

# China banks: new developments



 華泰金融控股(香港)有限公司  
HUATAI FINANCIAL HOLDINGS (HONG KONG) LIMITED



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# China banks new development

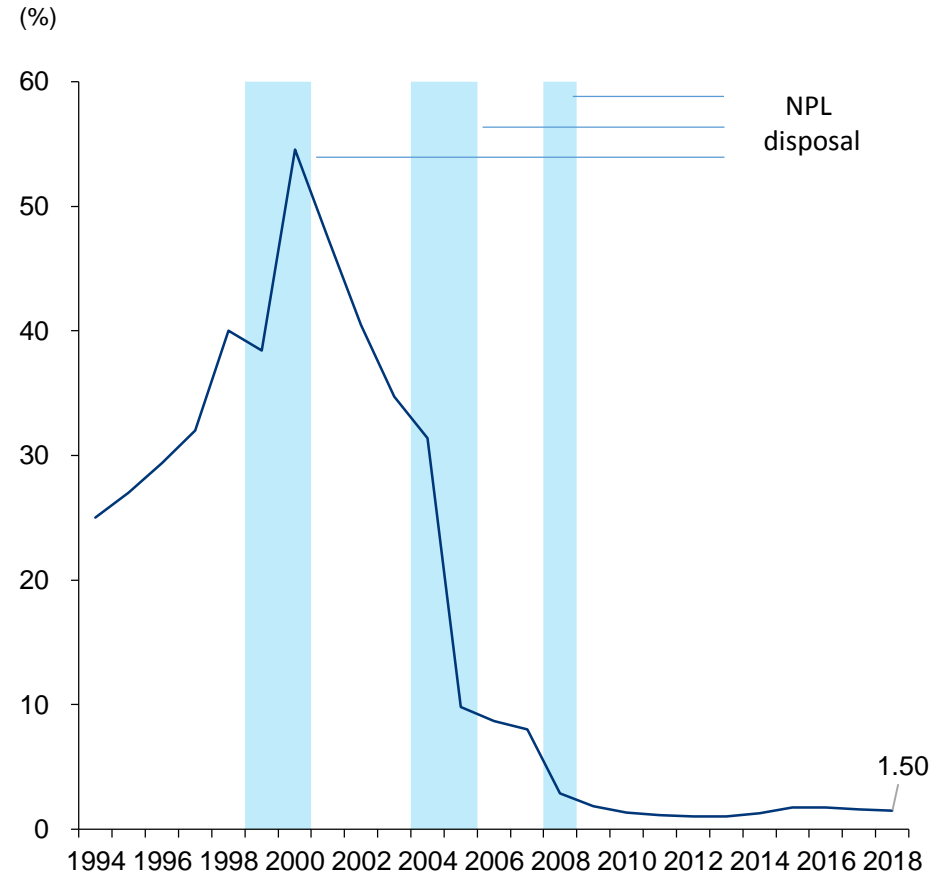
- Key focus
  - Policy banks → corporate banking → retail banking
- Retail banking
  - Mortgage & MSE → consumption & wealth management
- Fintech & digital race
  - Mobile banking, client service, credit control, risk management
- Key operation trends
  - Profitability declining, but enhanced provision and capital

# 1994 - 2009: From policy banks to commercial banks

## Big-4 banks history

- **Bank A:**
  - 1984-1994: a national specialized bank
  - 1994-2005: transformed into a state-owned commercial bank
- **Bank B:**
  - 1979-1994: ruled by State Council + more commercial banking functions
  - 1994-2004: transformed into a full service commercial bank
- **Bank C:**
  - 1949-1994: the state-designated specialized foreign exchange and trade bank
  - 1994-2004: transformed into a wholly state-owned commercial bank
- **Bank D:**
  - 1979-1994: from a state-owned specialized bank to a commercial bank
  - 1994-2009: transformed to a state-controlled commercial bank

## Big-4 banks NPL ratio



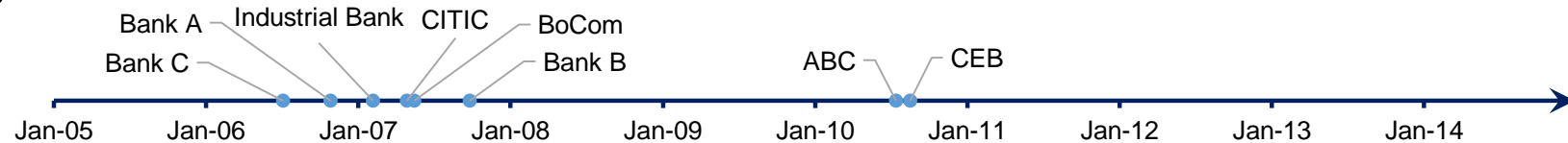
# Listing as a sign of the completion of transformation

## Major national banks' H-share and A-share listing

### H-share



### A-share



### SOE banks' listing

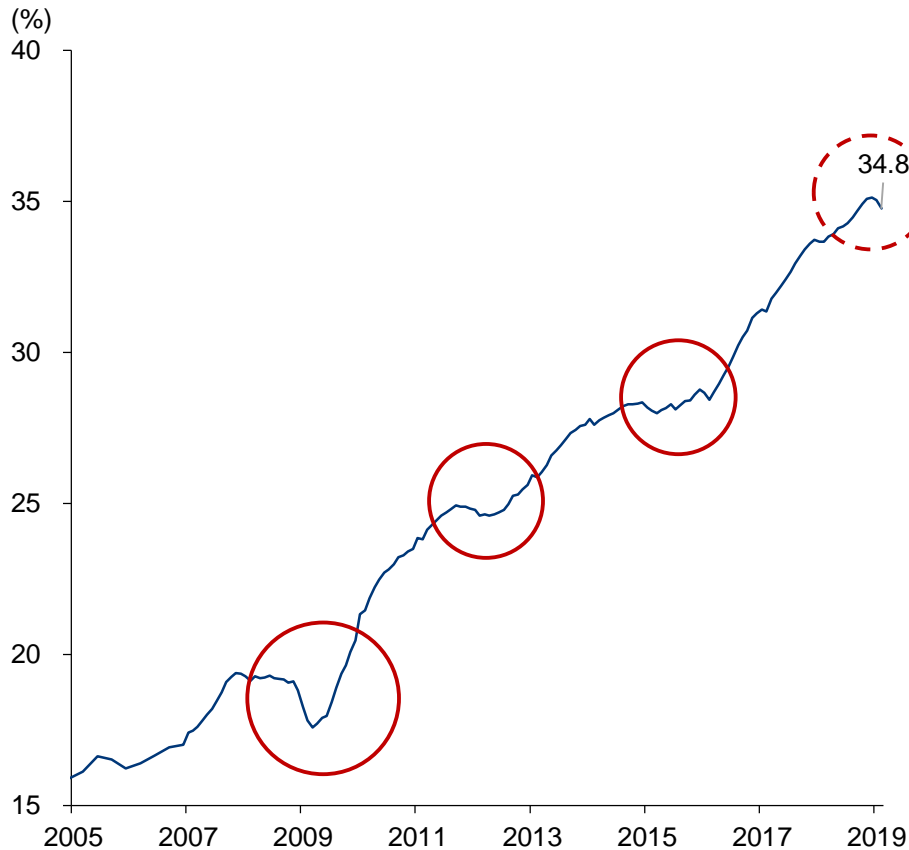
### Joint-stock banks' listing

	H share listing date	A share listing date		H share listing date	A share listing date
BoCom	6/23/2005	5/15/2007	Ping An	na	4/3/1991
Bank B	10/27/2005	9/25/2007	SPDB	na	11/10/1999
Bank C	6/1/2006	7/5/2006	Minsheng	11/26/2009	12/19/2000
Bank A	10/27/2006	10/27/2006	CMB	9/22/2006	4/9/2002
ABC	7/16/2010	7/15/2010	Huaxia Bank	na	9/12/2003
PSBC	9/14/2016	na	Industrial Bank	na	2/5/2007
			CITIC	4/27/2007	4/27/2007
			CEB	12/20/2013	8/18/2010

Source: HK Exchange, Shanghai Exchange, Shenzhen Exchange, Huatai HK Research

# 2009 - present: from corporate to retail banking

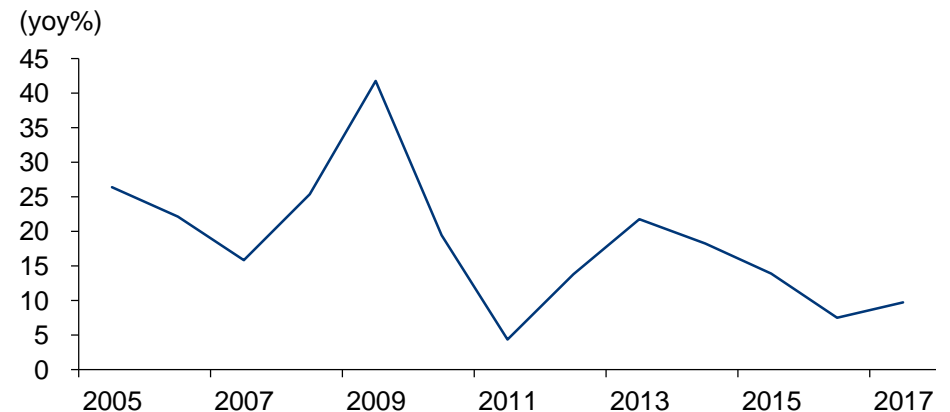
## China: personal loans as % of gross loans



## RMB4tn stimulus package

(RMBtn)	Amount
Public infrastructure (transportation, public utility)	1.50
Reconstruction in earthquake region	1.00
Shantytown and affordable housing	0.40
Rural public utility and infrastructure	0.37
Innovation and industrial reform	0.37
Energy saving, emission reduction ecological construction	0.21
Medical care, education and culture	0.15

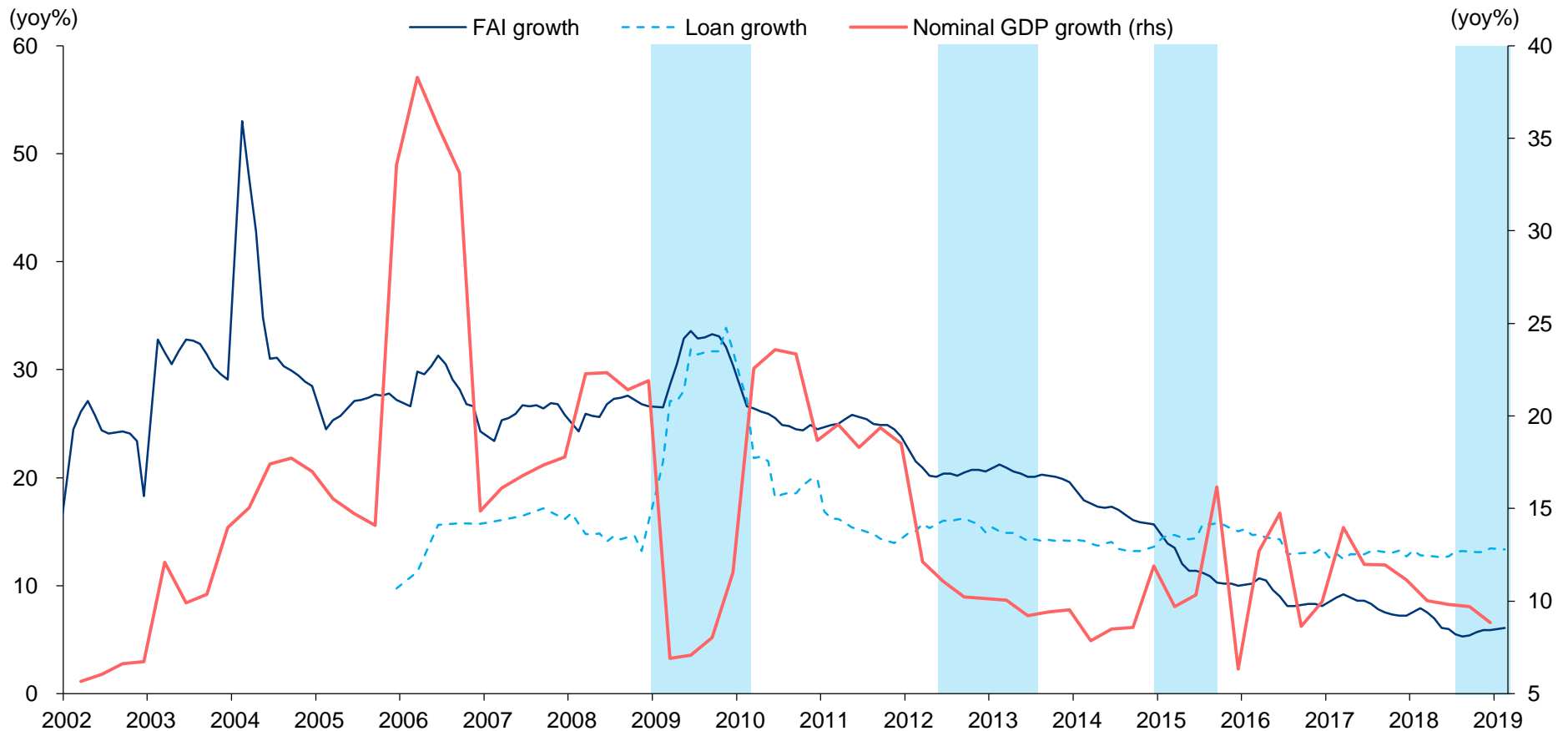
## Infrastructure financing growth



Source: PBOC, NBS, NDRC, Wind, Huatai HK Research

# Anti-cyclical monetary policy

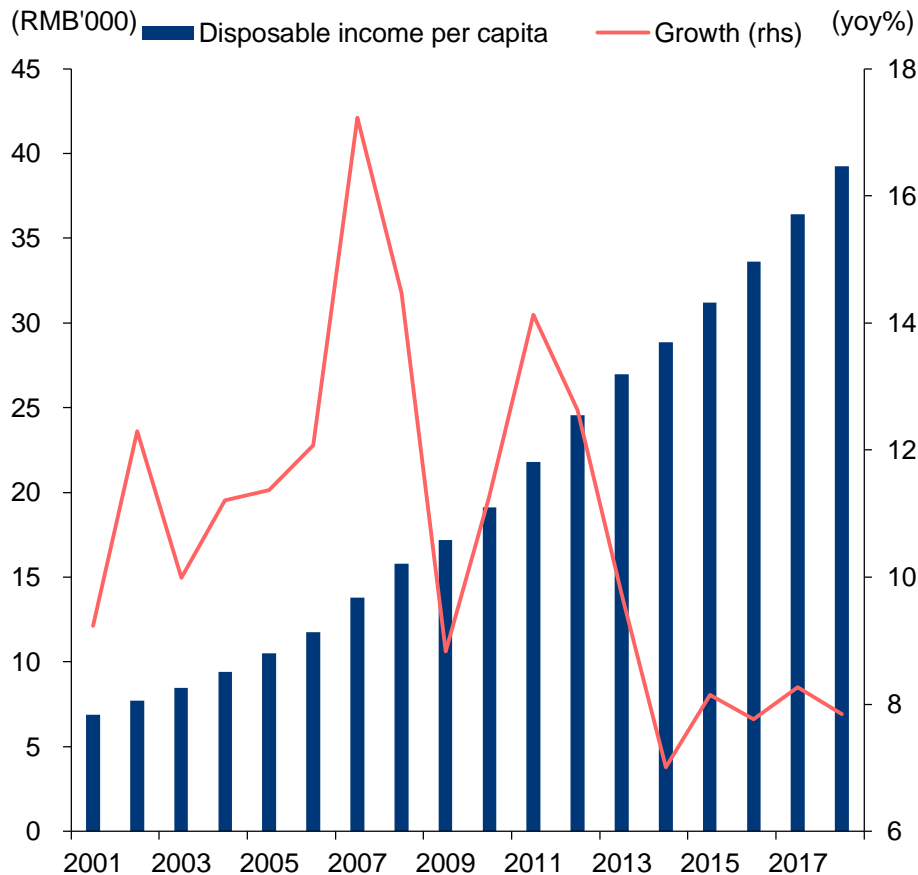
Loan, FAI and nominal GDP growth



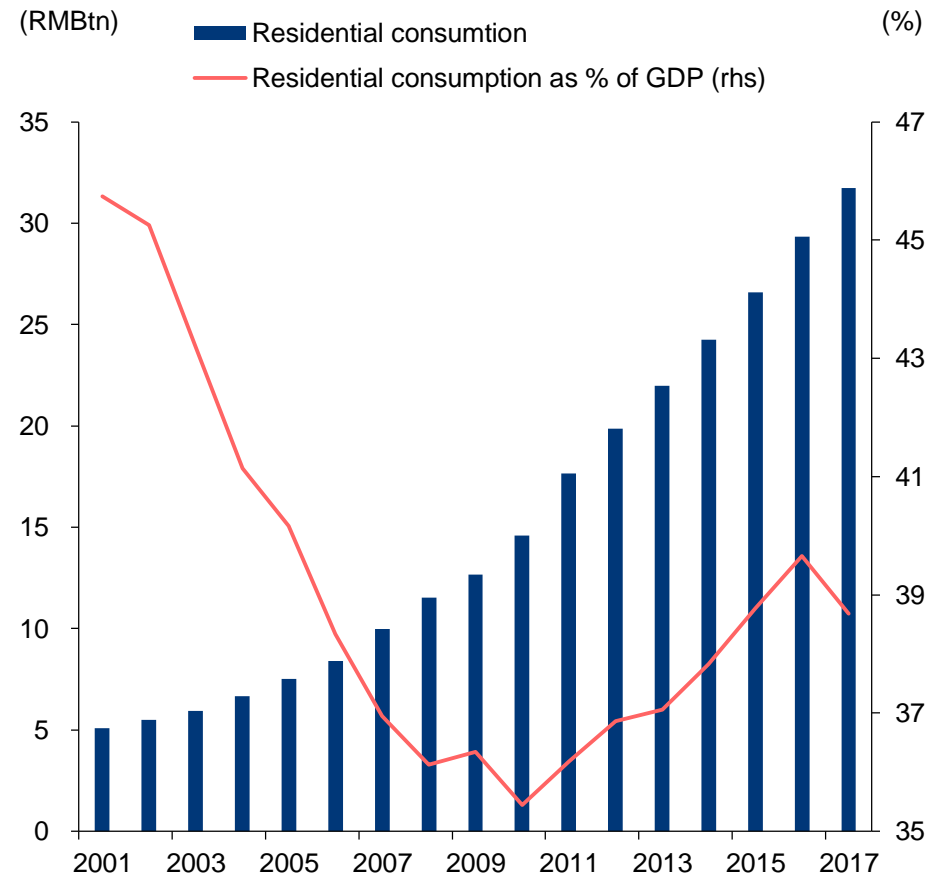
Source: NBS, PBOC, Wind, Huatai HK Research

# Residential banking: strong demand

## Disposable income per capita



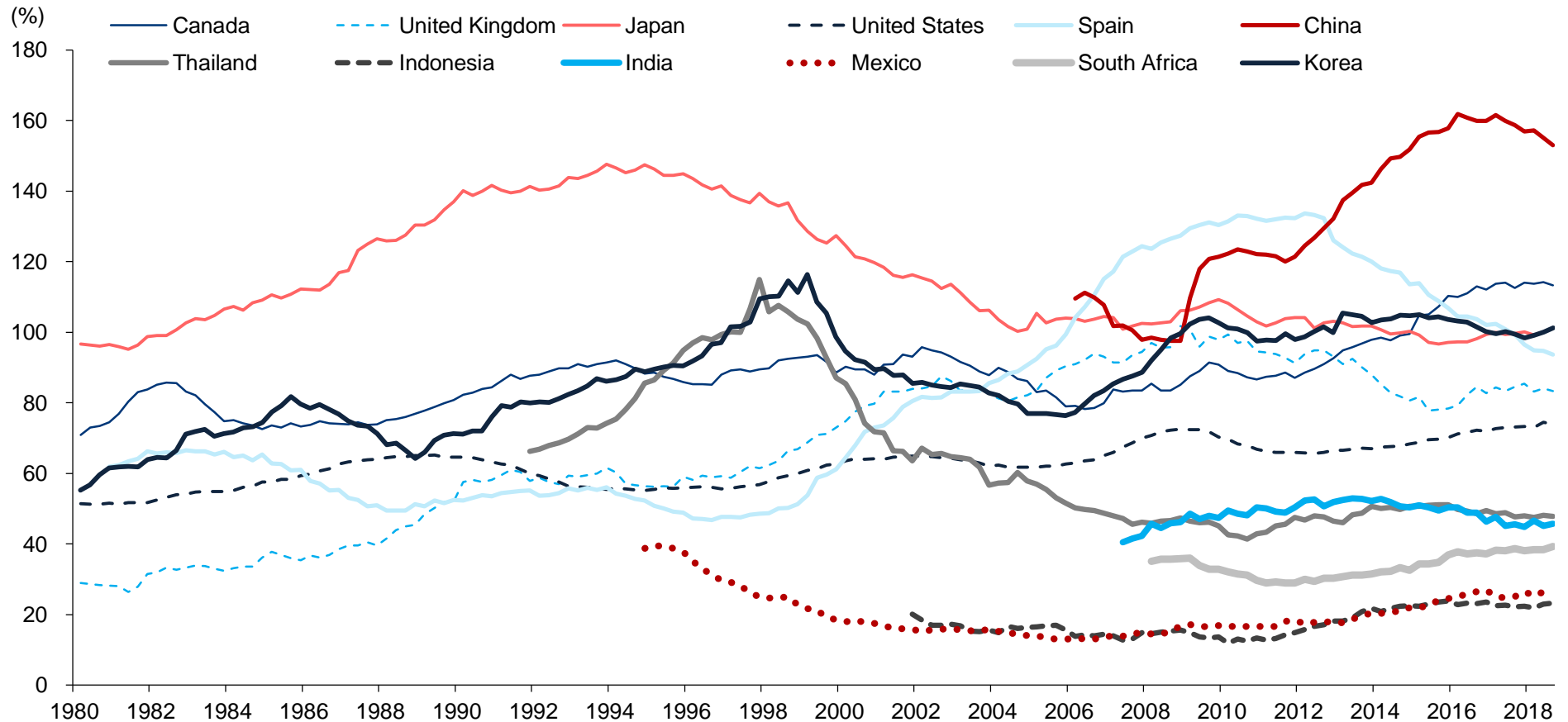
## Residential consumption as % of GDP



Source: Wind, NBS, Huatai HK Research

# Corporate leverage higher than most economies

Corporate leverage ratio (corporate debt as % of GDP)

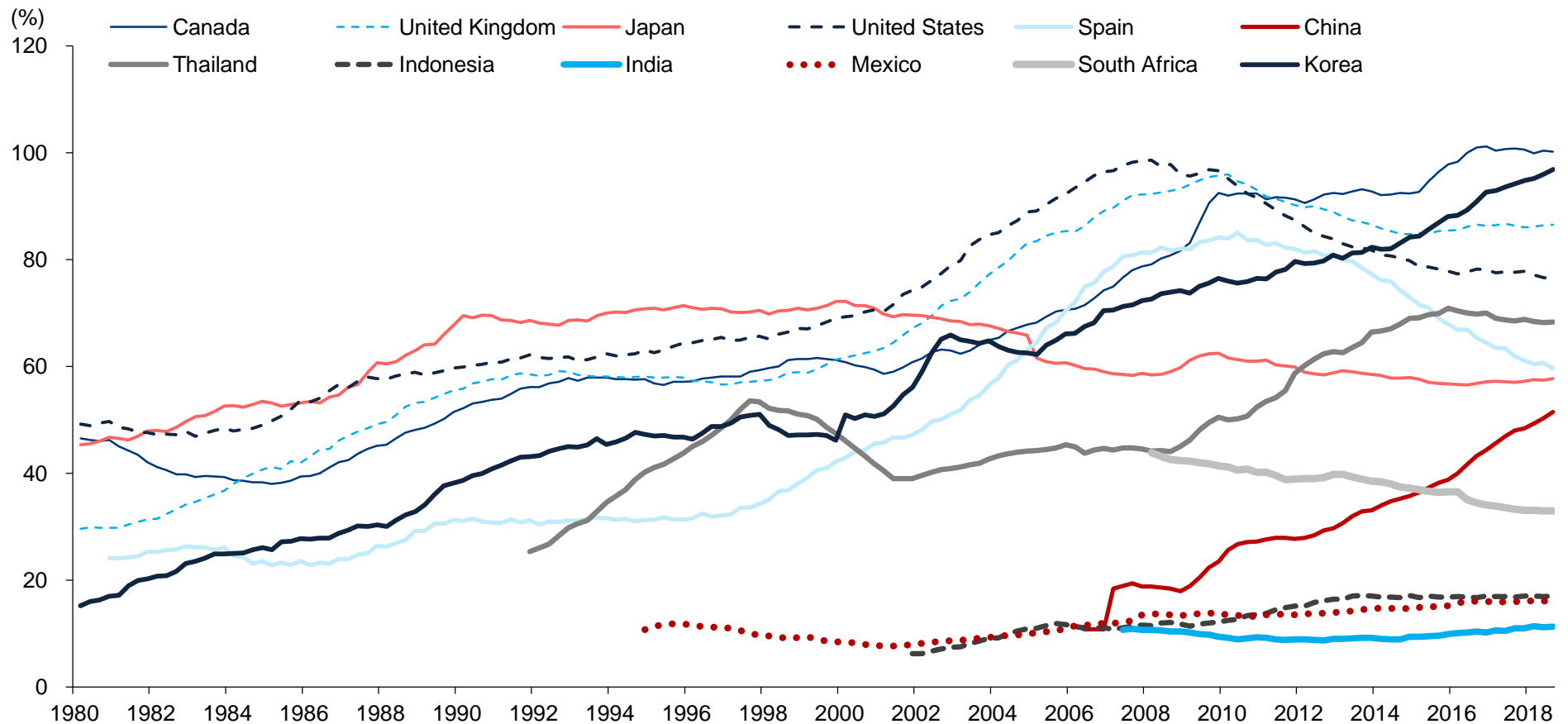


Source: BIS, Huatai HK Research



# Residential leverage lower than developed economies

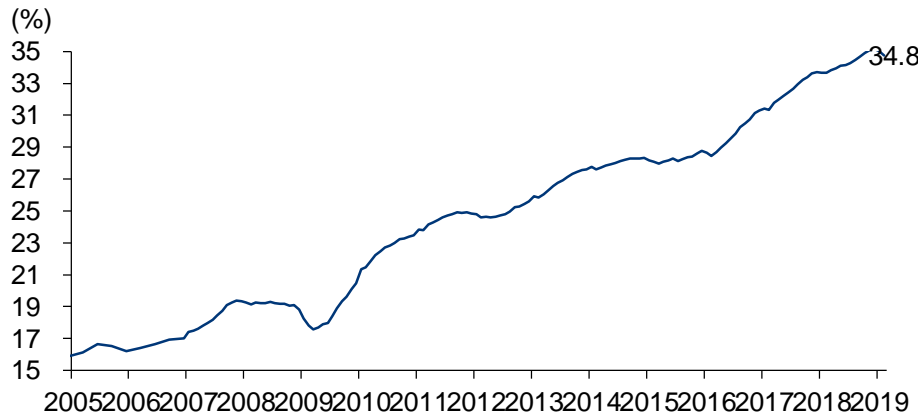
Residential leverage ratio (residential debt as % of GDP)



Source: BIS, Huatai HK Research

# Lower personal loan proportion than major economies

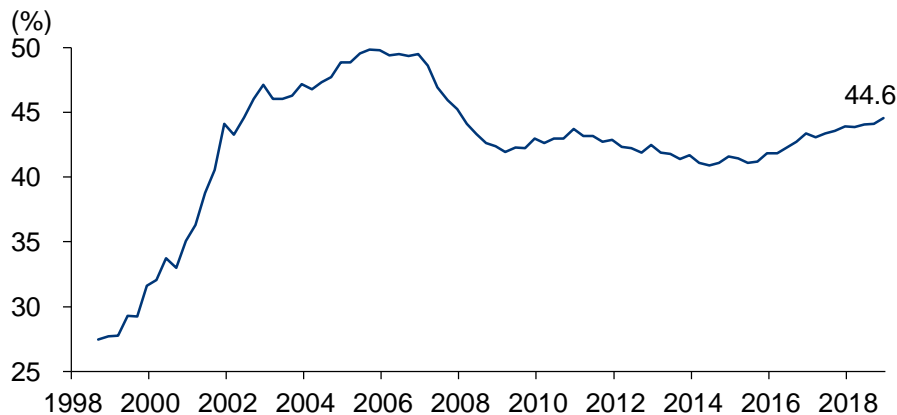
**China: personal loans as % of gross loans**



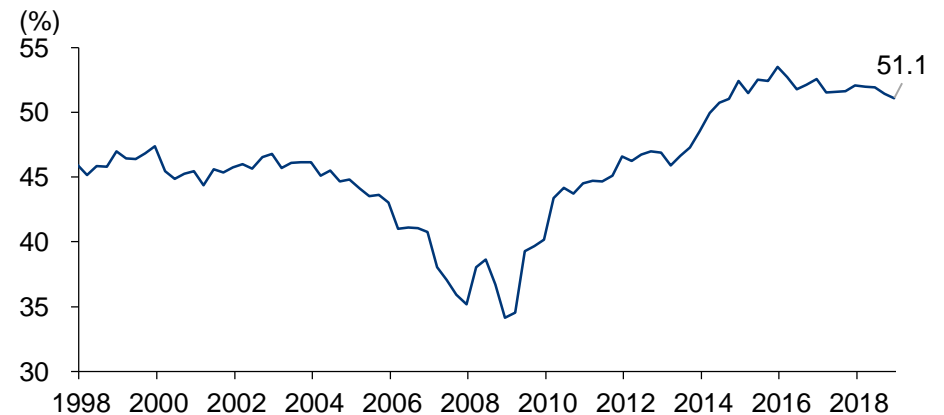
**US: personal loans as % of gross loans**



**Korea: personal loans as % of gross loans**



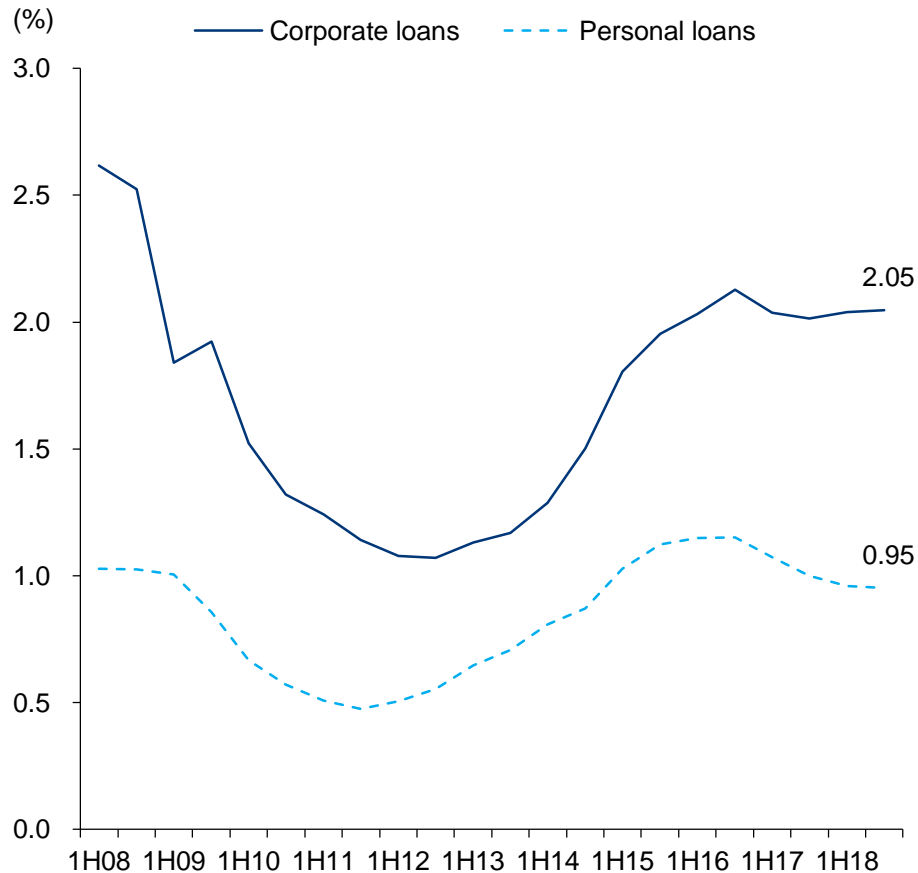
**UK: personal loans as % of gross loans**



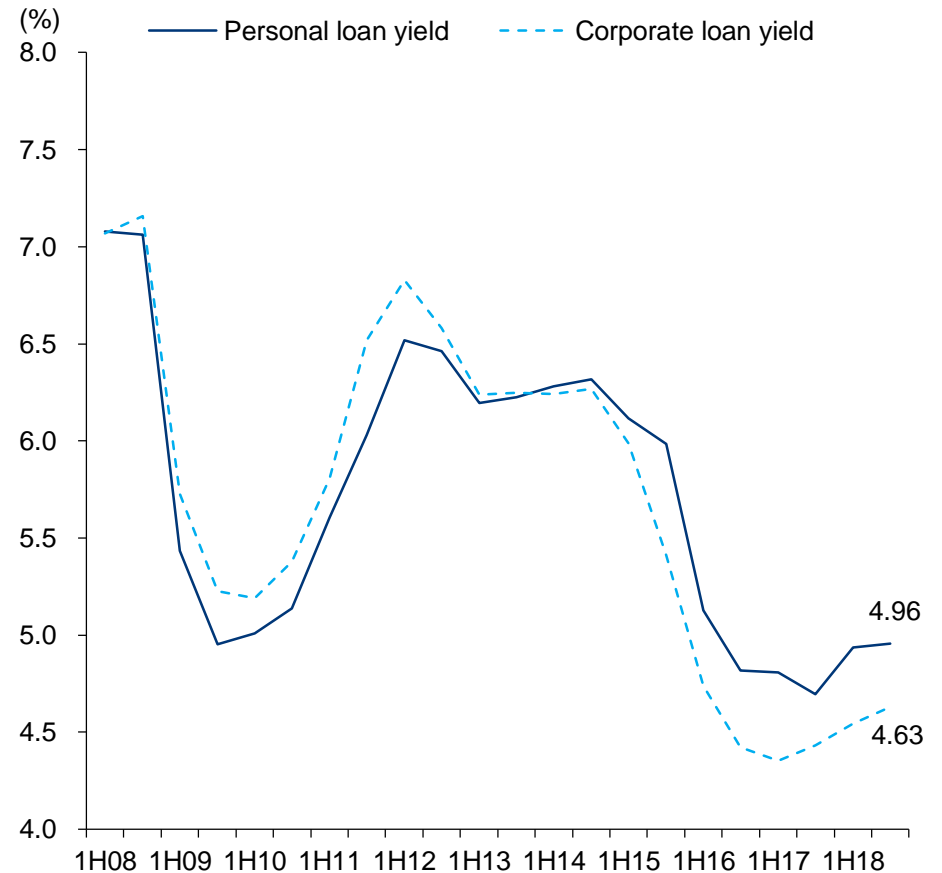
Source: PBOC, FED, Bank of Korea, Bank of England, CEIC, Huatai HK Research

# Retail banking: higher yield, lower risk

## NPL ratio



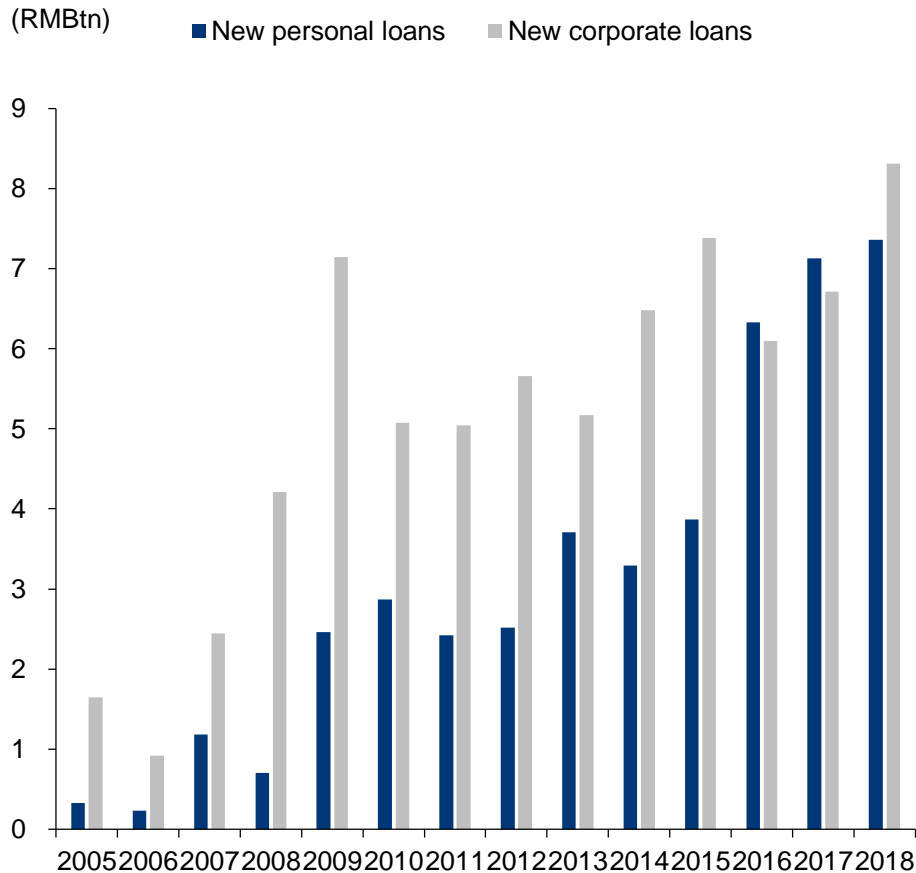
## Loan yield



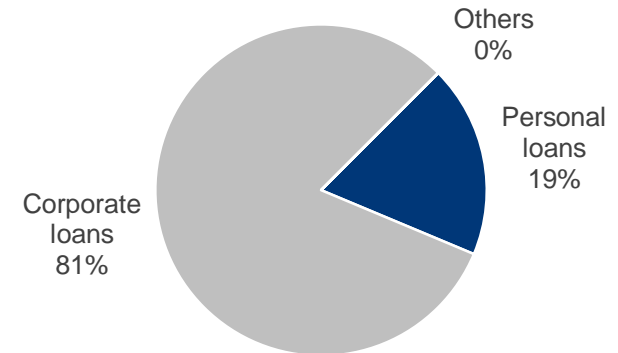
Note: average of HK listed major national banks (SOE bank and joint stock banks)  
 Source: Company data, Huatai HK Research

# Shift in focus from corporate to retail banking

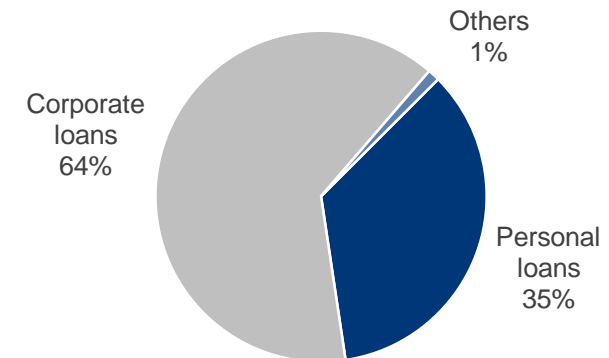
## Increase in personal loans vs corporate loans



## Loan book breakdown (2008)

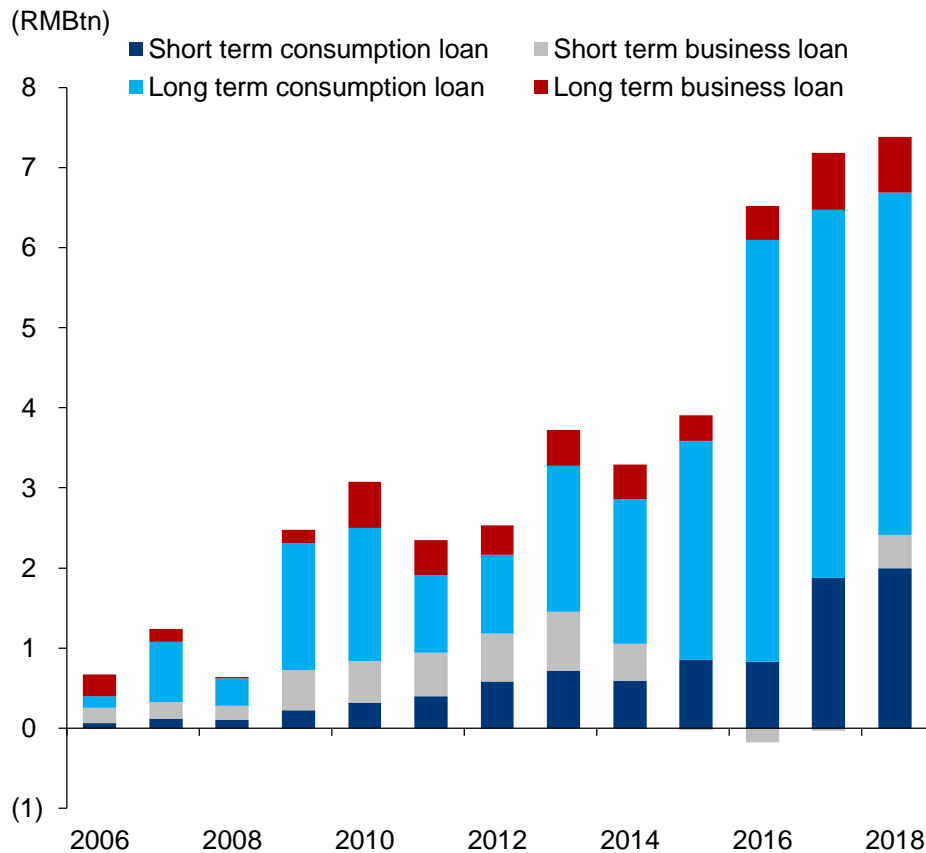


## Loan book breakdown (2018)

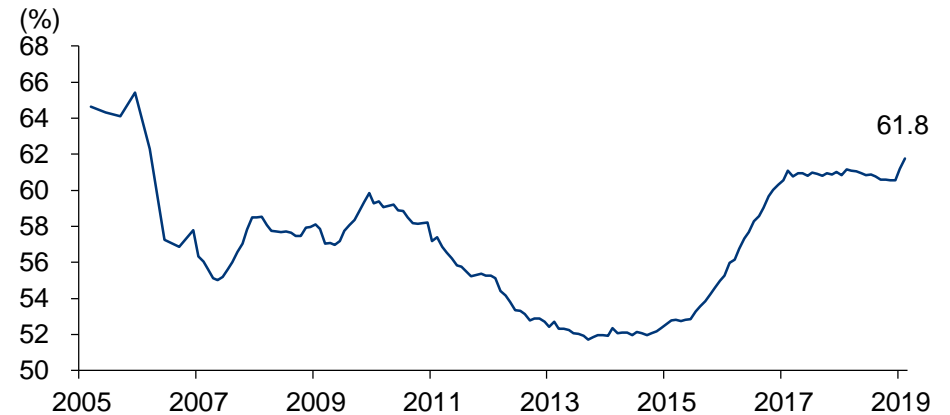


# Starting from mortgage and business loans

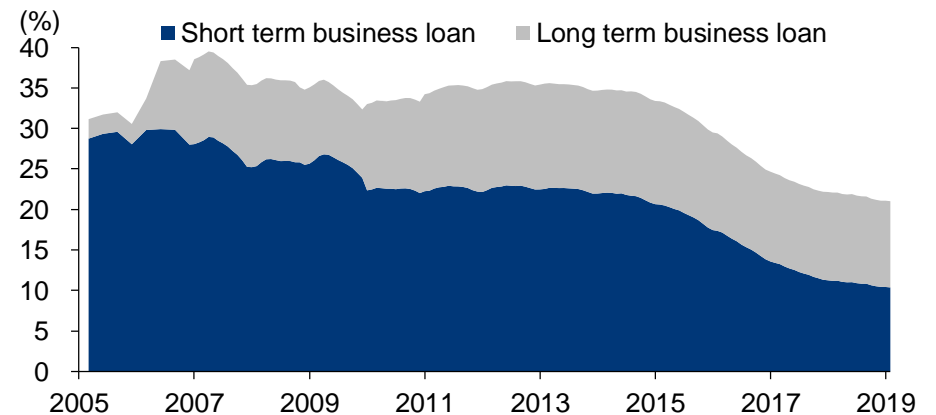
## New residential loans



## Mortgages as % of personal loans (outstanding)



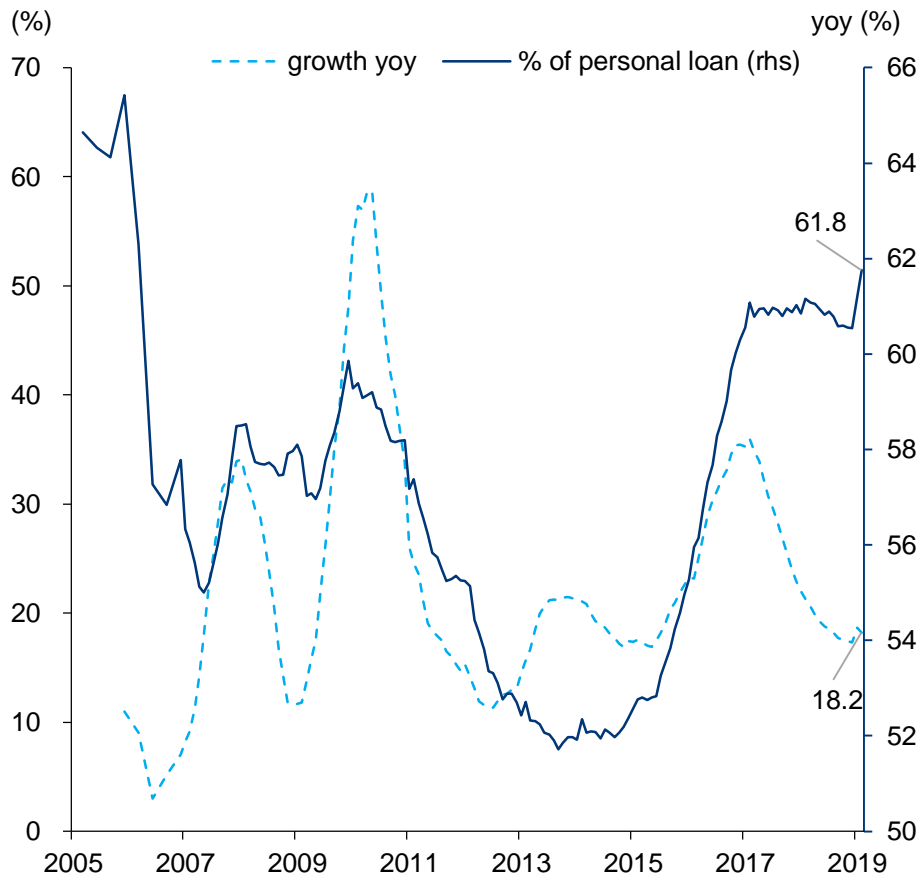
## Business loans as % of personal loans (outstanding)



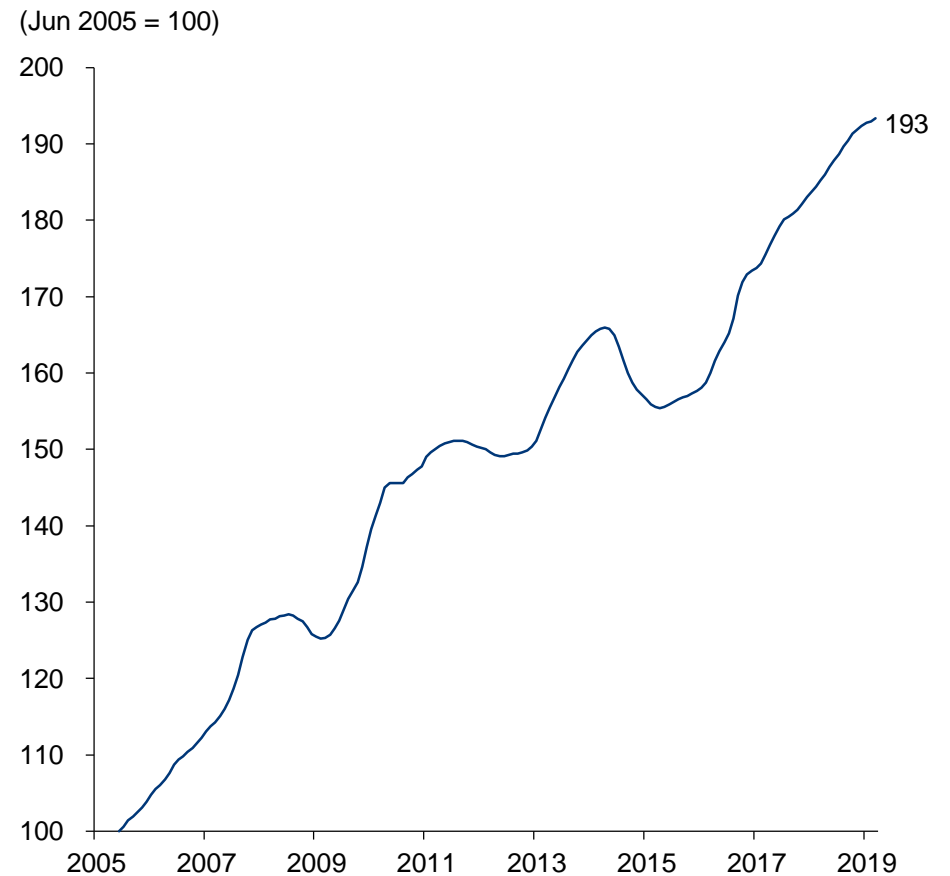
Note: long-term consumption loan is mainly mortgage  
 Source: PBOC, Wind, Huatai HK research

# Mortgage growth largely driven by property price

**Mortgage growth and as % of personal loans**



**Property price index**



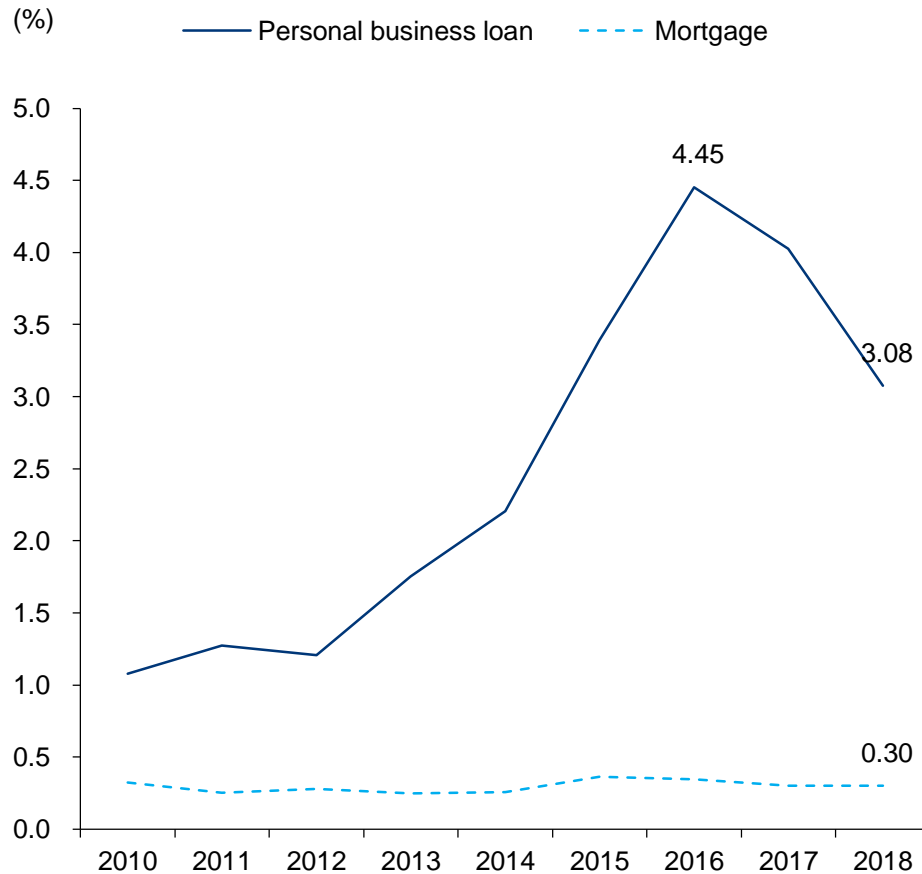
Source: PBOC, Wind, Huatai HK research

Note: 2005-2017: average property price change in 70 large cities in China; 2018-2019: in 100 cities in China

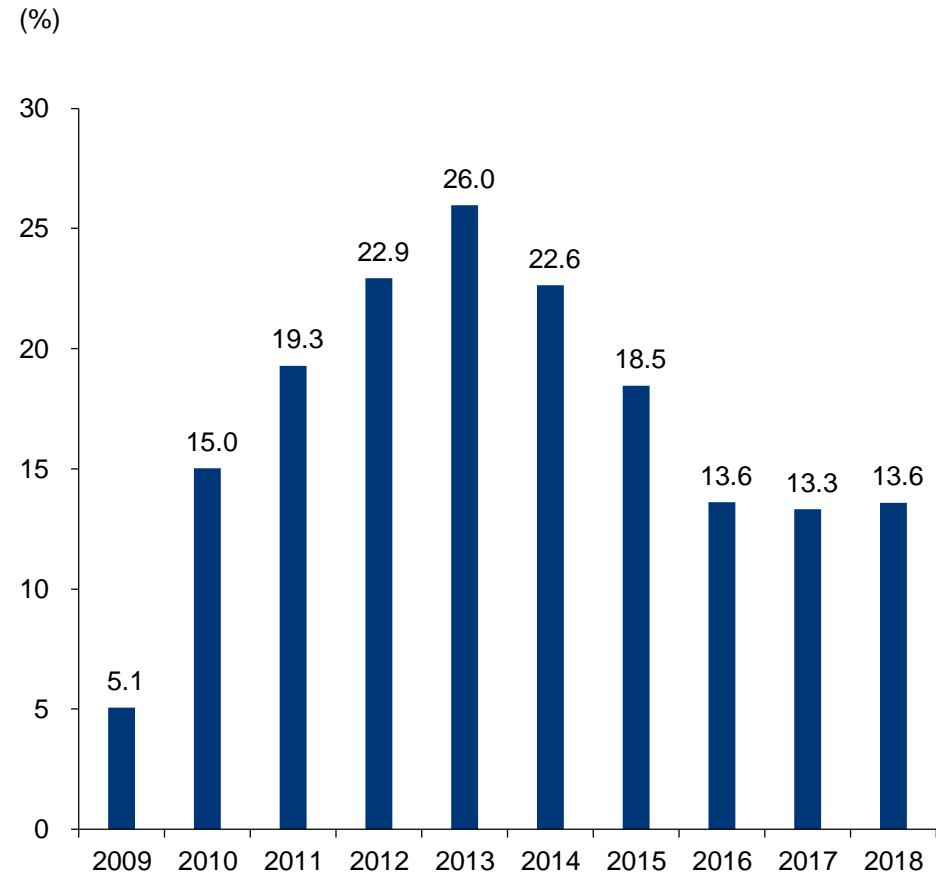
Source: NSBC, Wind, Huatai HK research

# The fading of personal business loan

**NPL ratio**



**Minsheng Bank: MSE loans as % of total loans**



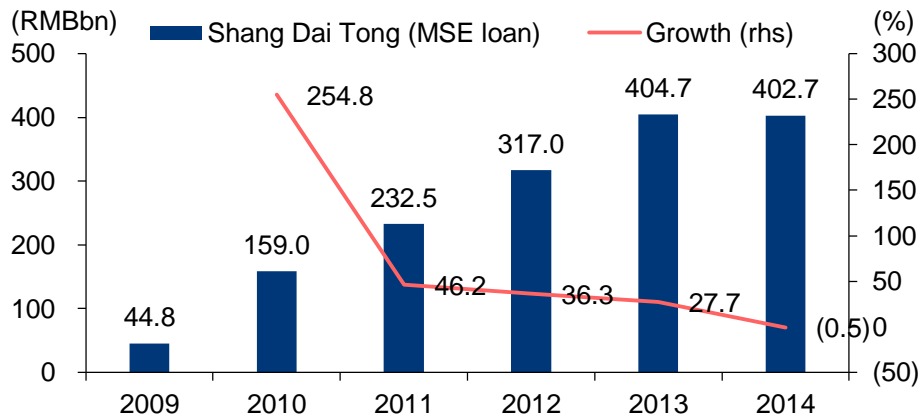
Note: personal business loan is mainly micro and small enterprise (MSE) loan

NPL ratio is simple average of major national banks that disclosed NPL ratio for personal business loan and mortgage

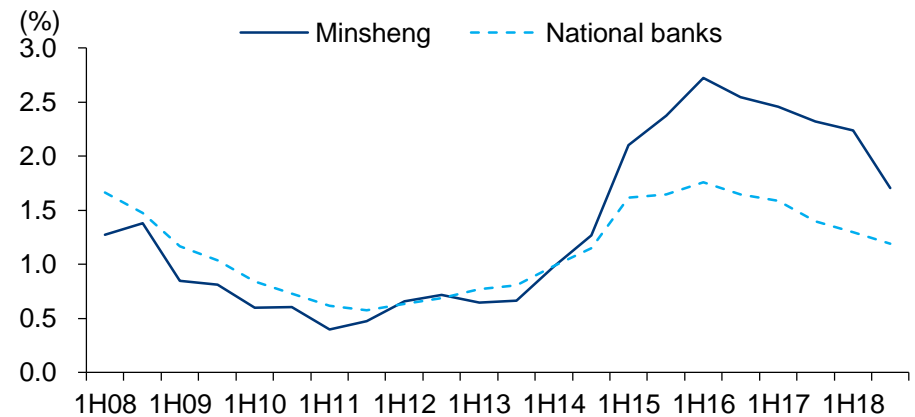
Source: Company data, Huatai HK research

# Minsheng's trial: mutual guarantee MSE loan

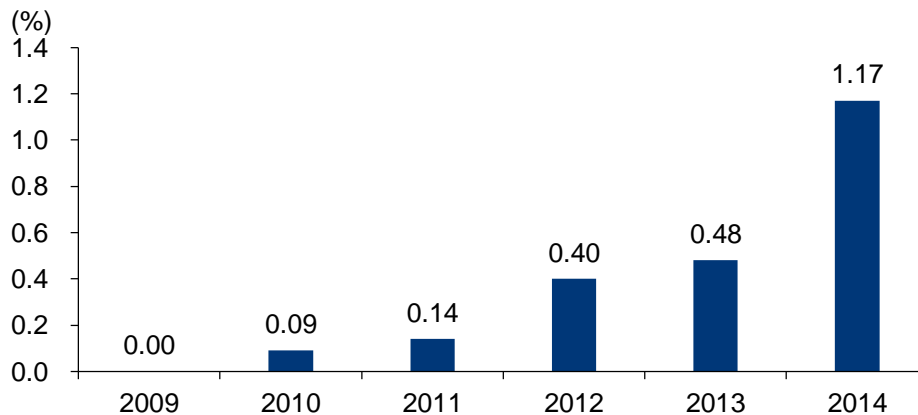
**Shang Dai Tong (MSE loans) grew rapidly**



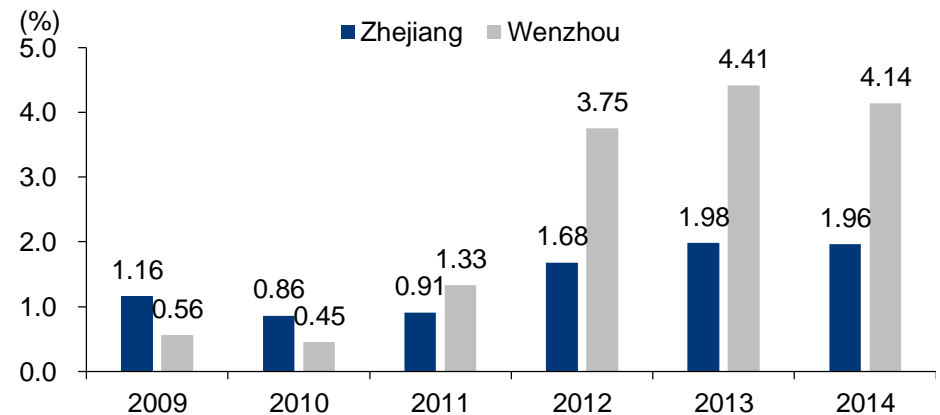
**>90 days overdue loan ratio: Minsheng vs peers**



**Shang Dai Tong (MSE loans) NPL ratio**



**Zhejiang and Wenzhou NPL ratio**



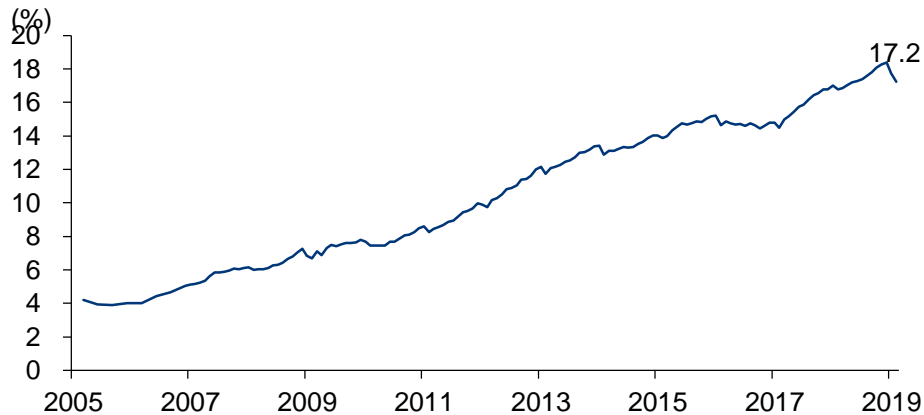
Note: national banks - major HK listed SOE and joint-stock banks average; Shang Dai Tong is Minsheng's major MSE loan product

Source: Company data, PBOC, Wind, Huatai HK research

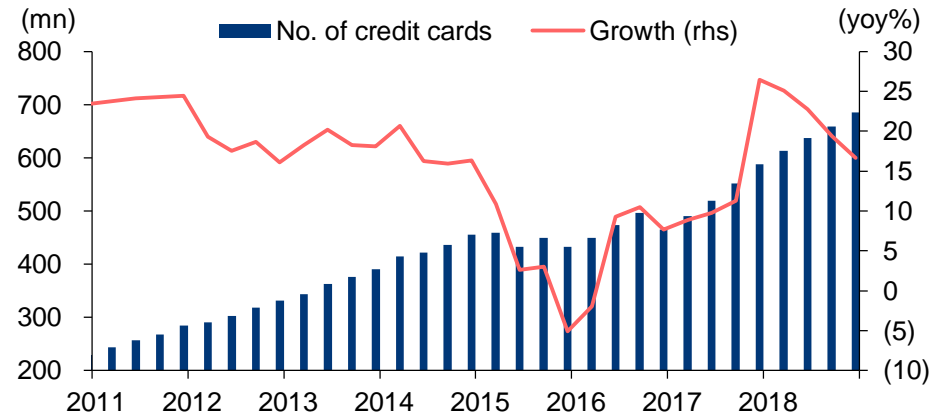


# Short-term consumption mainly driven by credit card

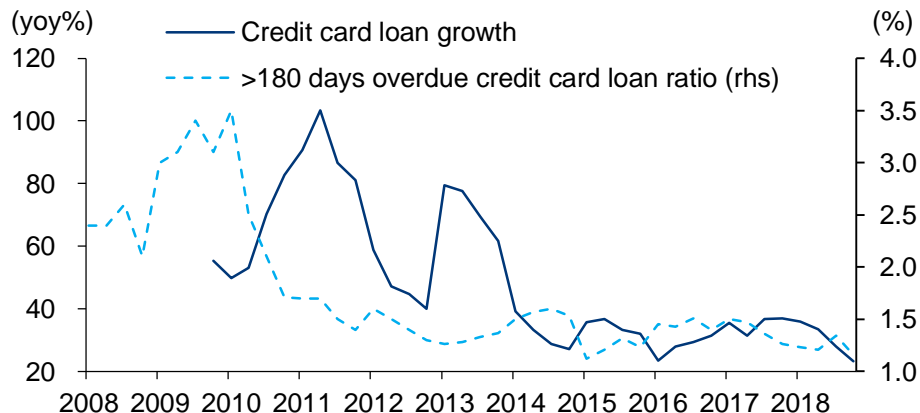
Short-term consumption loans as % of personal loans



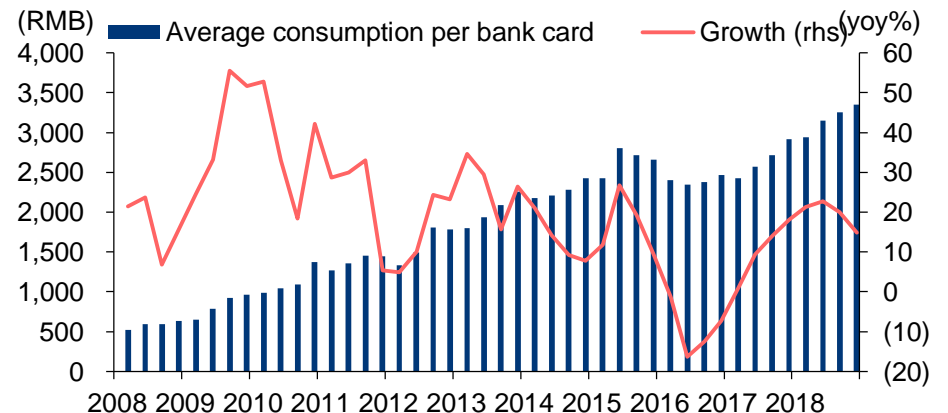
No. of credit cards



Credit card: growth and >180 days overdue ratio

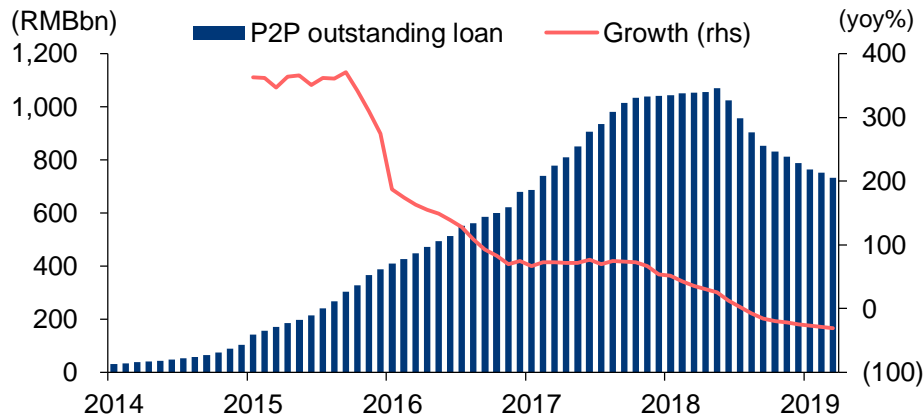


Average consumption per card

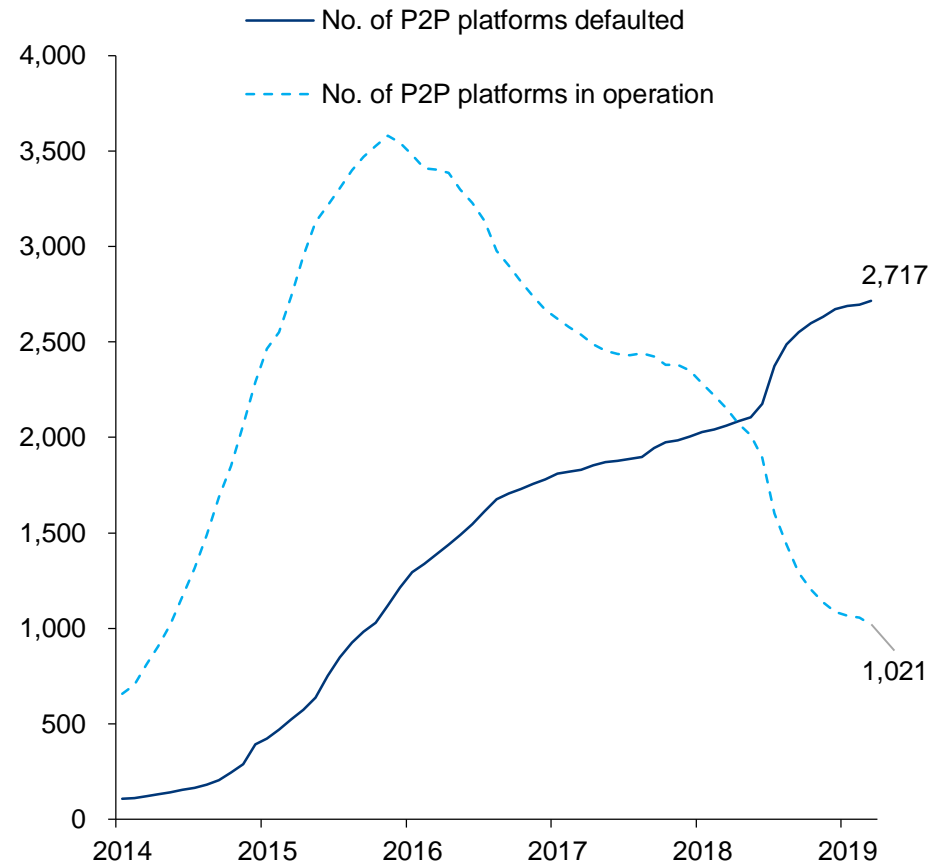


# Other consumption loans affected by P2P default wave

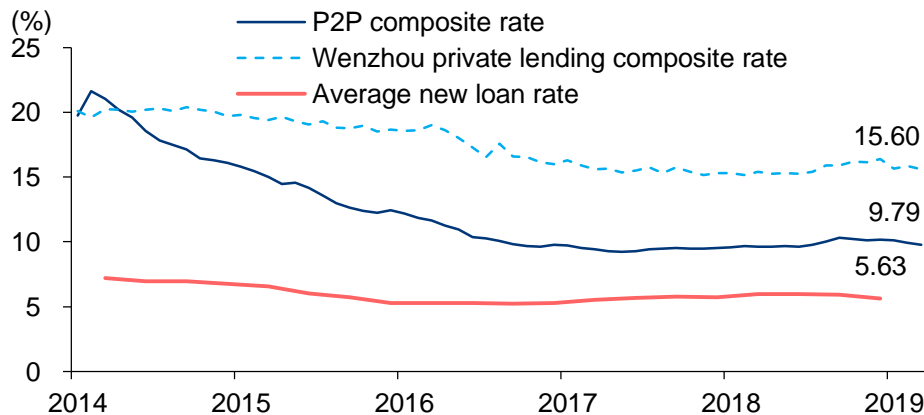
## P2P loan



## No. of P2P platform defaults vs No. in operation



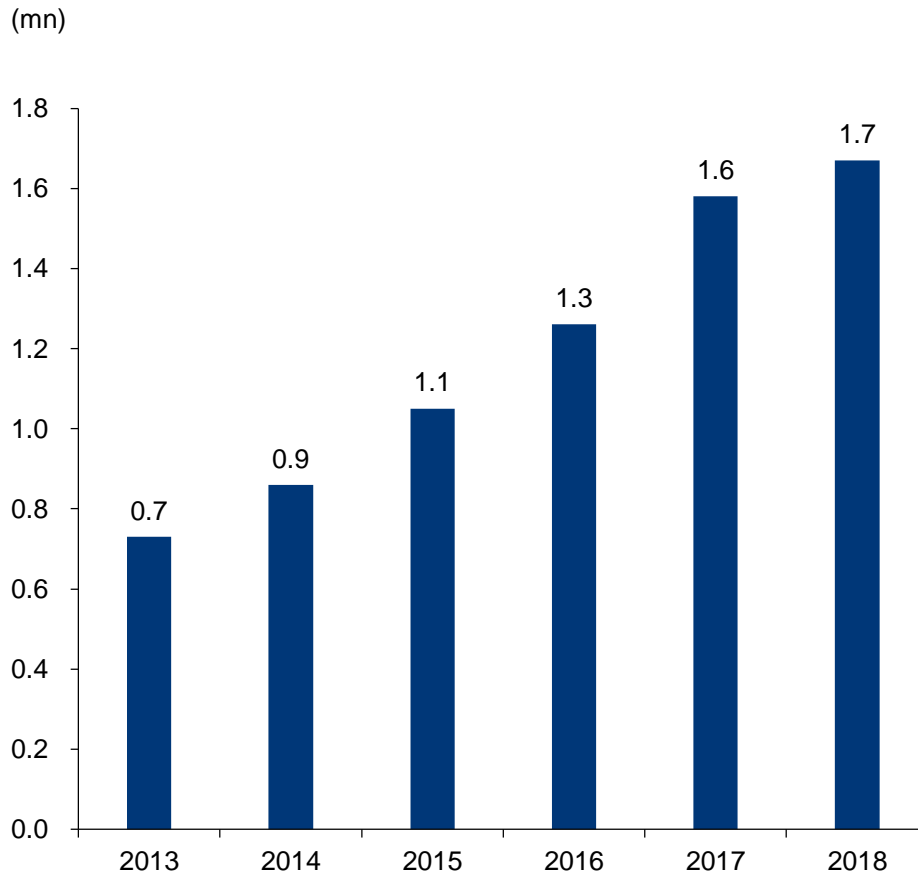
## Private lending, P2P & bank loan rate



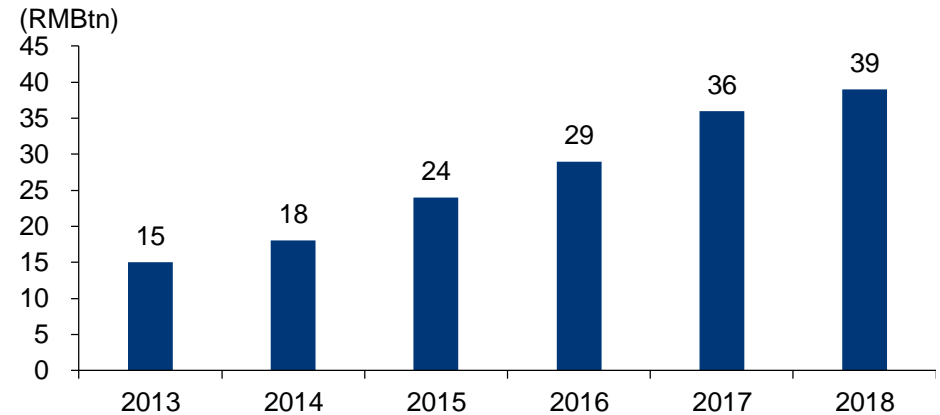
Source: Wangdaizhijia, PBOC, Wind, major HK listed SOE bank annual reports

# Off balance sheet growth: rising demand from HNW

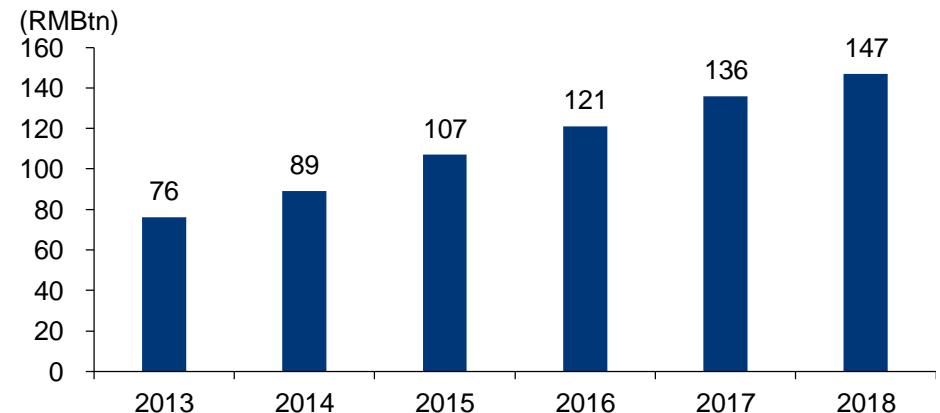
**No. of China HNW individuals**



**China HNW individuals' investable assets**



**China individuals' investable assets**

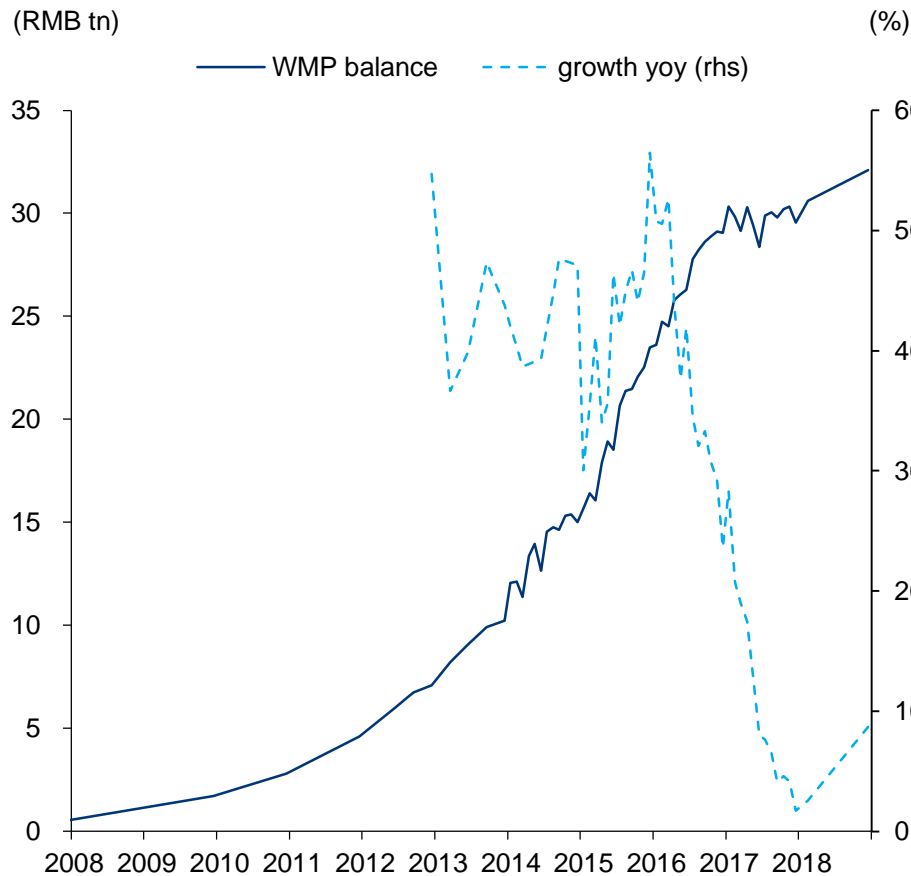


Note: HNW - high net worth

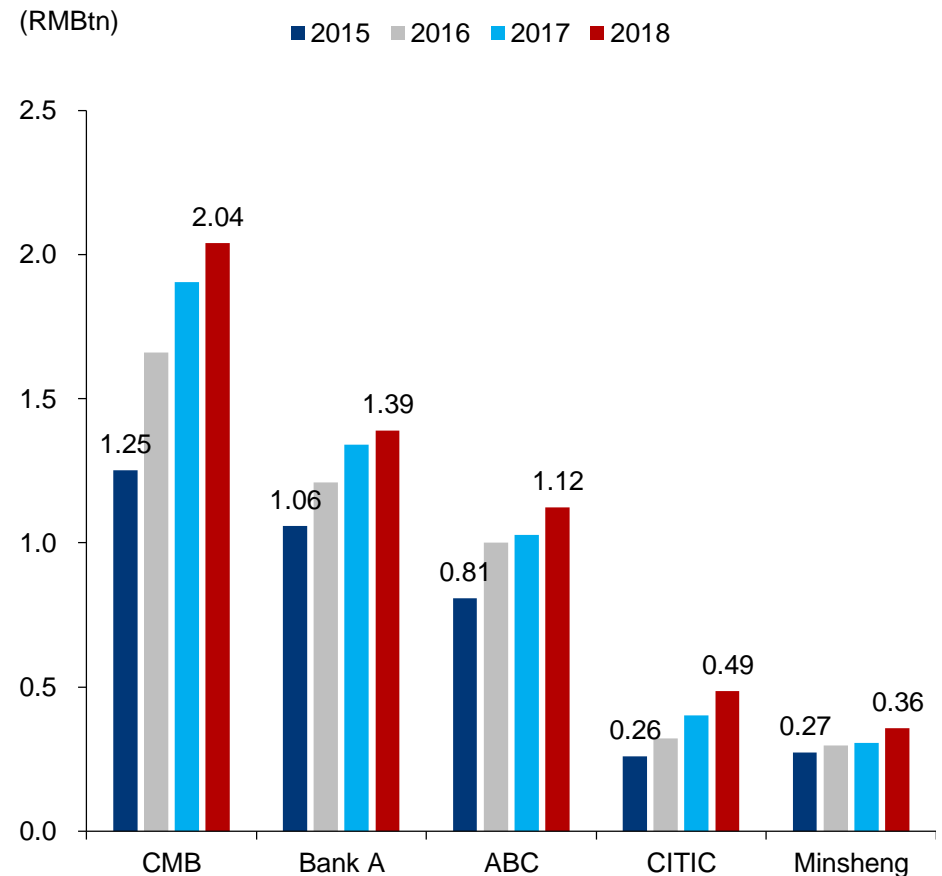
Source: BCG, Huatai HK research

# Rapid growth in WM and private banking

## Bank wealth management product (WMP) balance



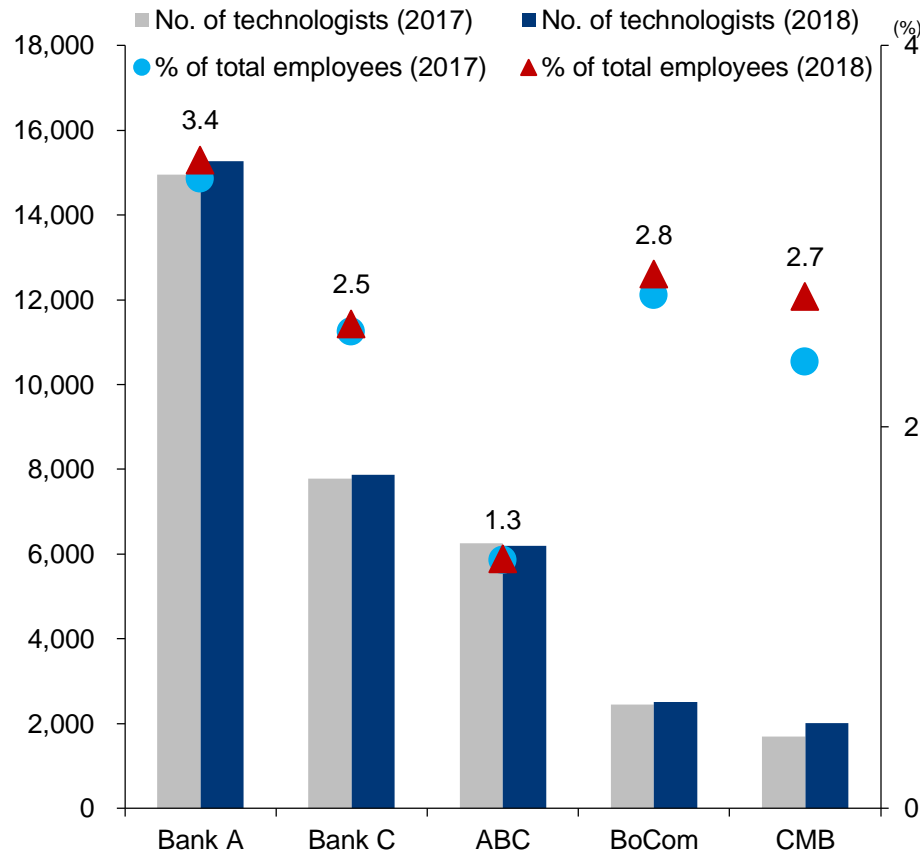
## Private banking AUM



Source: CBIRC, Wind, Company data, Huatai HK research

# Fintech race: investing in technologists and hardware

## No. of technologists



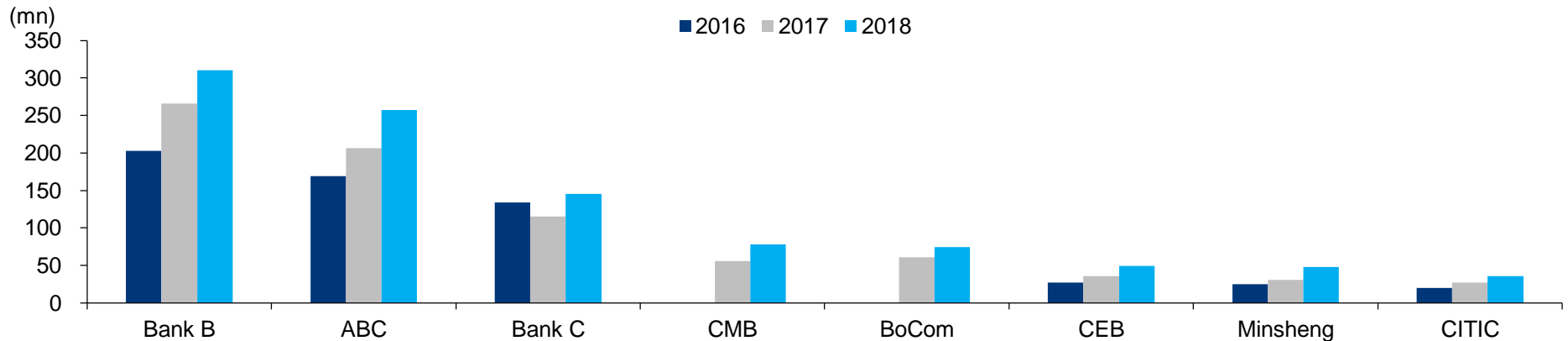
## Change in employee number and cost per capita

Bank	No. of employees		Cost per capita	
	2016 yoy	2017 yoy	2016 yoy	2017 yoy
Bank A	(1.0)	(1.9)	(0.7)	2.9
Bank B	(1.8)	(2.7)	2.8	6.1
Bank C	(0.4)	0.7	0.8	1.0
ABC	(1.3)	(1.9)	0.8	3.7
BoCom	1.2	(1.4)	3.0	7.4
PSBC	9.2	1.1	2.3	8.9
CMB	(7.5)	2.9	7.8	23.5
CITIC	2.7	(2.2)	2.1	12.0
Minsheng	(1.3)	(1.4)	5.0	1.5
CEB	4.8	4.3	2.2	(1.1)
CQRCB	0.4	(2.2)	1.1	4.4
Bank E	17.1	6.3	9.7	3.6
BoCQ	6.4	n.a.	(32.6)	7.0
Big-4	(1.1)	(1.4)	0.9	3.4
SOE banks	1.0	(1.0)	1.5	5.0
Joint-stock banks	(0.3)	0.9	4.3	9.0
National banks	0.5	(0.3)	2.6	6.6
Municipals	8.0	1.4	(7.3)	5.0
Total	2.2	0.1	0.3	6.2

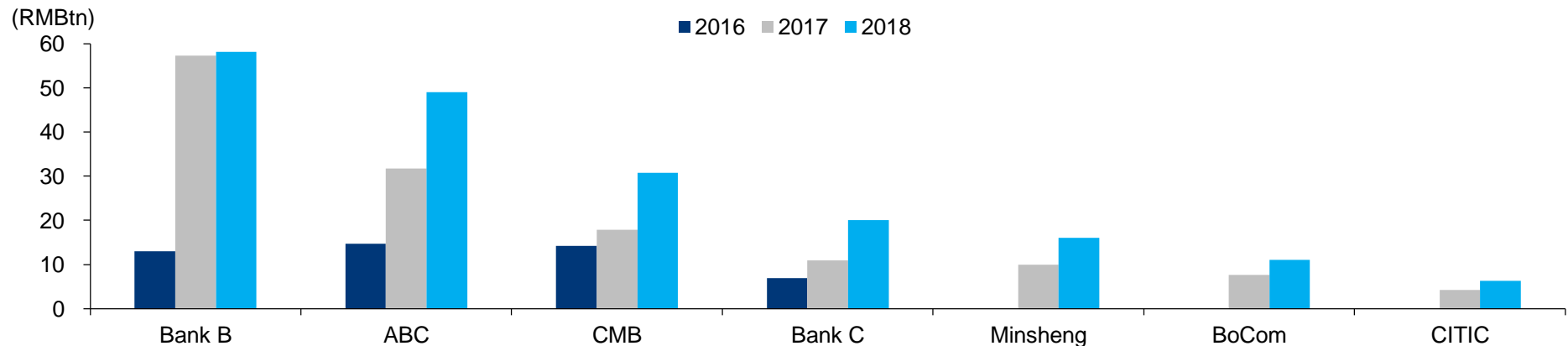
Source: Company data, Huatai HK research

# Mobile banking is key to retail banking

No. of mobile banking app users



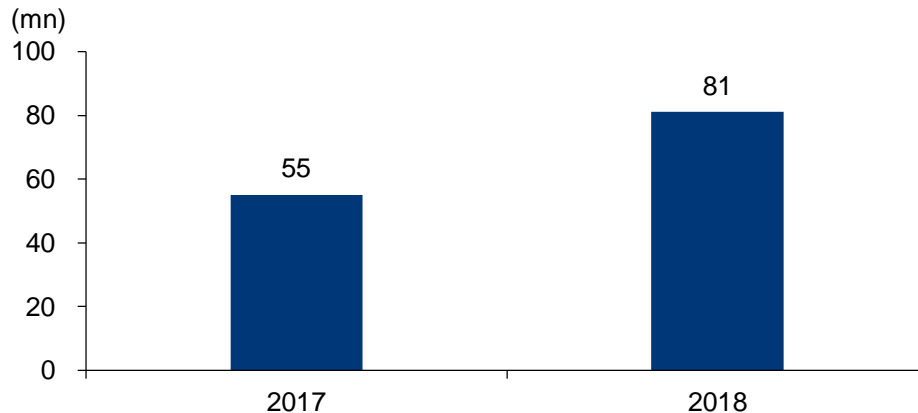
Mobile banking transaction volume



Source: Company data, Huatai HK Research

# Mobile banking: sales and client acquisition – CMB

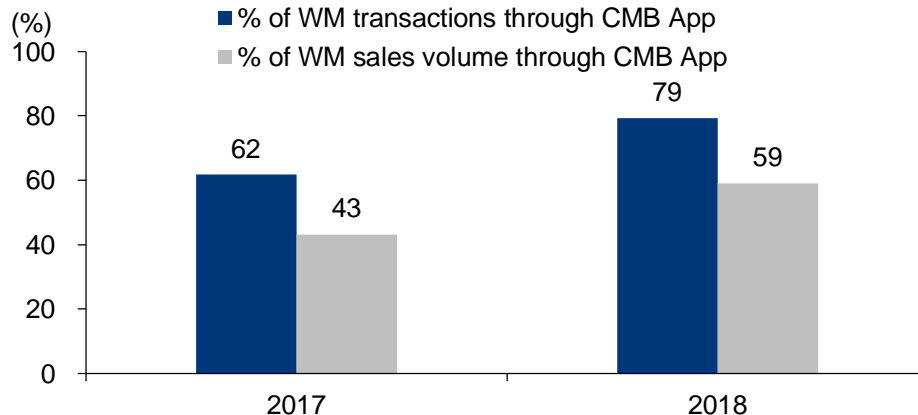
## CMB App & CMB Life App MAU



## CMB App + CMB Life App

- CMB App + CMB Life App MAU reached **81mn**, up by **47%** yoy
- Debit card customers acquired online accounted for **18%** of total debit card customers
- Credit card customers acquired supported by data analysis accounted for **61%** of total in 2018

## % of WM transactions/sales volume through CMB App



### CMB App



- Wealth management sales volume /transactions through CMB App accounted for **59%/79%** of total wealth management sales volume/ transactions

### CMB Life App



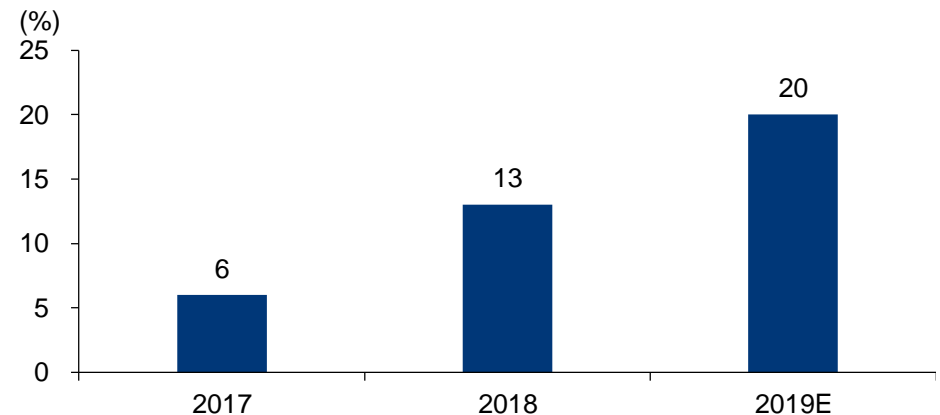
- Consumer financial transactions completed through CMB Life App accounted for **49%** of total consumer financial transactions

# Intelligent Customer Service – BoCom

## BoCom: Intelligent Robot “Jiaojiao”



## Customer service diverted as % of total



## Lobby manager & credit card customer service

- Intelligent Robot 2.0: more like a bank lobby manager’s assistant. The real manager can control two robots at the same time remotely.
- Similar to IR 2.0, BoCom’s credit card AI solved 35% of customer requests, and reduced human mobile banking service by 13%, according to the company.

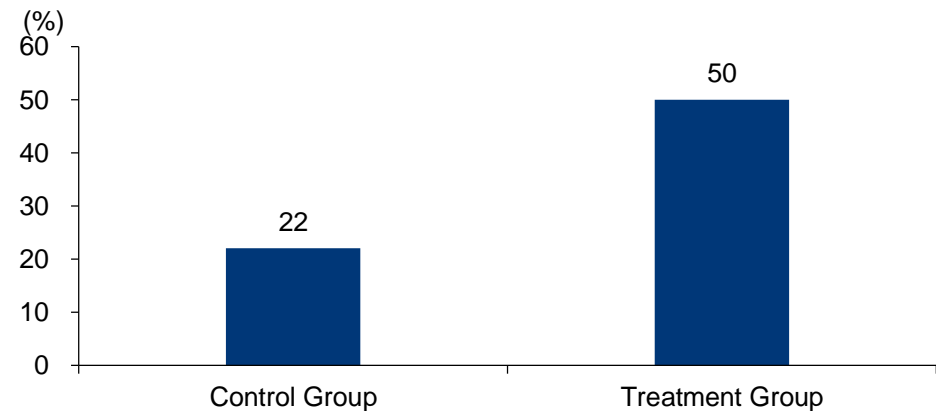


# Automatic credit limit adjustment – CITIC Bank

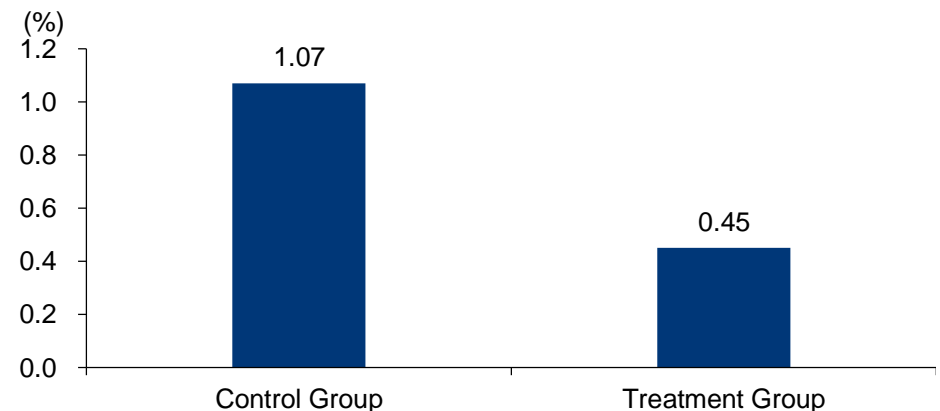
## Client screening

- Statistical variables
  - Age, industry
- Behavioral variables
  - Consumption, cash withdrawal, repayment practice
- Risk variables
  - Behavior evaluation, PBOC credit score, delinquency history
- Bank profit variables
  - RORAC

## Loan per person growth in one year



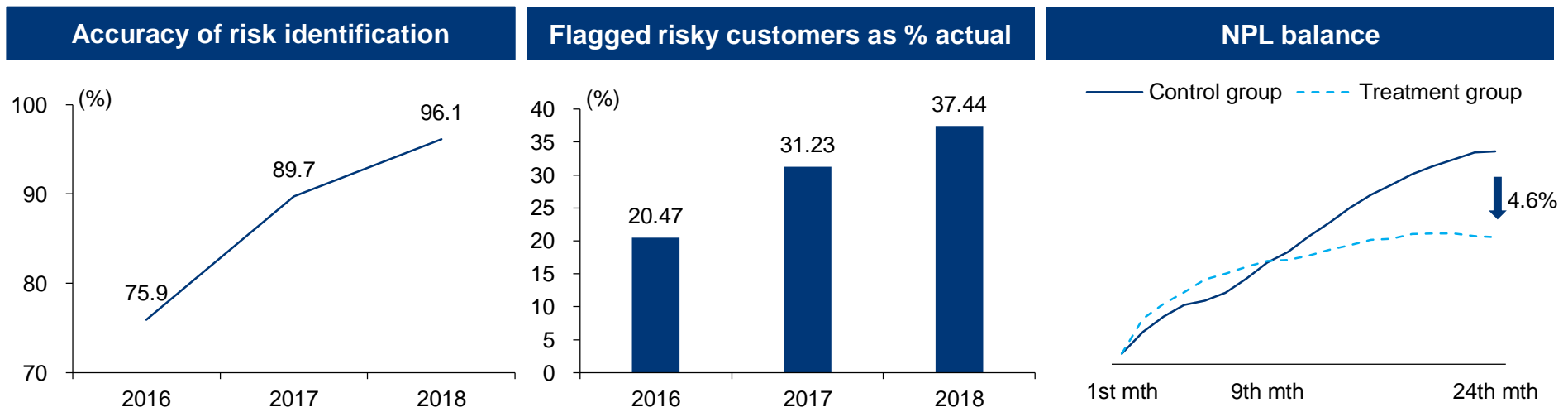
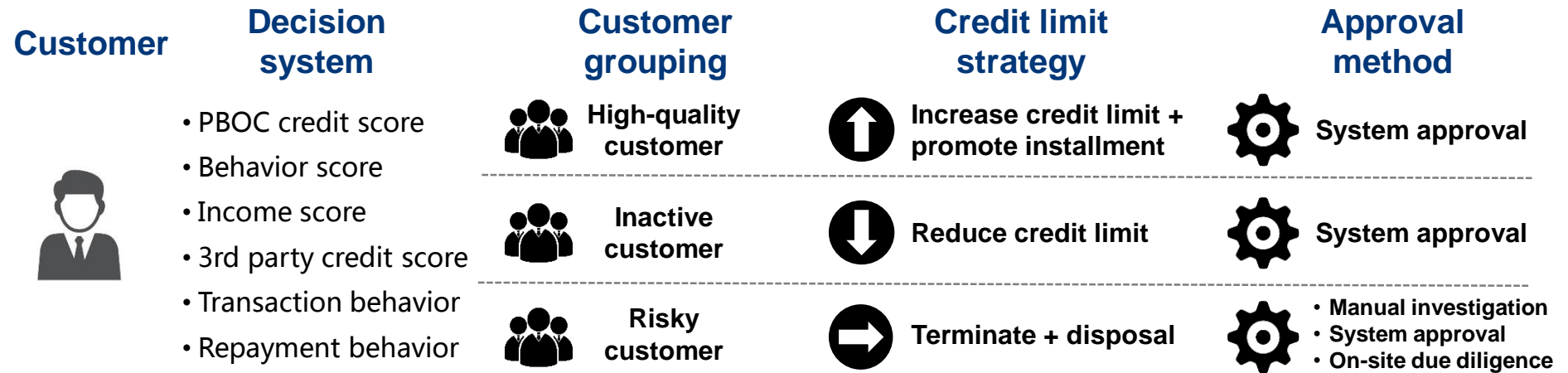
## NPL ratio after one year



Note: control group - CITIC Bank credit card users without automatic credit limit adjustment; treatment group - users with automatic credit limit adjustment

Source: Company data, Huatai HK research

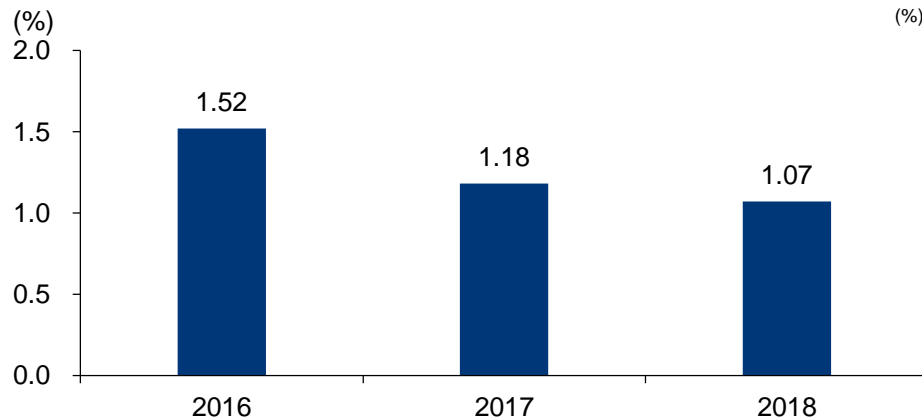
# Intelligent risk management – CITIC Bank



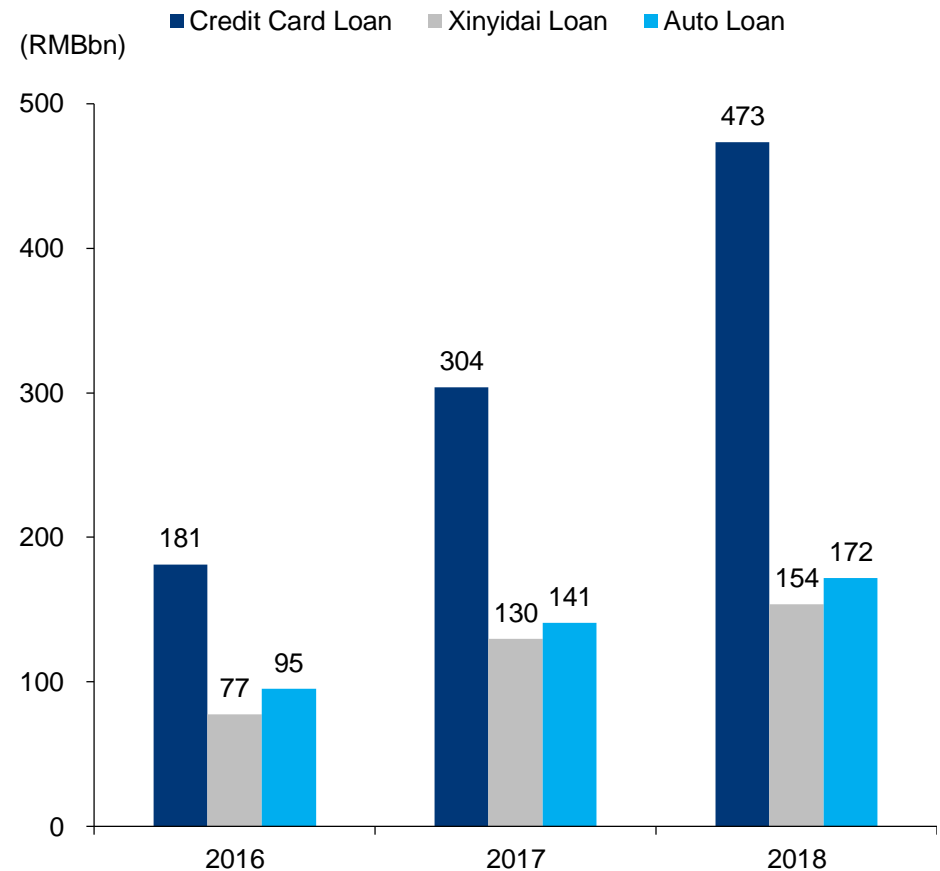
Note: control group - CITIC Bank credit card loans not using intelligent risk management; treatment group - loans using intelligent risk management  
 Source: Company data, Huatai HK Research

# Intelligent risk management – Ping An Bank

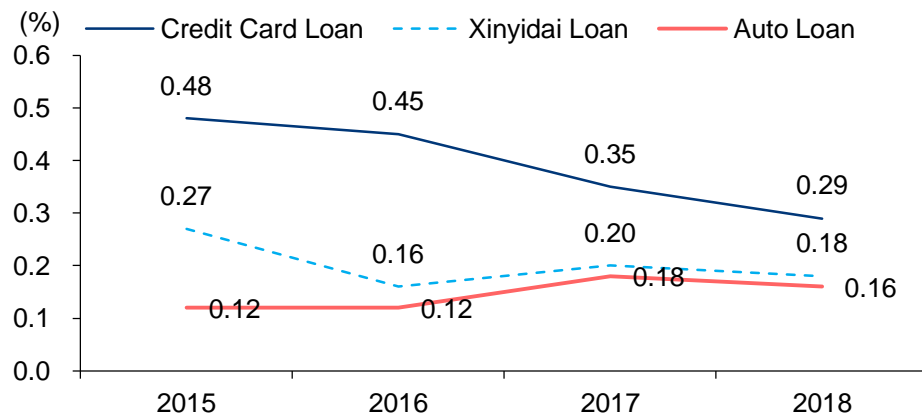
Retail NPL ratio



Ping An Bank retail loans



>30 day delinquency ratio

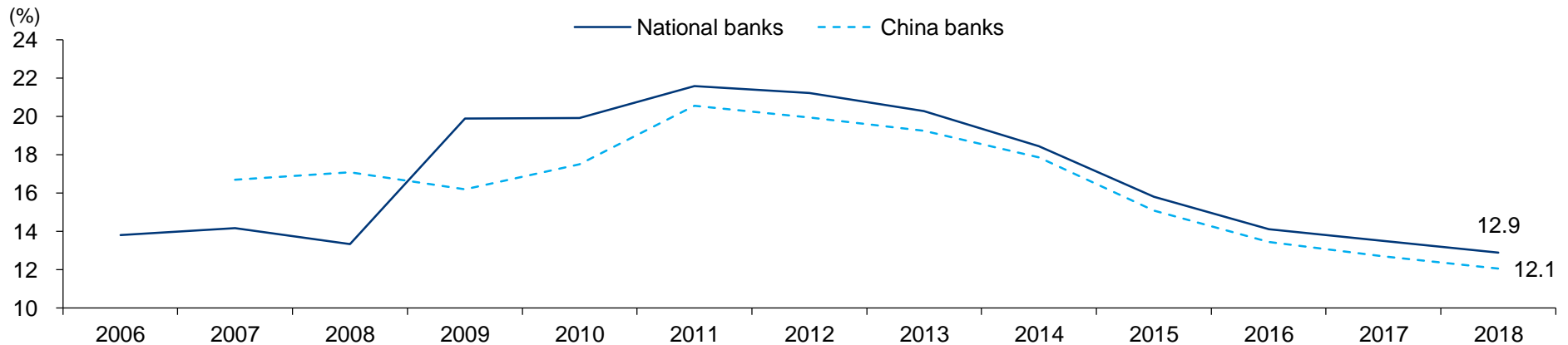


Source: Company data, Huatai HK Research

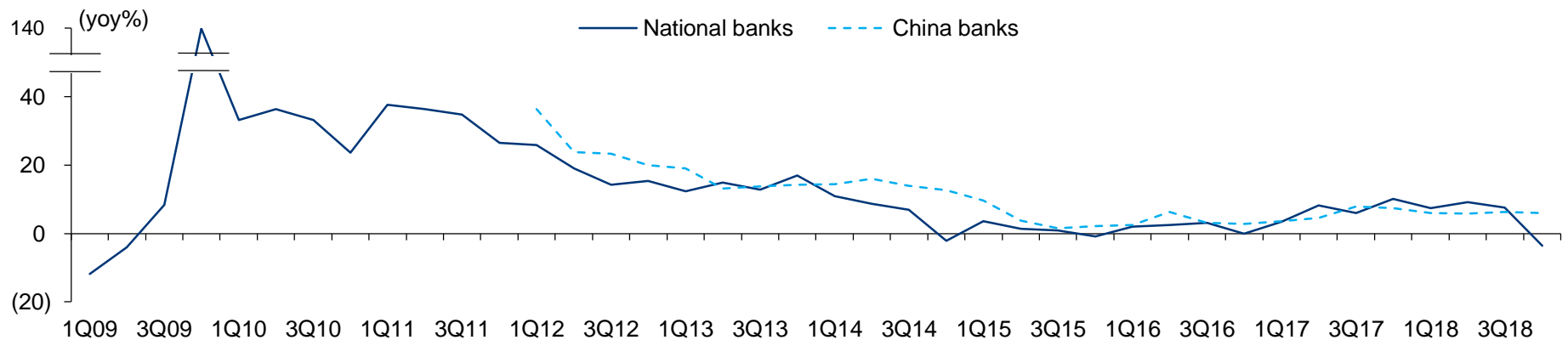
Note: >30 day delinquency ratio = 30-day delinquency loan balance / origination balance of loans issued 6 month ago

# Still... earnings growth slowing, and ROE decreasing...

## ROE



## Net profit growth

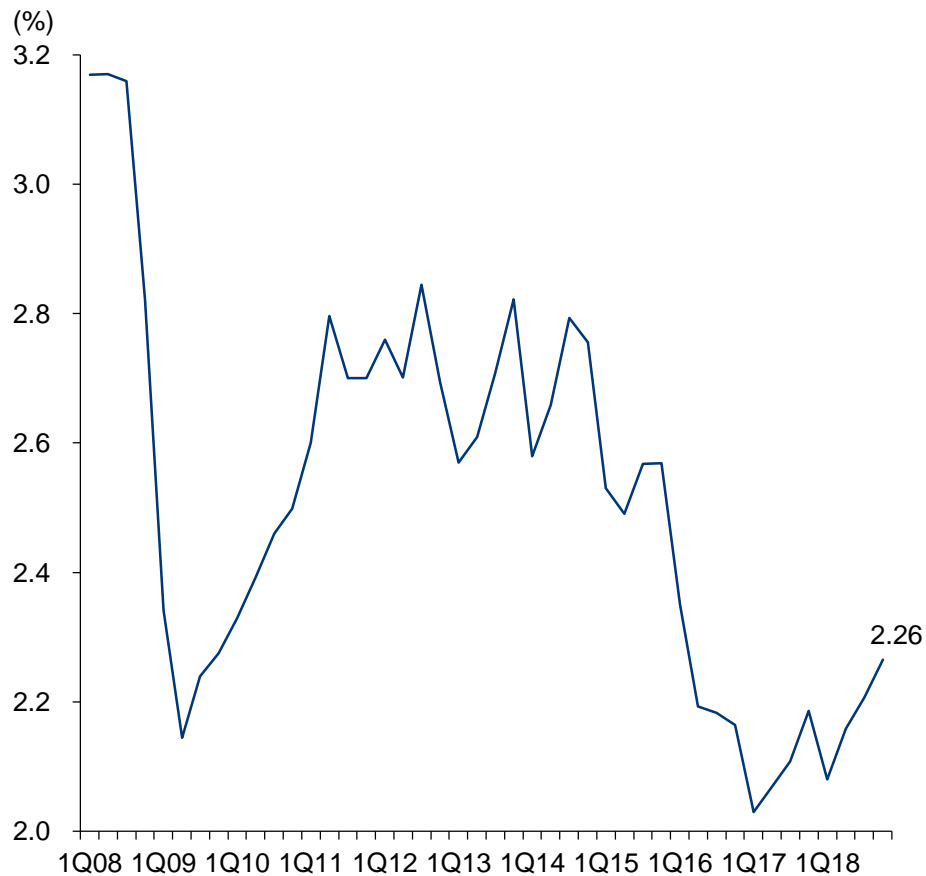


Note: we estimate China bank ROE by using banking institutions' ROE in 2007-2010 disclosed by CBIRC.

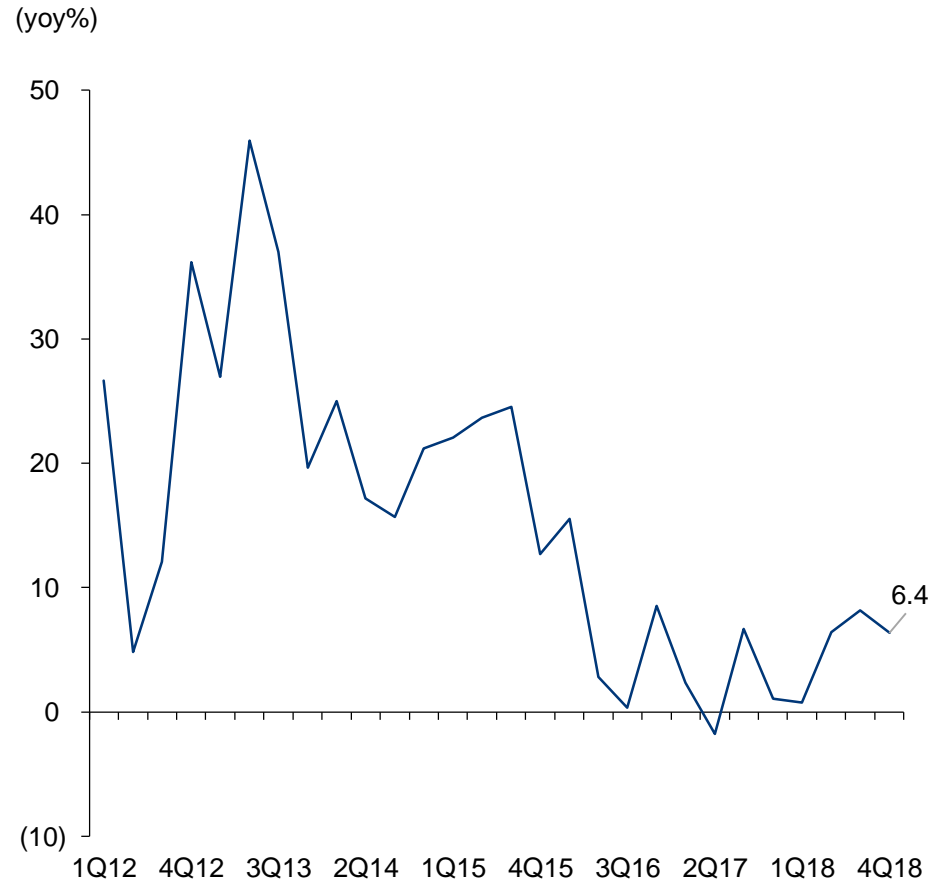
Source: CBIRC, Company data, Huatai HK Research

# ...mainly due to NIM contraction in the long run

**China banks NIM**



**Fee income growth**

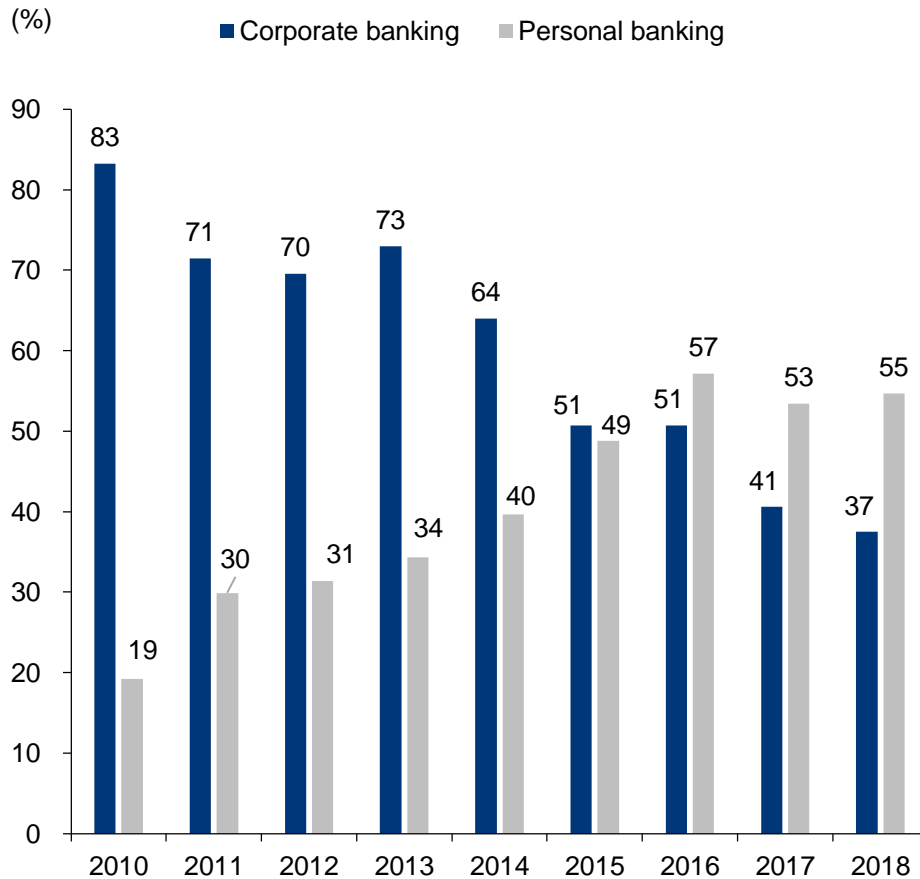


Note: estimated based on China banks accumulative NIM disclosed by CBIRC in 2011-2018 and average of national banks' NIM in 1Q08-4Q10.

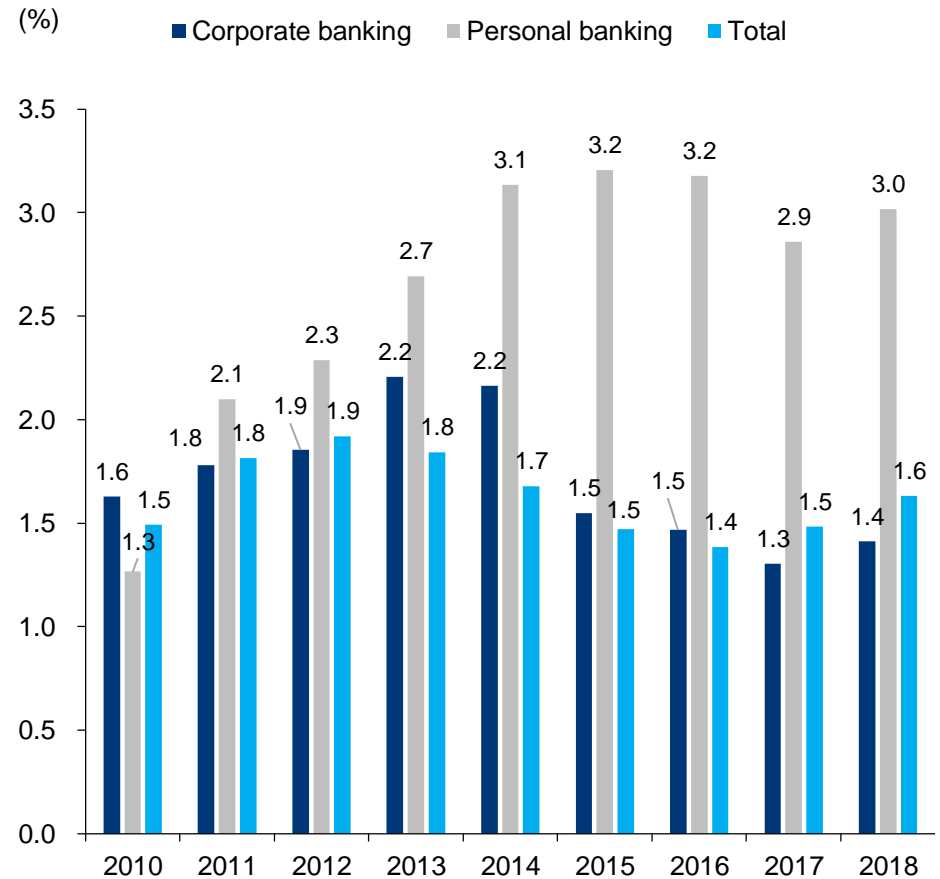
Source: CBIRC, Company data, Huatai HK Research

# Retail banking helps ROA and capital

**CMB: pretax profit breakdown**



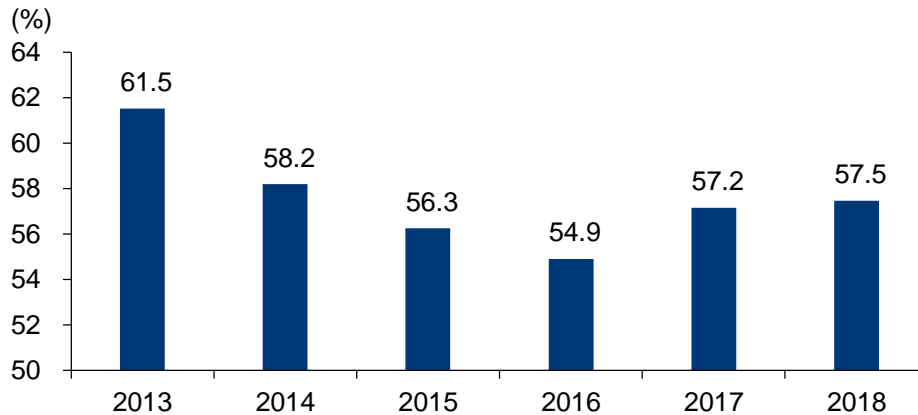
**CMB: pretax ROA**



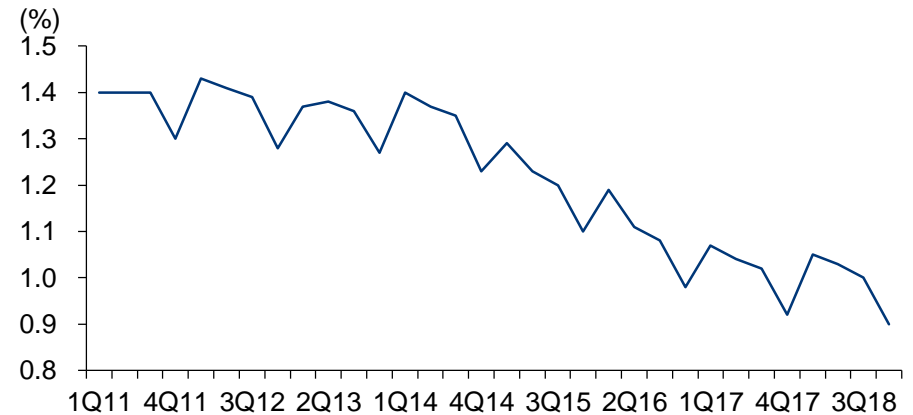
Source: Company data, Huatai HK Research

# Slower RWA growth & slower decline in RoRWA

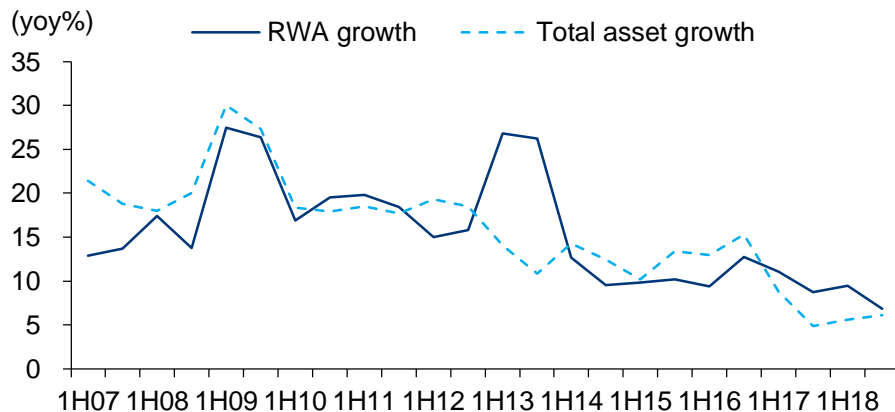
**Credit RWA as % of total RWA**



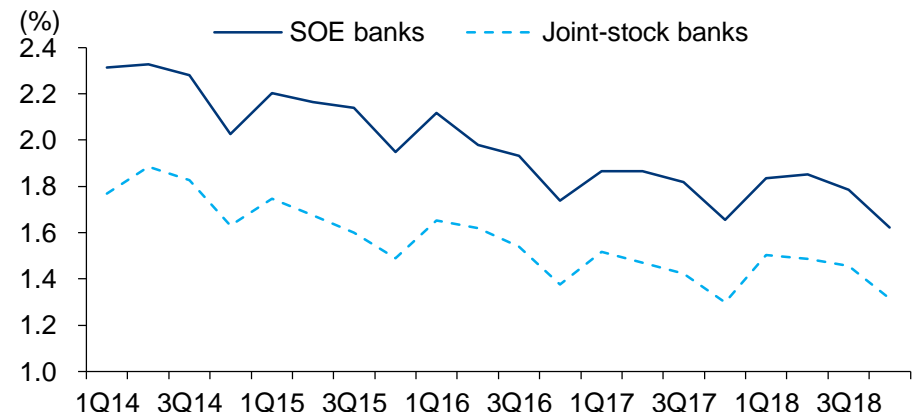
**ROA**



**RWA growth vs total asset growth**



**RoRWA**

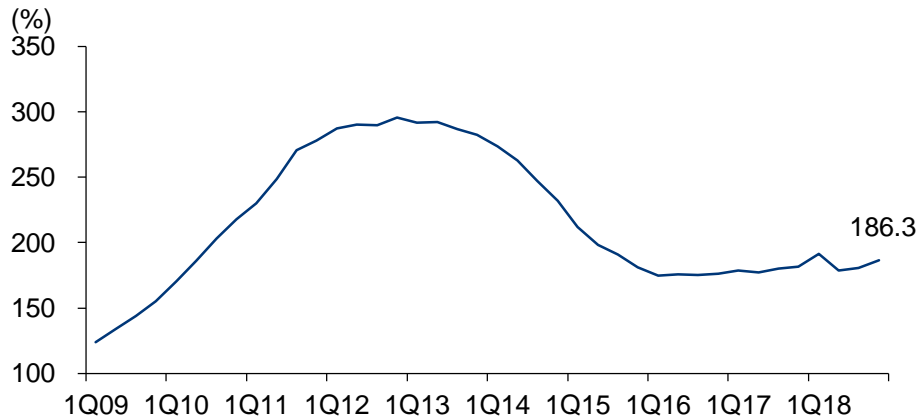


Note: credit RWA as % of total RWA – HK-listed major SOE and joint-stock banks average

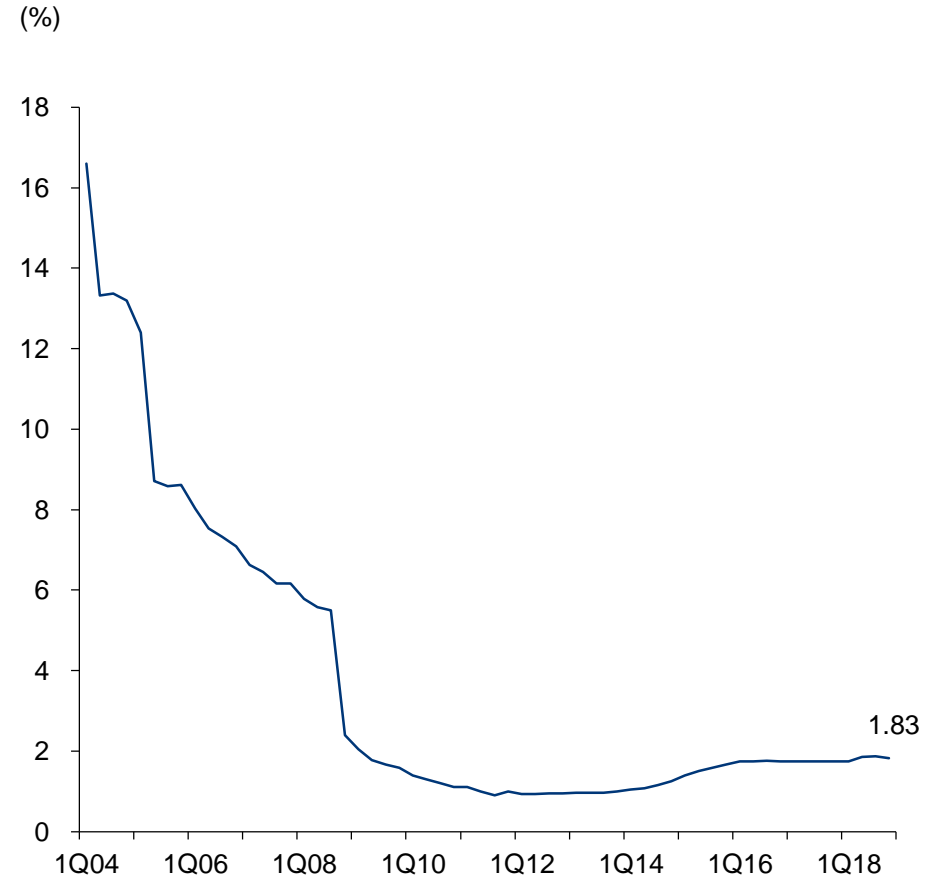
Source: Company data, CBIRC, Wind, Huatai HK research

# But enhanced buffer against potential NPL surge...

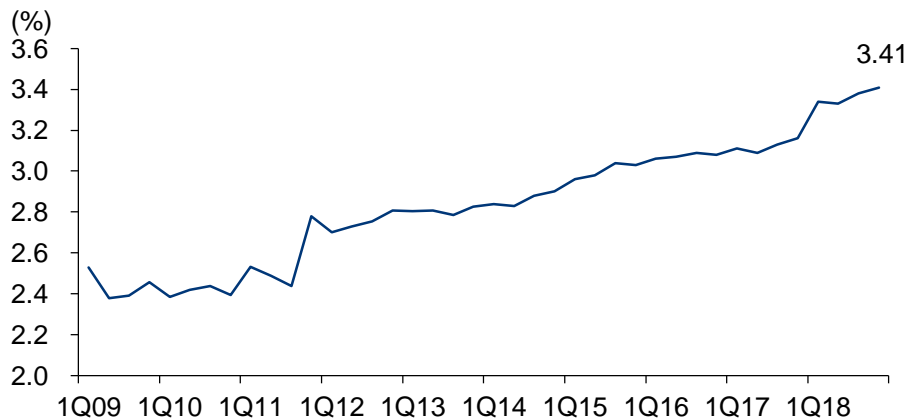
**NPL coverage ratio**



**NPL ratio**



**Provision to loan ratio**

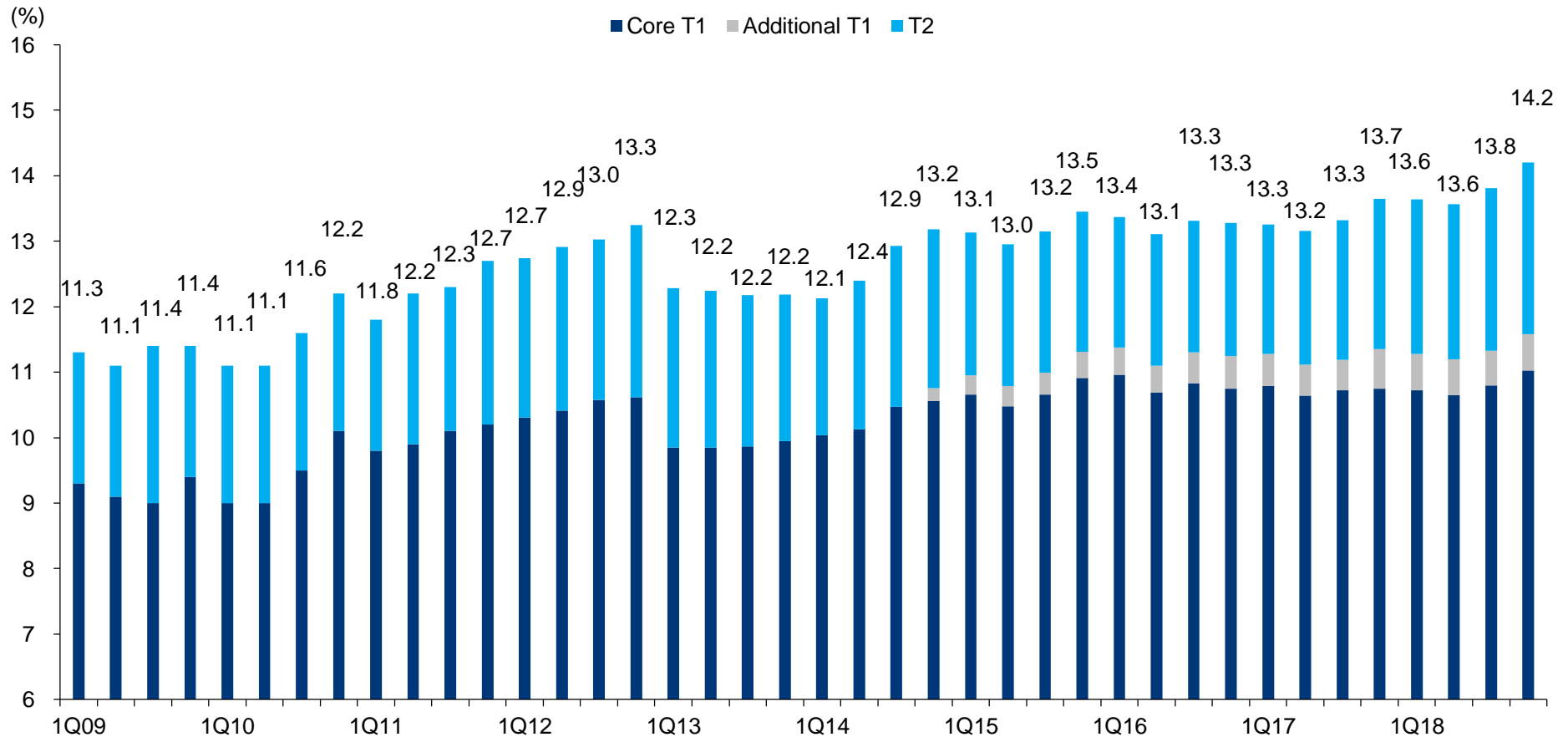


Source: CBIRC, Wind, Huatai HK research



# ...and capital is improving

China banks' CAR



Note: adopted new CAR calculation methodology in 1Q13  
 Source: CBIRC, Wind, Huatai HK research

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