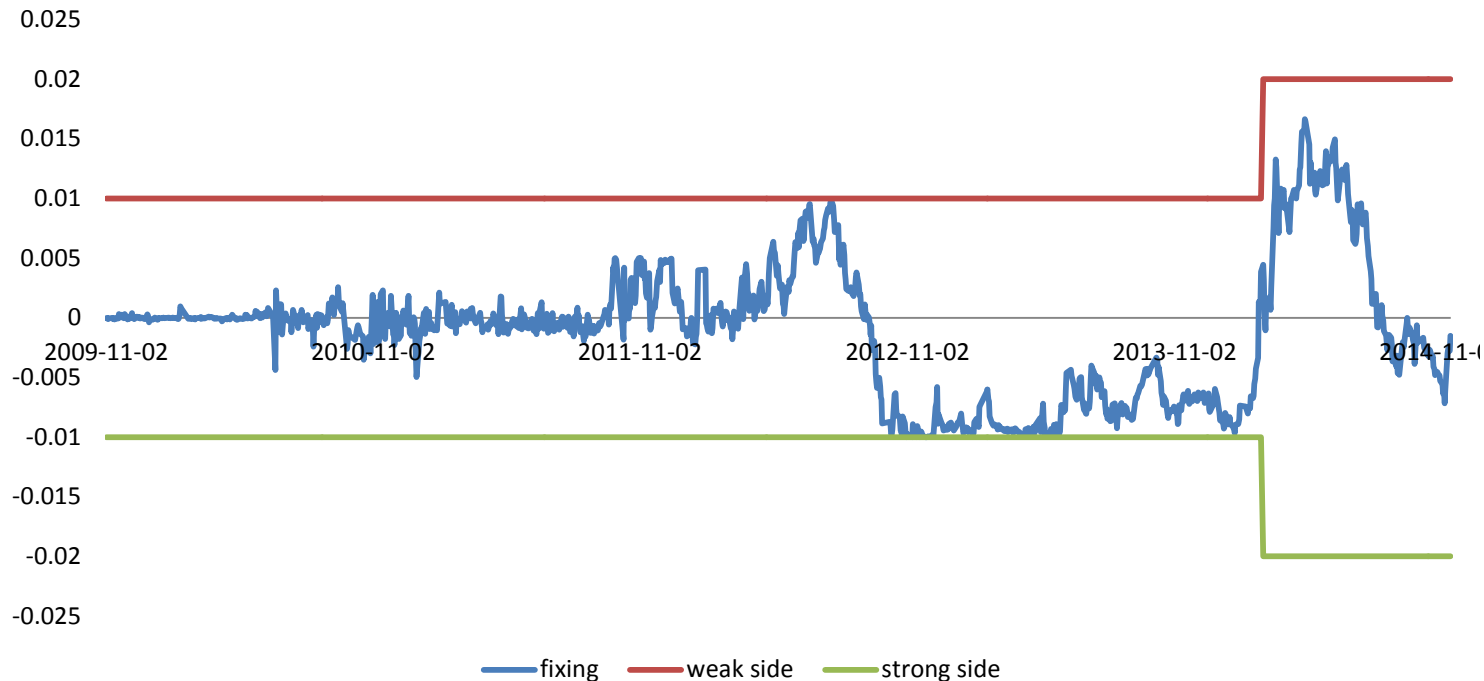
- PBC published two reports in 2012, suggesting speeding up capital account liberalization (PBC, 2012a, 2012b);
- A more radical two-step liberalization proposal which suggested basically liberalizing capital account by 2015, and completely liberalizing it by 2020;
- As the 3<sup>rd</sup> plenum decision of the 18<sup>th</sup> CPC central committee showed, RMB's convertibility under capital account should be accelerated;





## II. Factors driving the internationalization of RMB

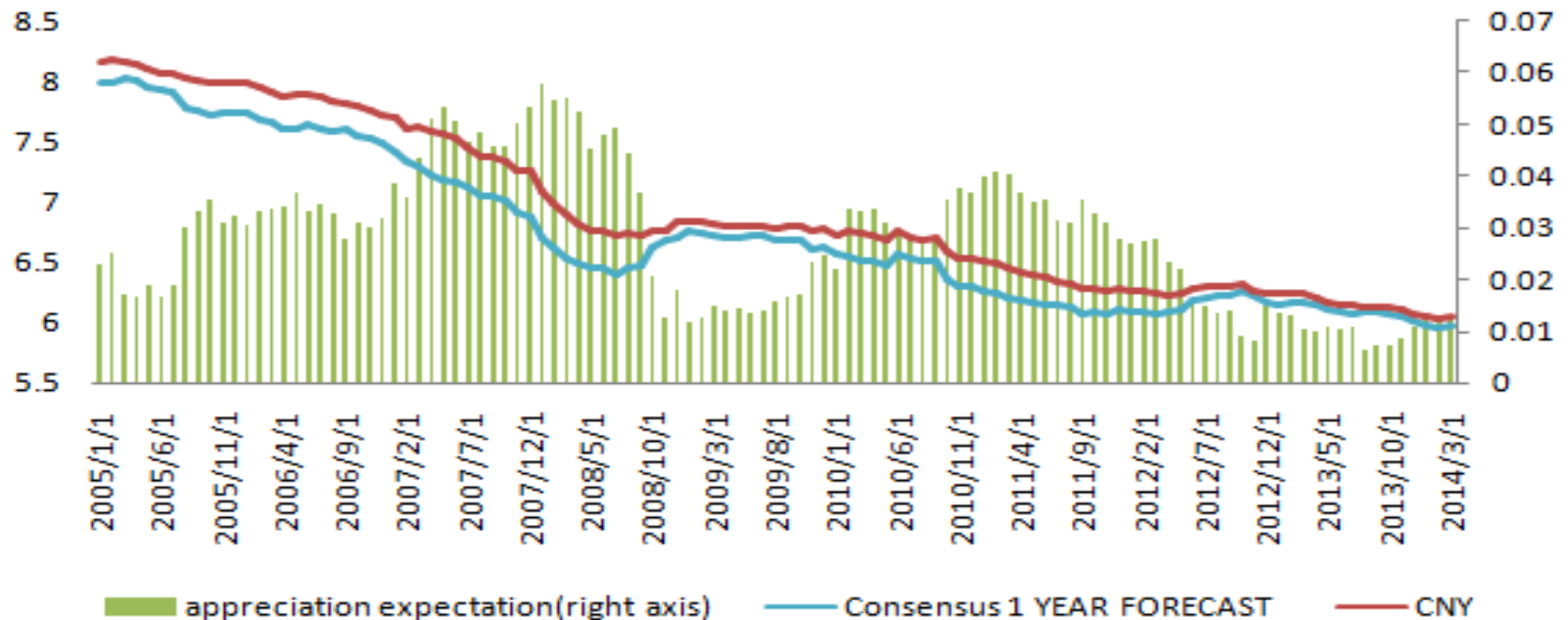
Under RMB exchange rate regime, the RMB exchange rate is still heavily managed, lack of volatility, have unilateral appreciation expectations.





## II. Factors driving the internationalization of RMB

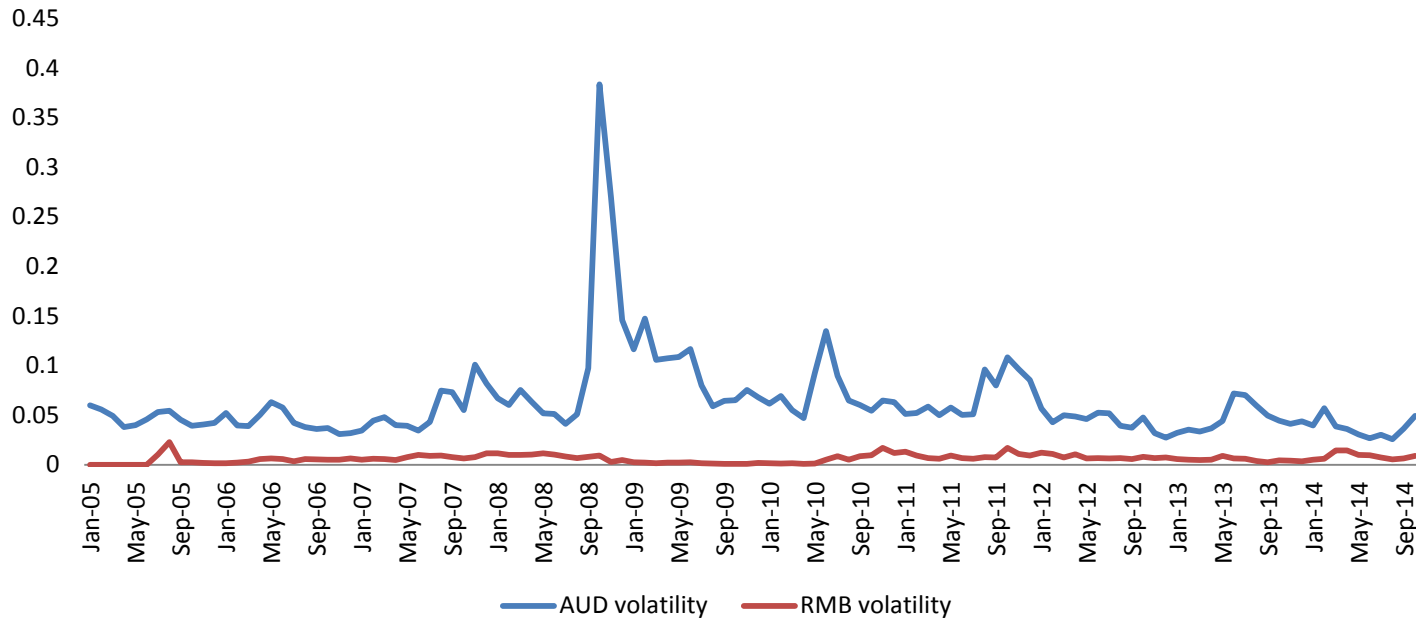
From 2005-2014 RMB have persistent appreciation expectation





## II. Factors driving the internationalization of RMB

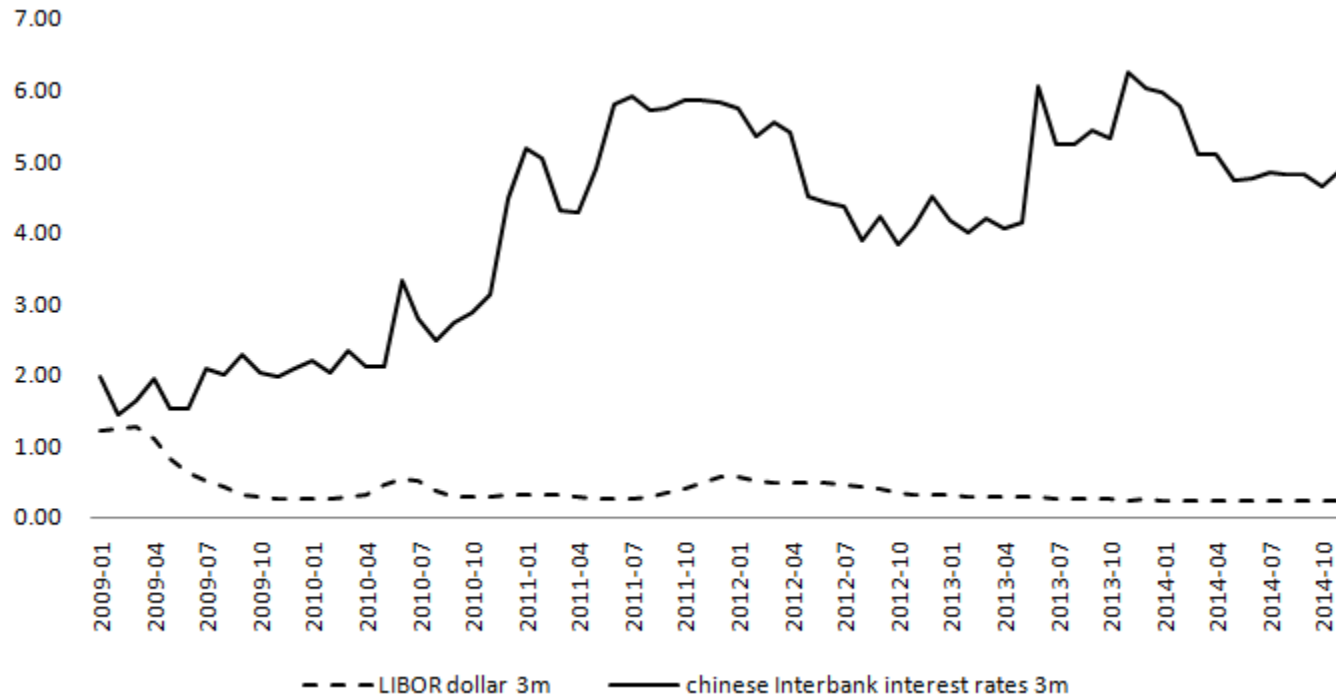
- Compare to AUD, RMB volatility has been extremely low, currently standing at one fifth, which make the RMB become one of the most attractive carry targets currencies.





## II. Factors driving the internationalization of RMB

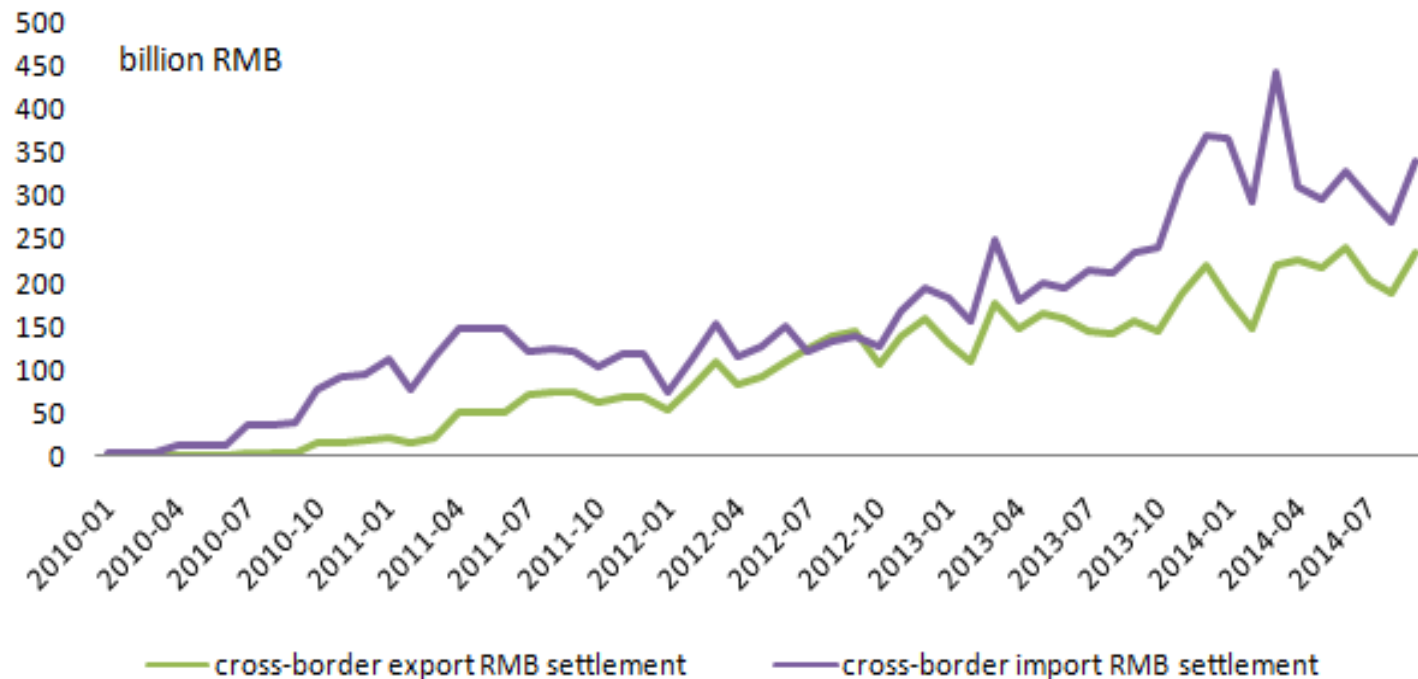
From 2009-2014, chinese financial market have relative high interest to international financial market.





## II. Factors driving the internationalization of RMB

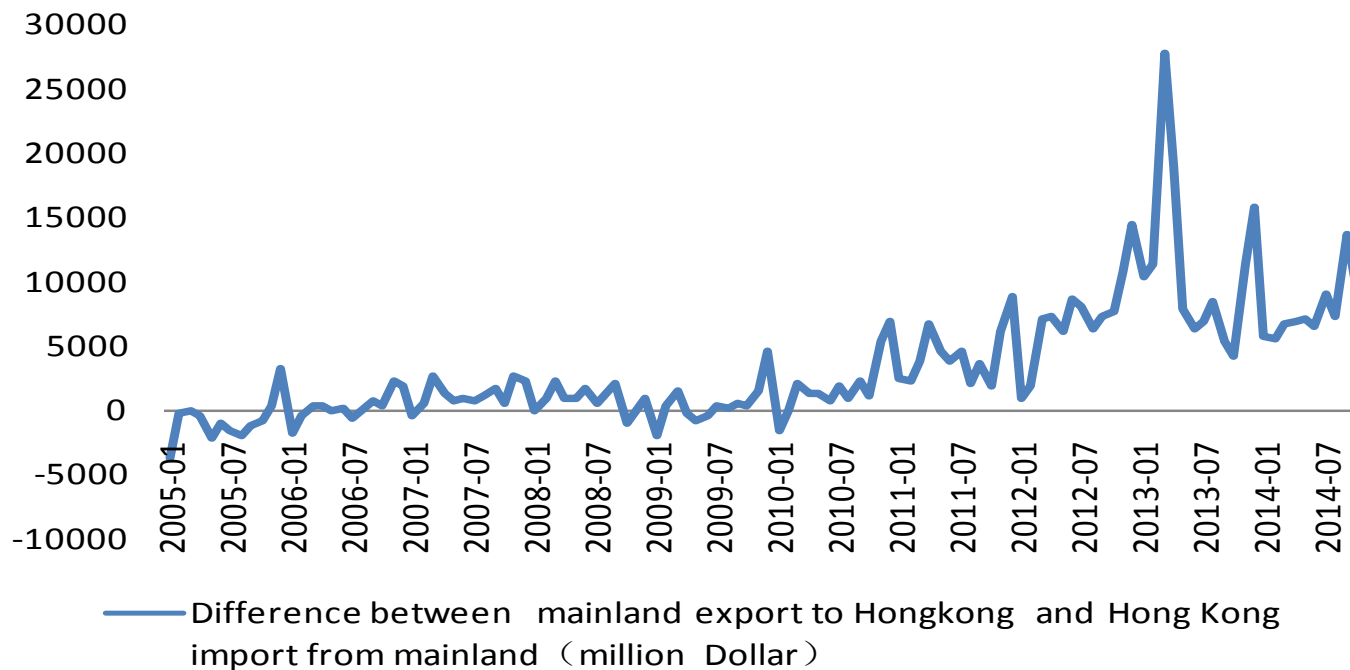
The volume of cross-border trade settlement in RMB has increased rapidly. However, the import trade settlement in RMB exceeded the export trade settlement





## II. Factors driving the internationalization of RMB

Capital flow through Fake China export invoices. The gap between Chinese exports to Hong Kong and Hong Kong imports from China rose sharply from 2012.





## II. Factors driving the internationalization of RMB

- Invoice currency or settlement currency?
- Although the total amount of cross-border settled in RMB rises rapidly, but the cross-border trades denominated in RMB are not the same.
- the difference in the invoiced currency and settlement currency in the cross-border trades are mainly due to the RMB appreciation expectations.



## II. Factors driving the internationalization of RMB

- the determinants of RMB as cross-border trade invoicing currency
- Law 1 *Grassman's Law***: Invoicing currency of trade among industrialized countries is dominated by export country's currency, and then by the import country's currency, and slightly by the third country's currency(Grassman,1973,1976).





## II. Factors driving the internationalization of RMB

- the determinants of RMB as cross-border trade invoicing currency
- Law 2** Trade between industrialized country and developing country is mainly invoiced by the currency of industrialized country or of the third country.



## II. Factors driving the internationalization of RMB

- the determinants of RMB as cross-border trade invoicing currency
- Law 3** Trade between homogeneous goods is invoiced mainly by US dollar or other vehicle currencies, while trade between heterogeneous goods is invoiced by exporter's currency generally.  
McKinnon (1979)



## II. Factors driving the internationalization of RMB

- the determinants of RMB as cross-border trade invoicing currency
- In addition to above three empirical laws, we have to consider the structure of China's trade mode  
More than half of China's export is processing trade, which import commodity, and export intermediate goods, tending to be denominated in foreign currencies.



## II. Factors driving the internationalization of RMB

- three determinants of RMB as cross-border trade invoicing currency
  - 1. the export destination .
  - 2. the complexity of the export products.
  - 3. processing trade



## II. Factors driving the internationalization of RMB

- the complexity of the export products.

Traditional advantage industries: Labour-intensive

Textile	HS11	CH50-CH59	Industrial chemistry	HS6	CH28-CH29 CH30-CH38
Textile, garment	HS11	CH60-CH63	Rubber and plastics products	HS7	CH39, CH40
Shoes, hats	HS12	CH64-CH67			
Leather, fur, feathers	HS8	CH41-CH43	mineral material products Ceramics and Glass	HS13	CH68-CH70
<u>Bags Manufacturing</u>			products		
Toys, Furniture	HS20	CH94, CH95	base metals	HS15	CH73-CH3
printing	HS10	CH45			



## II. Factors driving the internationalization of RMB

- the complexity of the export products.

### High-tech industry (OECD)

Medicine Pharmaceutical chemicals	HS6	CH30	Vehicle, Aircraft Shipping, transportation equipment	HS17	CH86-CH89
Electromechanical audio video equipment	HS16	CH84, CH85	Optics, medical facility Instrument, clock musical instrument	HS18	CH90-CH92



## II. Factors driving the internationalization of RMB

- RMB internationalization arbitrage index

Theoretically, a carry trade investment currency have to meet three conditions :

- 1) a relatively stable yield spread
- 2) low exchange rate fluctuation
- 3) high monetary liquidity.



## II. Factors driving the internationalization of RMB

- RMB internationalization arbitrage index

We track the usage of RMB mainly through three parameters:

- (1) the RMB exchange rate (against the five other currencies);
- (2) the cross-border RMB trade liquidation;
- (3) the interest spreads.





## II. Factors driving the internationalization of RMB

- RMB internationalization arbitrage index
- the Sharpe Ratio of RMB to foreign currency:

$$Sp = \frac{r_{rmb} - r_i^*}{vol(e_{rmb})}$$

numerator ( $r_{rmb} - r_i^*$ ) Represents the difference of the three-month interests between RMB and foreign currencies, denominator  $vol(e_{rmb})$  represents the three-month fluctuation of RMB to foreign currencies.



## II. Factors driving the internationalization of RMB

- RMB internationalization arbitrage index
- the weight is determined by the ratio of RMB liquidation of country  $j$  to the total amount of cross-border RMB trade liquidation.

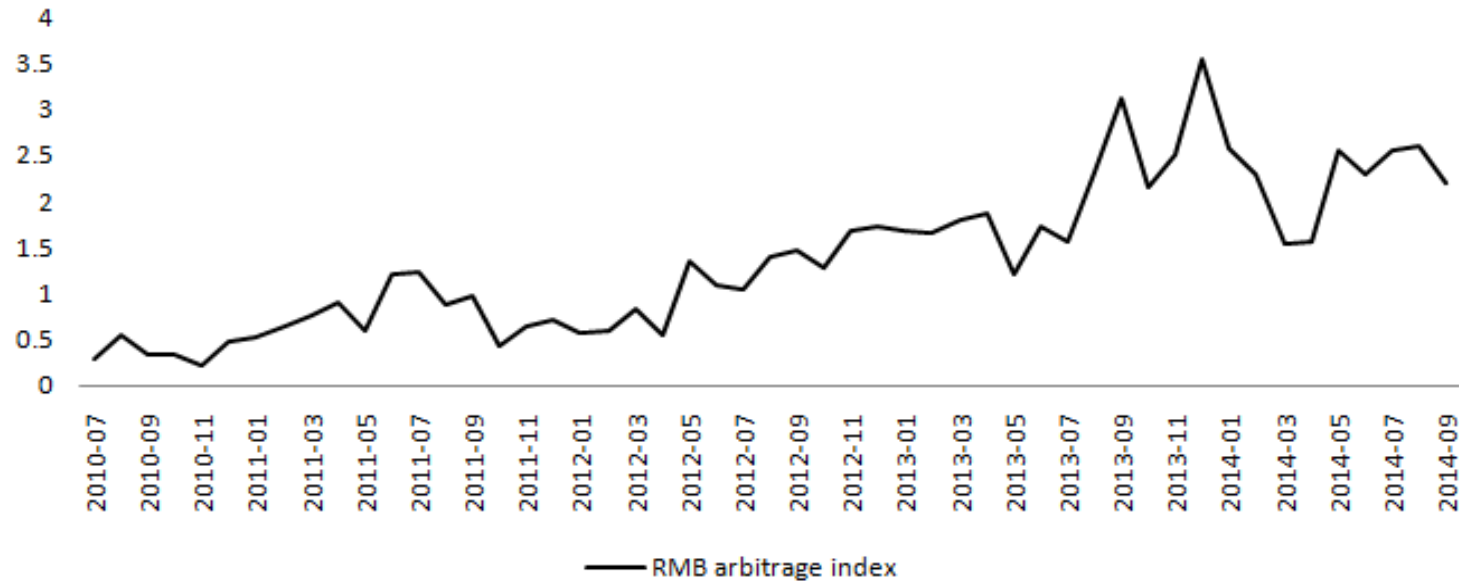
$$w_{jt}^A = \frac{A_{jt}}{\sum_{j=1}^N A_{jt}}$$

$w_{jt}^A$  represents the weight of economy  $j$ , and  $A_{jt}$  represents the RMB liquidation amount of economy  $j$  and China.



## II. Factors driving the internationalization of RMB

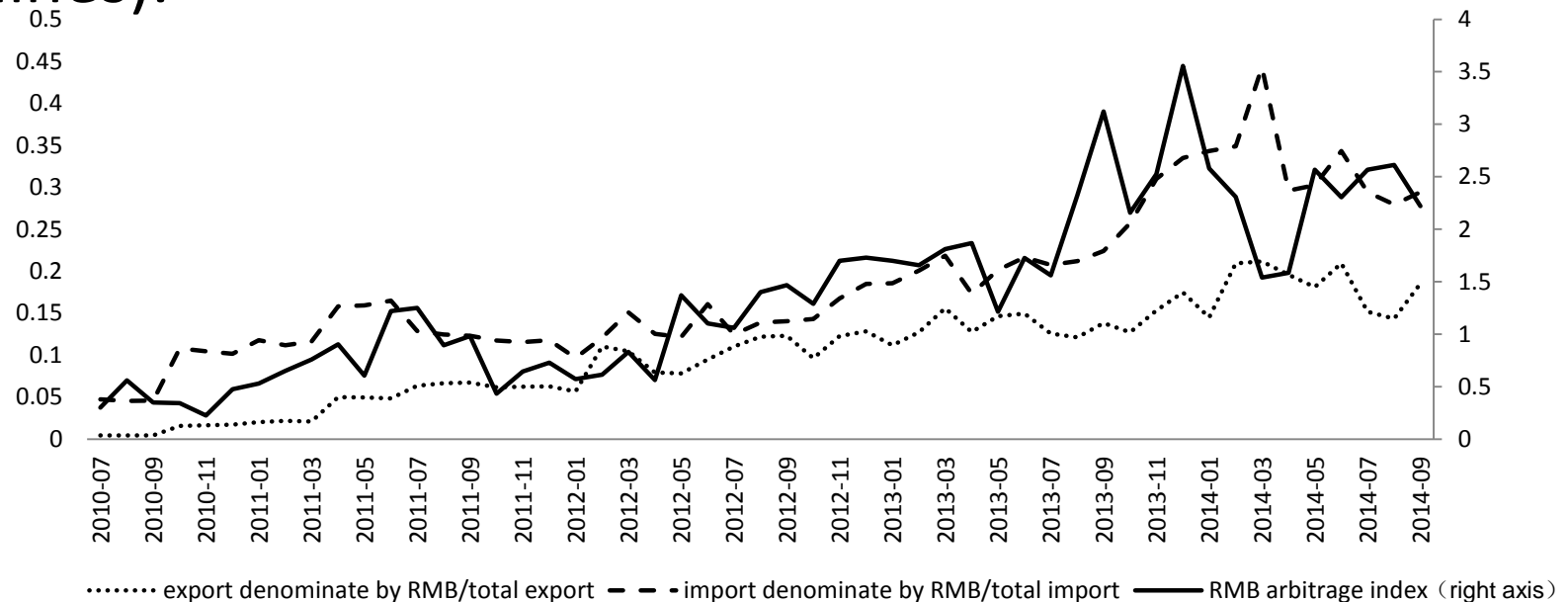
- RMB internationalization arbitrage index
- the cross-border RMB index reflects the arbitrage motivation in RMB internationalization.





## II. Factors driving the internationalization of RMB

- RMB internationalization arbitrage index
- arbitrage index and the RMB cross-border trade have very close relationship(Solid line and dashed lines).





## II. Factors driving the internationalization of RMB

- Empirical result of the Determinants of RMB Internationalization

For export ↵

$$\ln RE_t = 6.0483 + 8.83 \ln HSE_t + 0.98 \ln A_t \quad \left( \begin{array}{cc} (-2.61)^{***} & (-1.07) \end{array} \right) \quad \leftarrow$$

For import ↵

$$\ln RI_t = 7.0645 + 7.22 \ln HSI_t + 0.53 \ln A_t \quad \left( \begin{array}{cc} (-4.15)^{***} & (-3.45)^{***} \end{array} \right) \quad \leftarrow$$

↵



### III . Conclusions

- First, The government and private sector have different motives to push RMB internationalization.
- Second, based on the inflexibility of RMB exchange rate formation mechanism, the RMB international strategy will bring about a huge arbitrage space.
- Third, the import trade settlement in RMB exceed exports, and have a significant correlation with cross-border arbitrage index.



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Thank you !