

## China's Two Economies

**Contributing Analysts**

Uwe Parpart  
+852 2843 1474  
uparpart@reorientgroup.com

David Goldman  
+852 5328 3360  
dgoldman@reorientgroup.com

Steve Wang  
+852 2843 1464  
swang@reorientgroup.com

Victor Kwan  
+852 2843 1480  
vkwan@reorientgroup.com

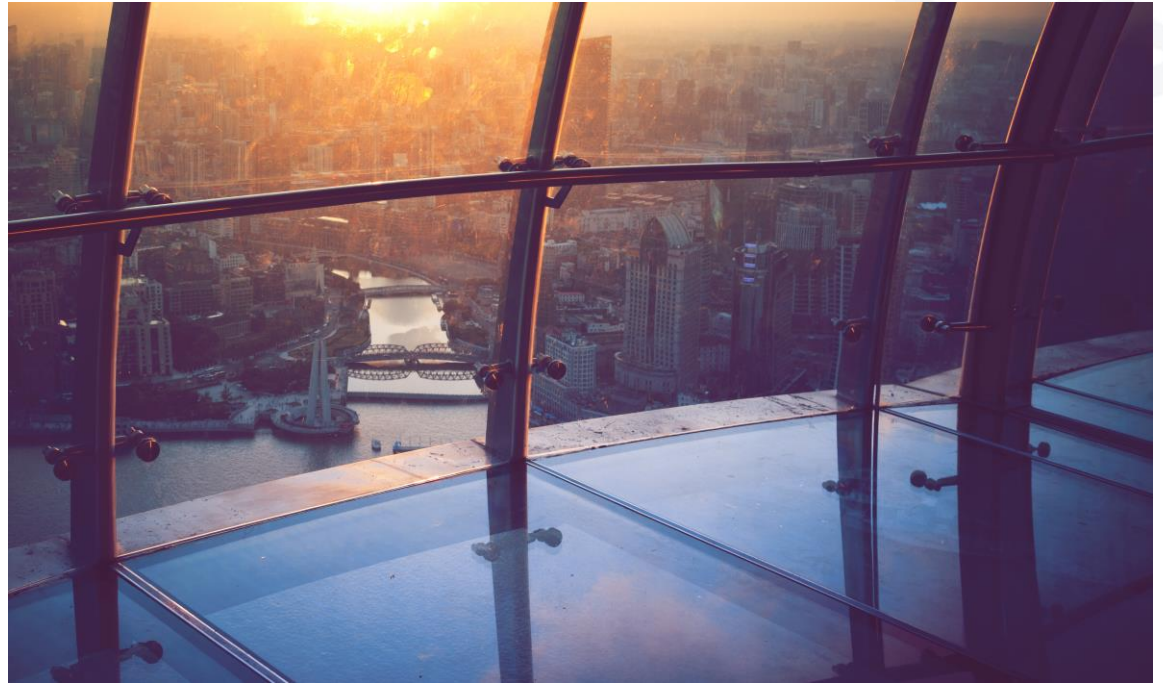


# CHINA'S STORY

## CHINA'S STORY IS CREATIVE DESTRUCTION – THE DESTRUCTION OF ONE CHINA AND THE CONSTRUCTION OF ANOTHER

- Mao leveled the old imperial culture and empowered the peasants
- Deng destroyed the countryside through mass migration and the One Child Policy, in favor of an urban smokestack, export economy
- Xi's new government is tearing down large parts of the old smokestack economy and building a tech-based, consumption-oriented economy
- Any snapshot of the Chinese economy captures two different things: the destruction of the old and building of the new
- Aggregate GDP data don't capture the transformations now in progress
- We drill down into the details to assemble a portrait of the emerging China

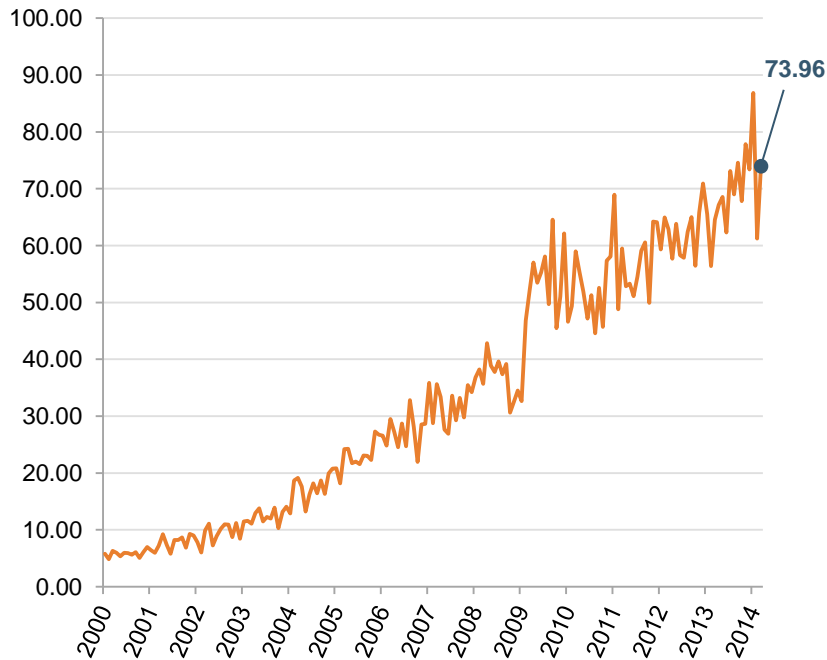
# CHINA'S TRANSFORMATION



# CHINA'S CURRENT ECONOMIC GROWTH REMAINS ROBUST

Import data are a good cross-check on China's GDP. Iron ore imports jumped in Q4 2013 and maintained this level during 2014. Crude oil imports in the 1Q totaled 74.72 Mt, +8.3% from 1Q 2013, in-line with the pace of economic expansion

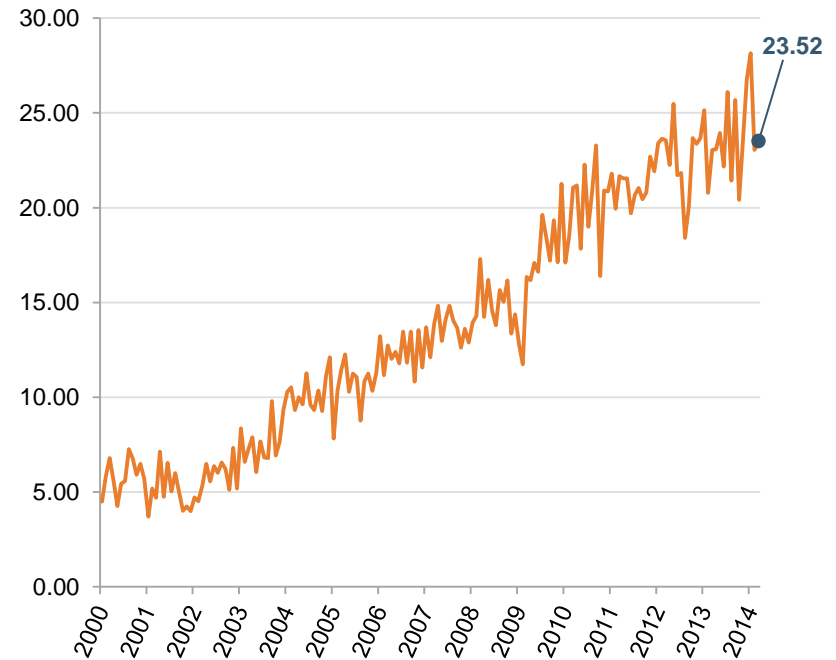
Mn Tonnes



Imports of Iron Ore

Source: Customs

Mn Tonnes

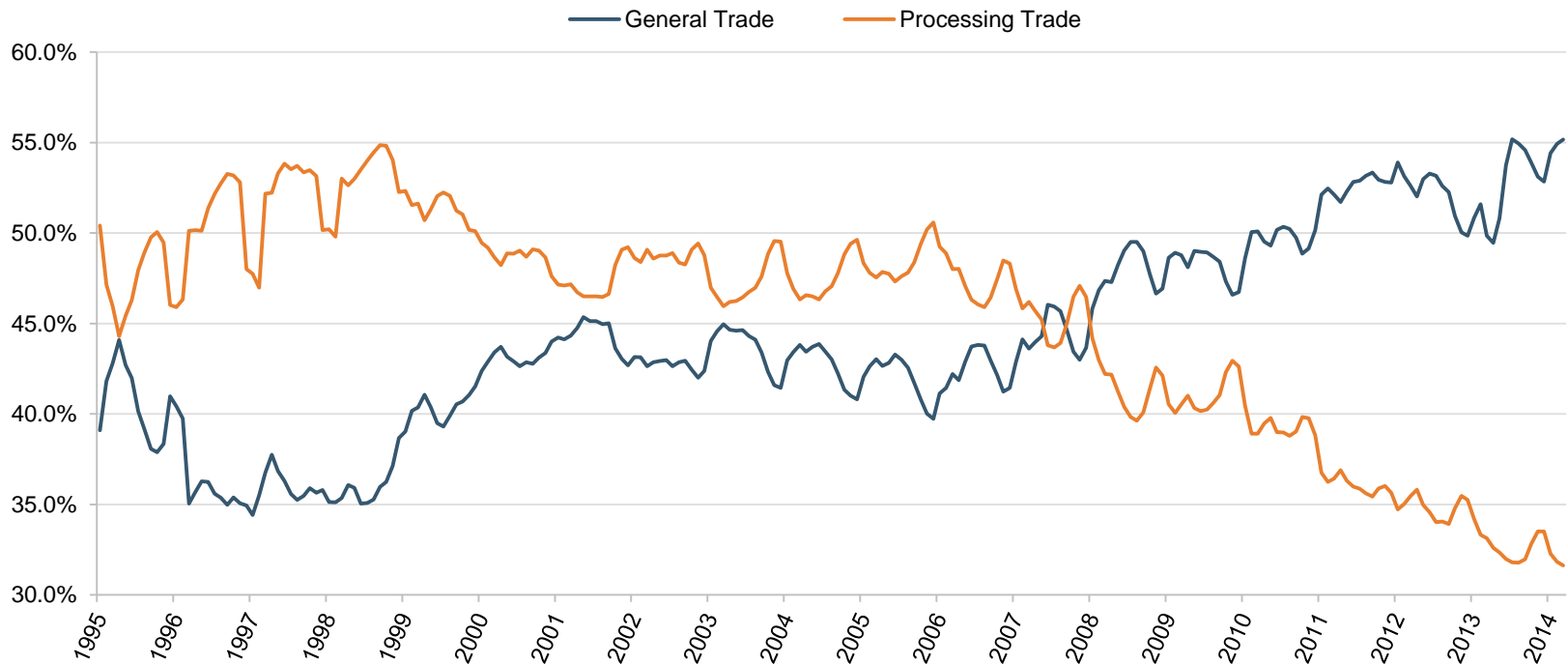


Imports of Crude Oil

Source: Customs

# BUT GROWTH IS SHIFTING AWAY FROM PROCESSING EXPORTS BASED ON CHEAP LABOR

Academics, analysts and noted short sellers have repeatedly forecast the coming collapse of the Chinese economy. What is collapsing is China's old economy of cheap-labor based exports

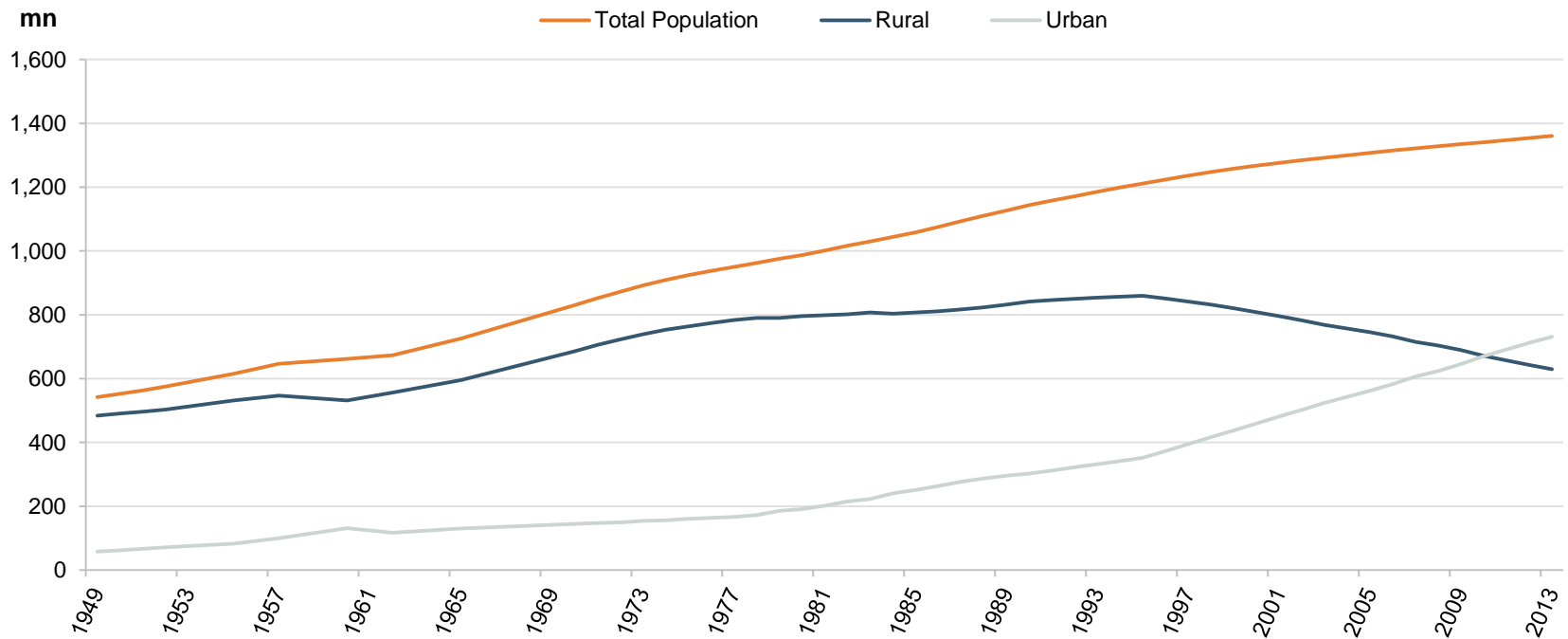


Trade as % of Foreign Trade

Source: China Customs

# SHRINKING LABOR RESERVE FROM RURAL SECTOR

...but China's access to cheap labor overseas allows it to shift to higher-value-added production at home

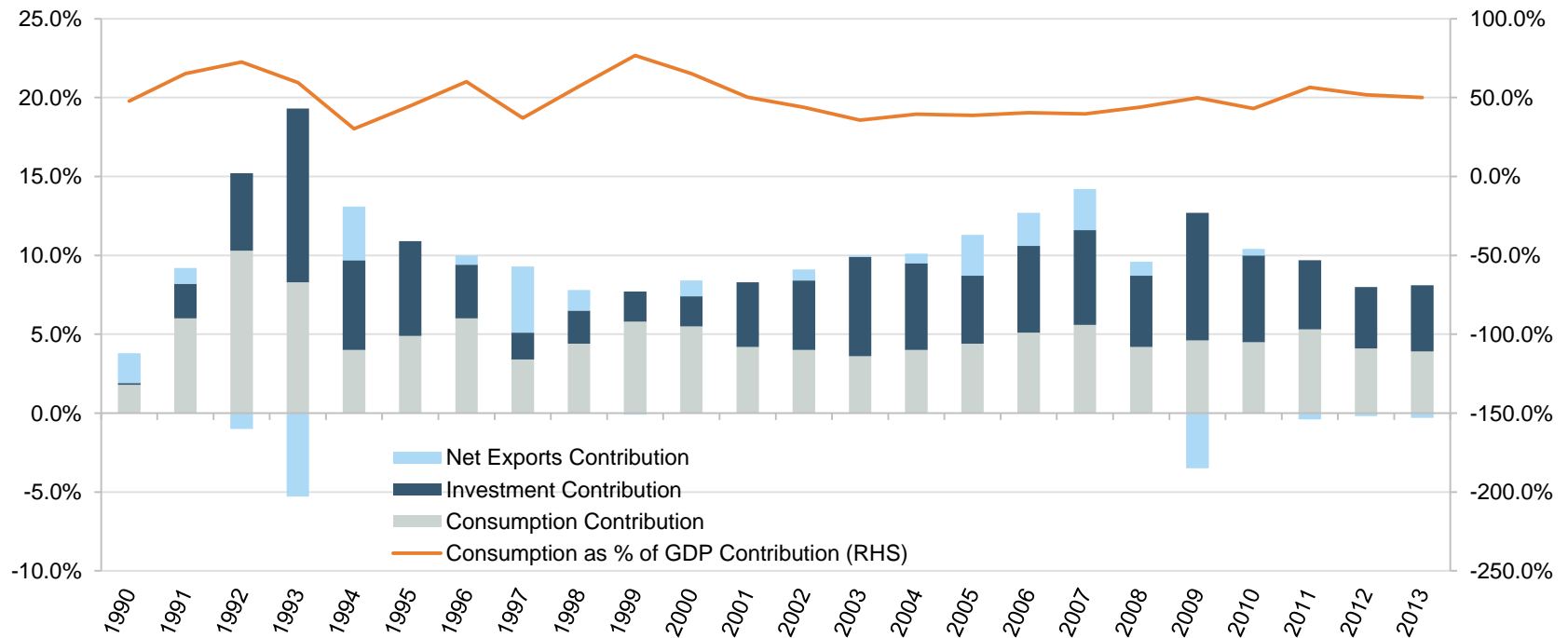


China Total Population

Source: NBS

# GDP GROWTH SHIFTS TO DOMESTIC CONSUMPTION

The transformational economic policies outlined in the 11th Five Year plan were specified further in the 12th Plan (2011-2015) with emphasis on “higher quality” and “inclusiveness” (narrowing of wealth gap) growth, a shift up the value-added chain in industry, and higher domestic consumption

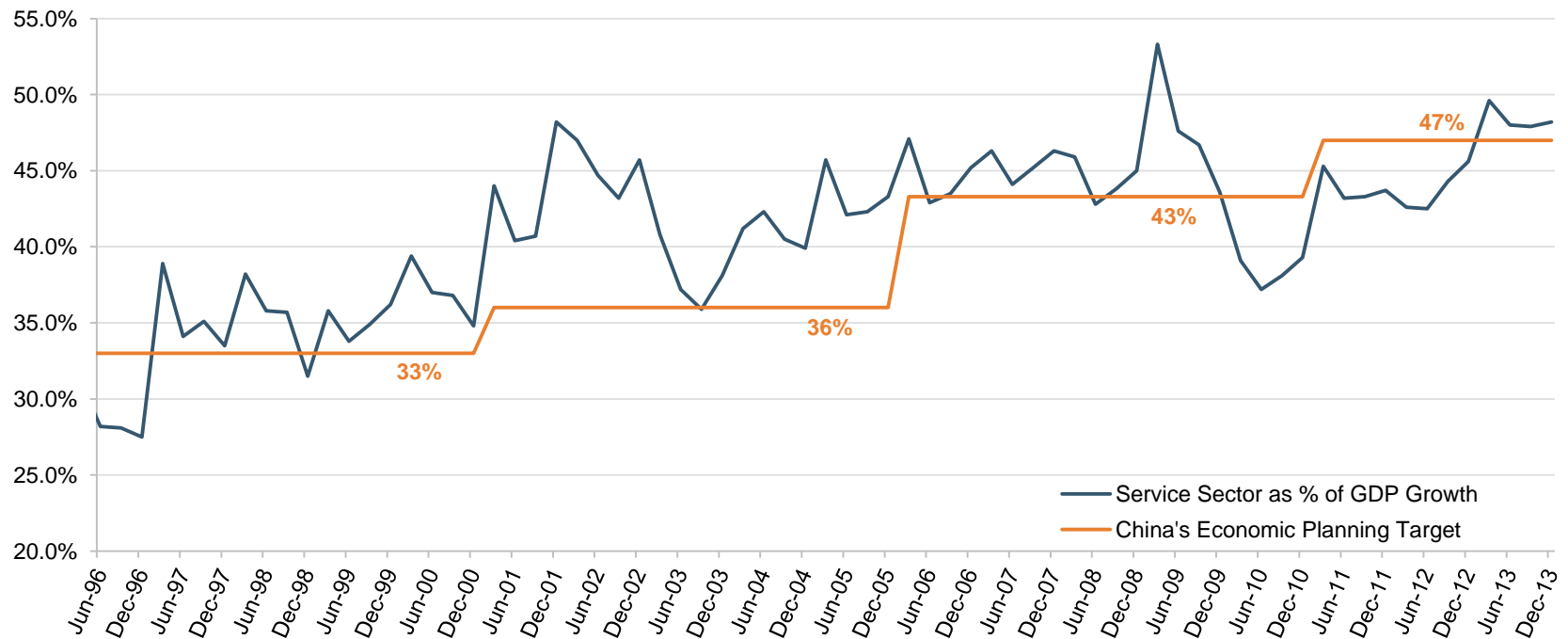


Contributions to GDP Growth

Source: NBS

# CHINA'S 12TH FIVE-YEAR PLAN TARGETS 47% SERVICES GDP CONTRIBUTION

Sectors such as energy, automotive, IT infrastructure and biotechnology are in focus. The service sector (43.3% of GDP in the 11th plan period) is to grow to 47% of GDP



China Service Sector Contribution and Target

Source: NBS



# ANTI-CORRUPTION CAMPAIGN

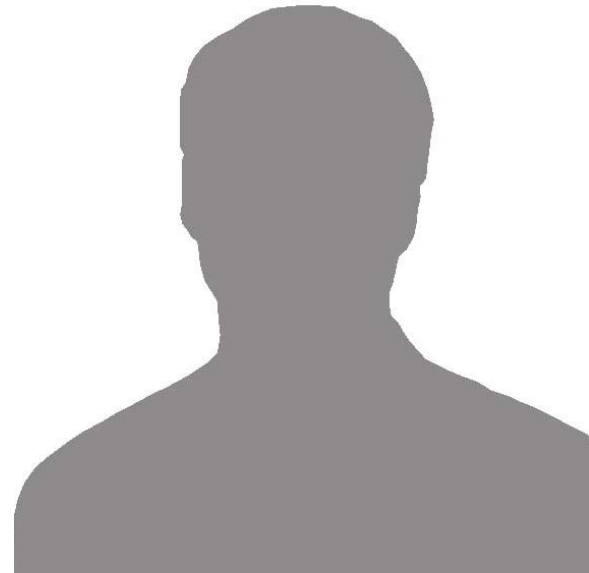
Wang Qishan, Politburo Standing Committee member and Secretary of the Central Commission for Discipline Inspection (CCDI), China's top anti-graft watchdog, has led the anti-corruption battle since taking charge in November 2012. Behind scenes political corrupted mastermind is rumored to be Zhou Yongkang, former Politburo Standing Committee member for 2007-2012

## Zhou Yongkang



Source: Politics People

## Who's Next



Source: Politics People

# DEATH SENTENCES

Liu Han (Left) was the ex-chairman of the Chinese energy conglomerate, Sichuan Hanlong Group. He was sentenced to death for crimes including murder and leading an organized crime group. Liu Wei (Right), Liu Han's younger brother, received the same sentence. The Liu brothers and their associates have been charged with 15 crimes, including murder, assault, illegal detention, blackmail and operating casinos

## Liu Han



Source: China Hubei

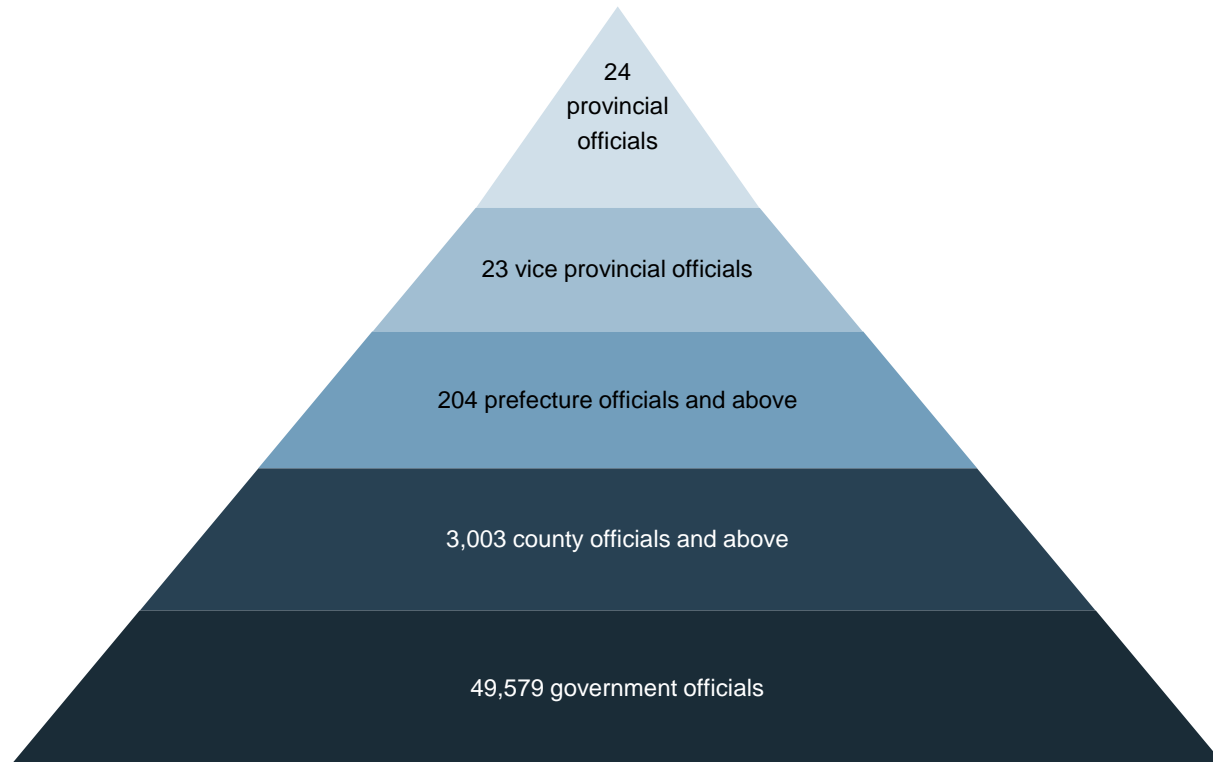
## Liu Wei



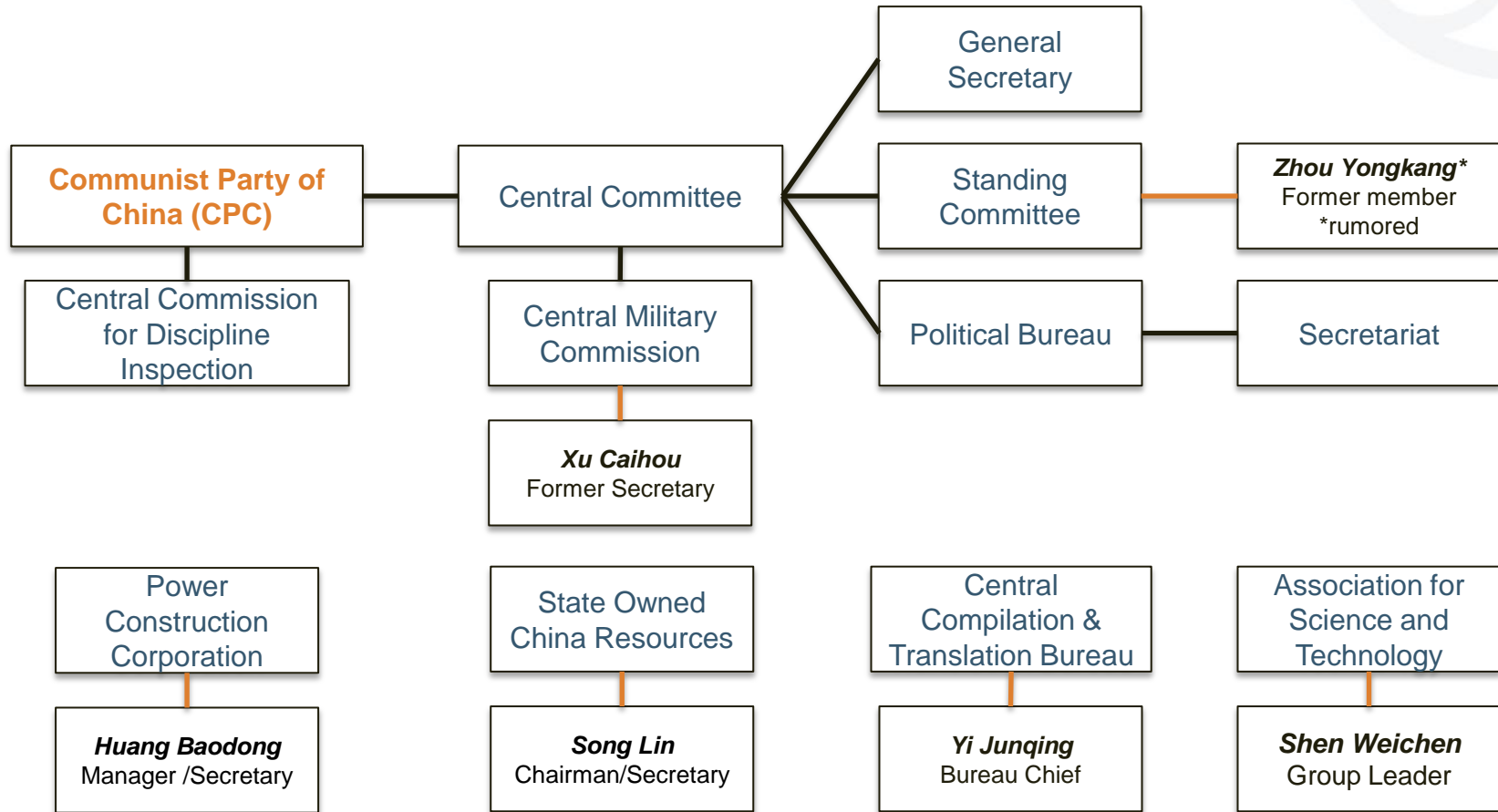
Source: China Hubei

# WANG QISHAN CLEANS HOUSE

2012 was a year of political transition from the Hu/Wen to the Xi/Li leadership. On the political side, the fight against corruption was given top priority. On the economic policy side, Premier Li has emphasized market and private sector driven reforms and accelerated urbanization as key economic drivers



# “TIGERS” UNDER INVESTIGATION WITHIN THE COMMUNIST PARTY



# CHINA MOVES UP THE VALUE ADDED SPECTRUM

China's transformation is unique: forget the BRIC story and look at China as a special case

- Income growth by far the world's fastest
- Urbanization
- Agricultural productivity approaching US levels
- Tech capacity (twice as many science/engineering PhD's per year as the US) (74.8% in China vs. 34.0% in US)
- R&D spending as % of GDP at European levels
- Major high tech accomplishments (world leader in supercomputing and DNA sequencing, and a challenger in chip production, robotics and aerospace)

# TWO STAGE ROCKET

## STAGE 1: SHIFT WORKFORCE TO MANUFACTURING AND RAISE FARM PRODUCTIVITY

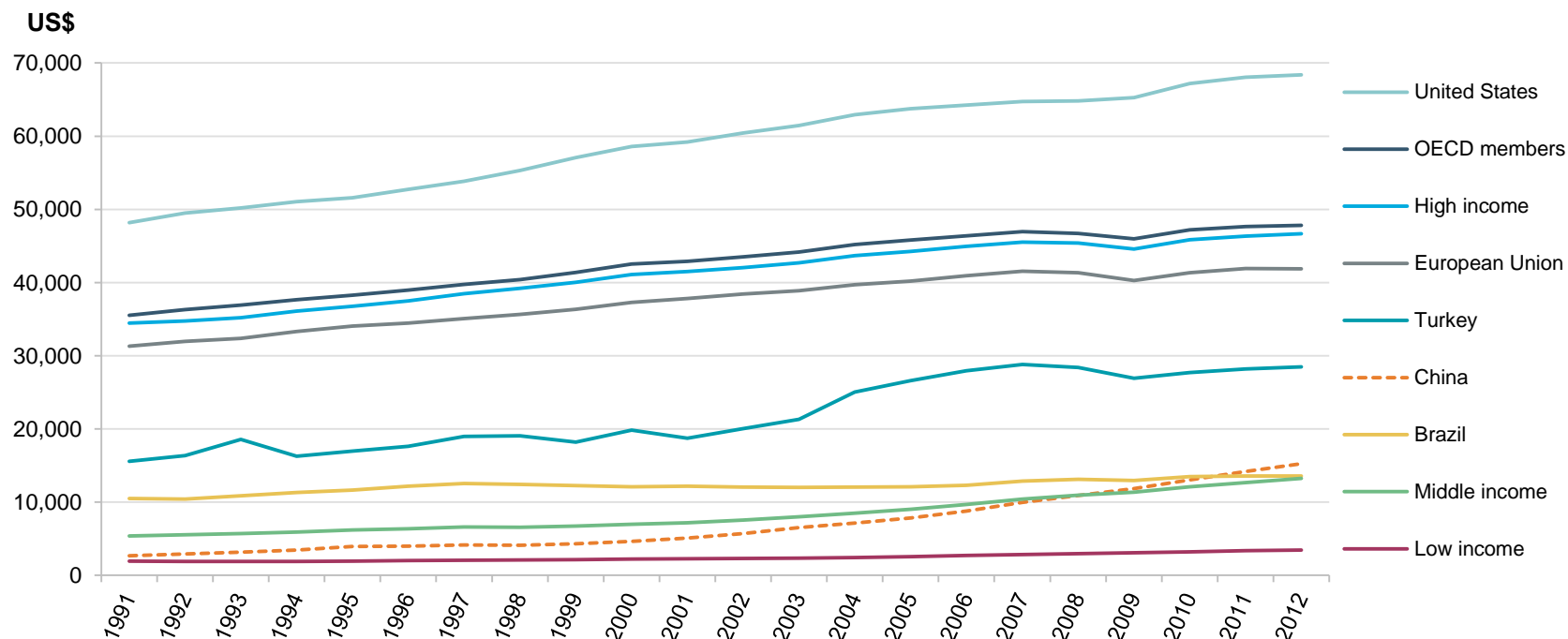
- Low-wage, export model
- State allocation of credit with enormous inefficiencies and corruption

## STAGE 2: SHIFT TO HIGH-VALUE-ADDED MANUFACTURING AND GROWTH

- Consumption growth leads economy, not profits (reduces excess saving by corporate sector)
- Freeing of interest rates
- Two-way flow of investment leading to convertibility of yuan
- Defense and military high tech shift to private sector
- China creates its own new markets and sources of labor: Build-out of “New Silk Road” infrastructure (high-speed rail and high-speed broadband from Beijing to Istanbul in the west and to Bangkok, Singapore and Yangon in the south)

# GDP PER EMPLOYEE (CONSTANT 1990 DOLLARS AT PPP) AT PPP)

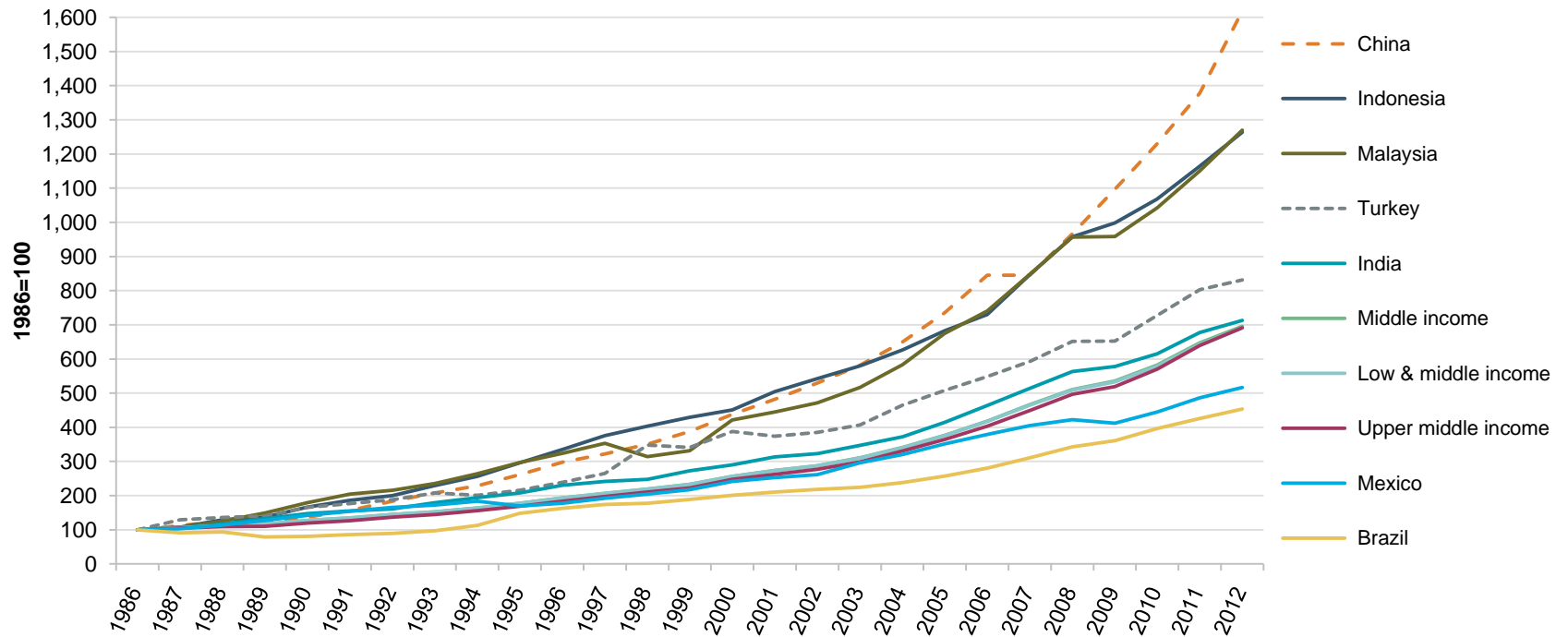
China's GDP per worker has just overtaken Brazil



GDP Per Employee (Constant 1990 Dollars at Purchasing Power Parity)

Source: World Bank

# HOUSEHOLD CONSUMPTION



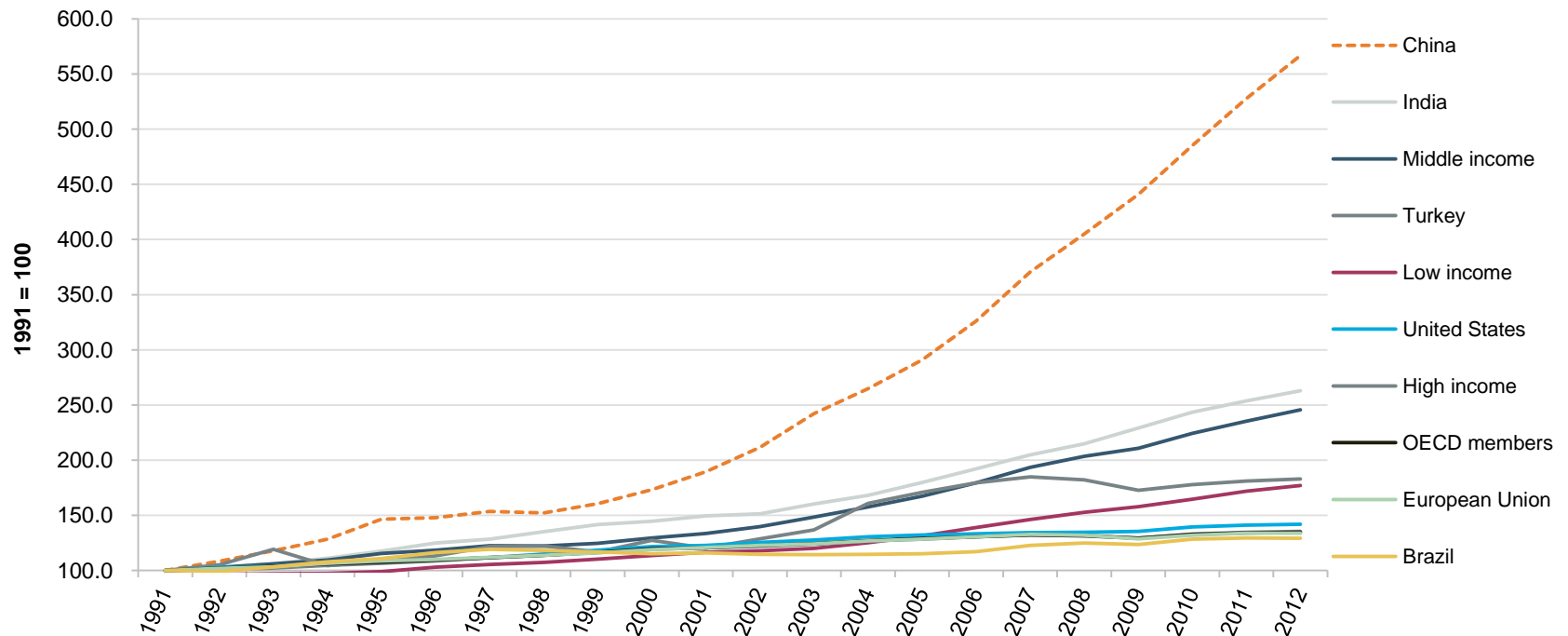
Household Final Consumption Spending (Current Dollars at Purchasing Power Parity)

Source: World Bank



# GDP PER EMPLOYEE (CONSTANT PPP BASIS)

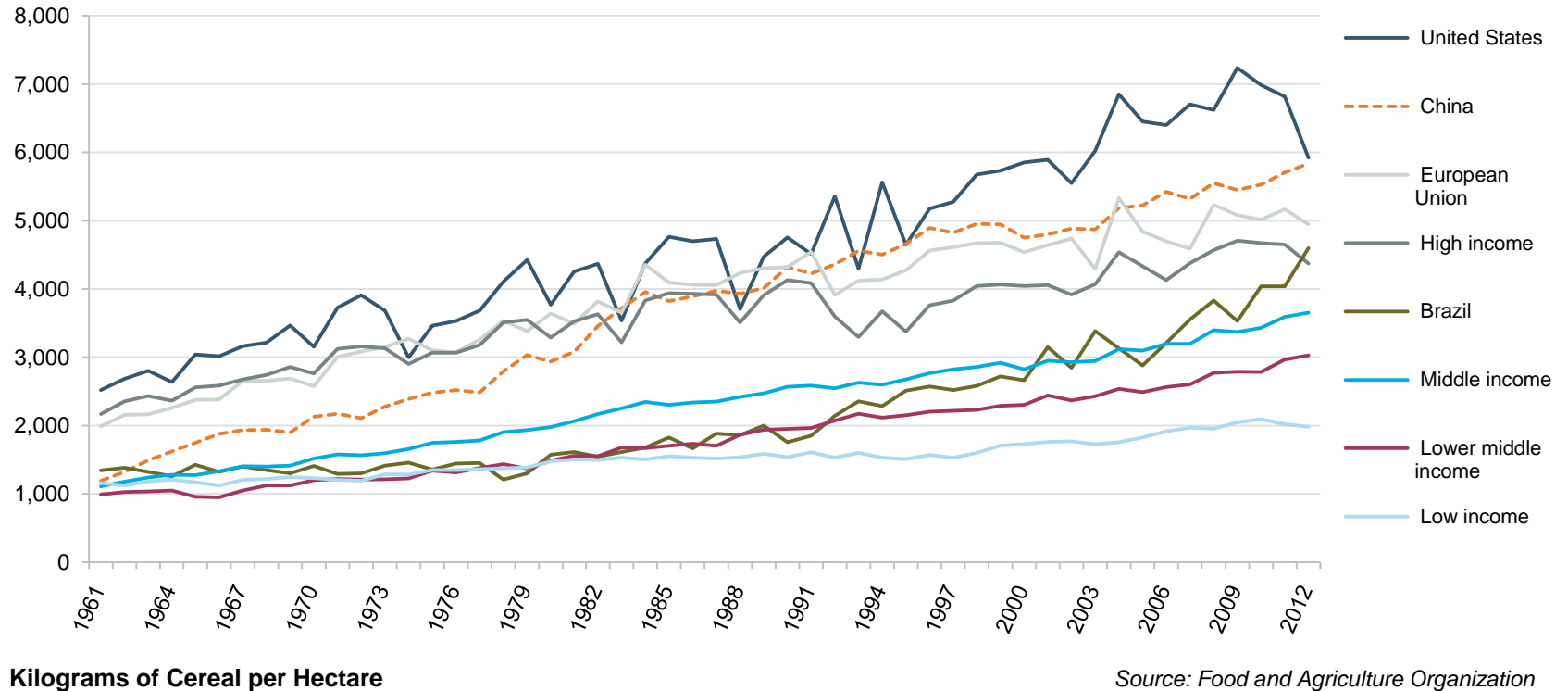
The growth rate of GDP per worker is much faster than any other country



GDP/Employee (Constant PPP Basis)

Source: World Bank

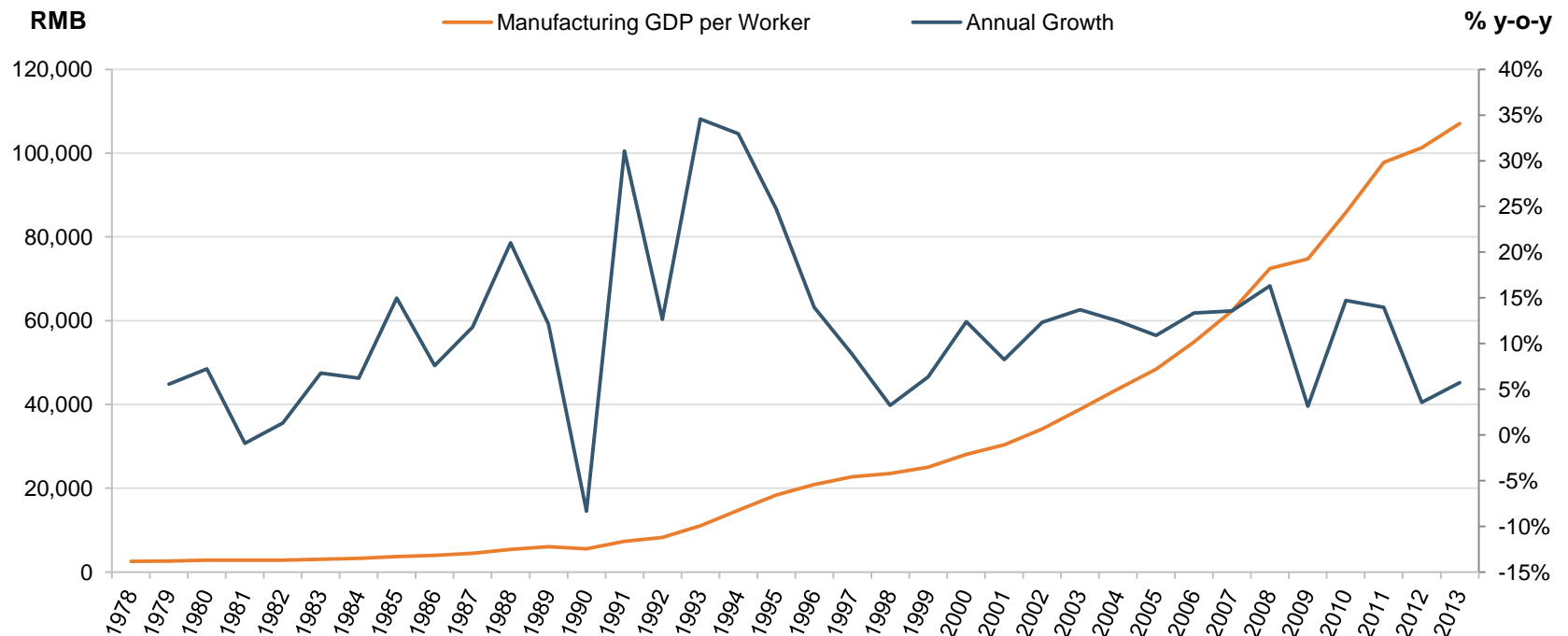
# AGRICULTURAL PRODUCTIVITY COMPARABLE TO EU



Source: Food and Agriculture Organization

# CHINA MANUFACTURING GDP PER WORKER

Industrial productivity has risen 500% since 1995 (vs. 80% in the United States)

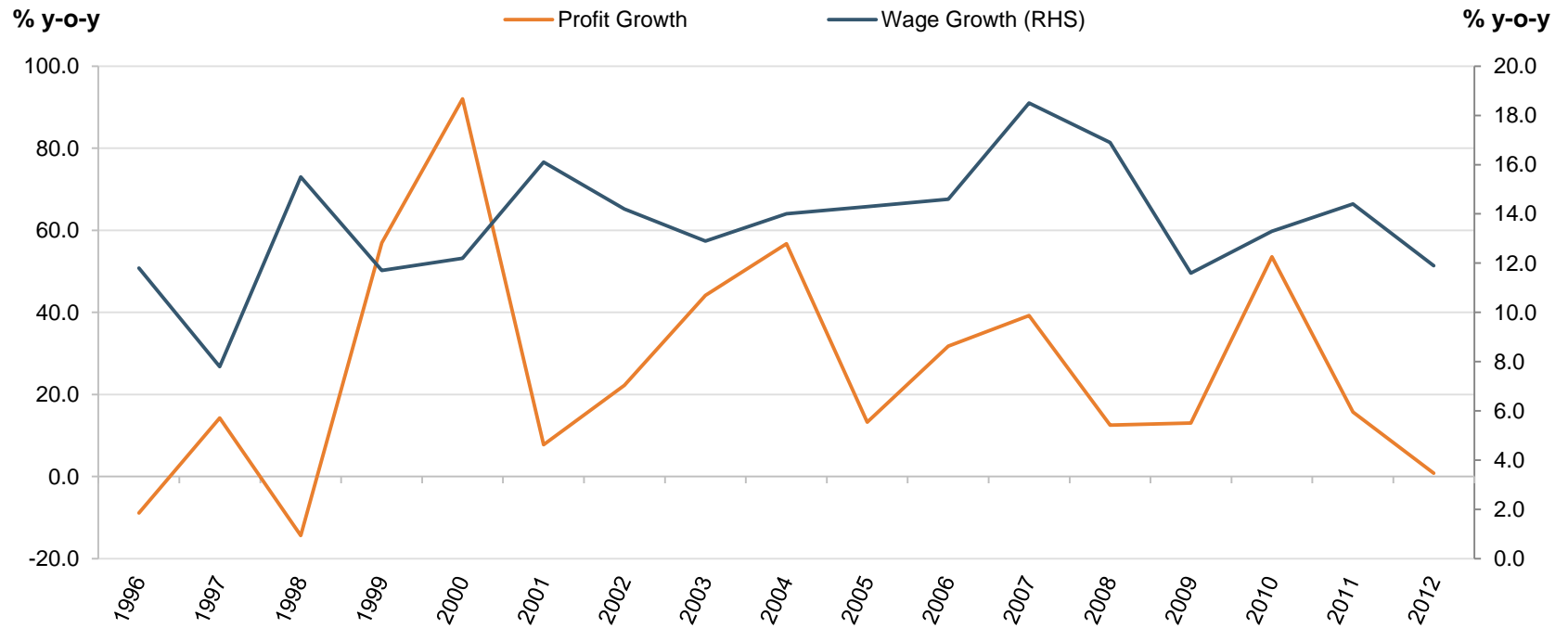


Manufacturing GDP per worker and Annual Growth

Source: NBS

# CHINA WAGES VS. PROFITS GROWTH

Fast wage growth suppresses profits

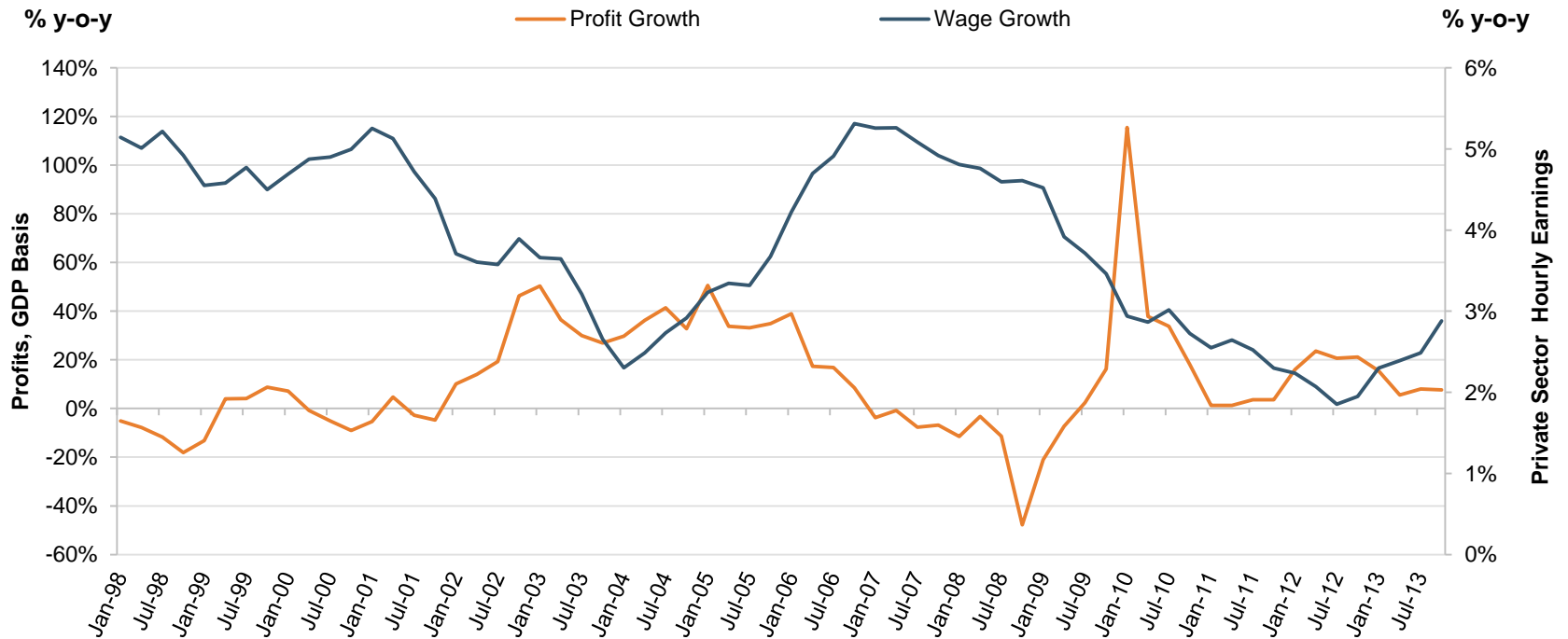


Profit Growth vs. Wage Growth

Source: NBS

# US PROFITS VS. HOURLY EARNINGS

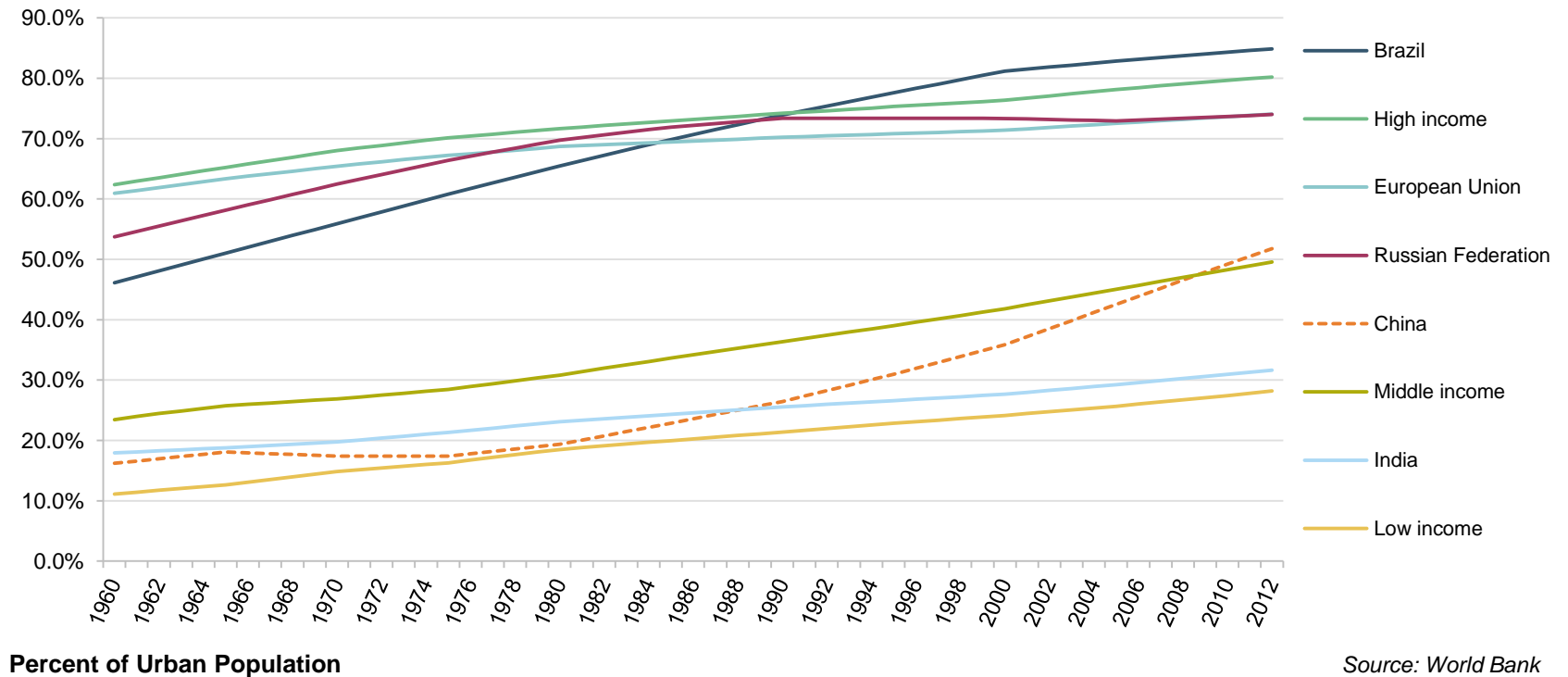
The US is the opposite: Slow wage growth supports profits



US Profits vs. Hourly Earnings

Source: BLS

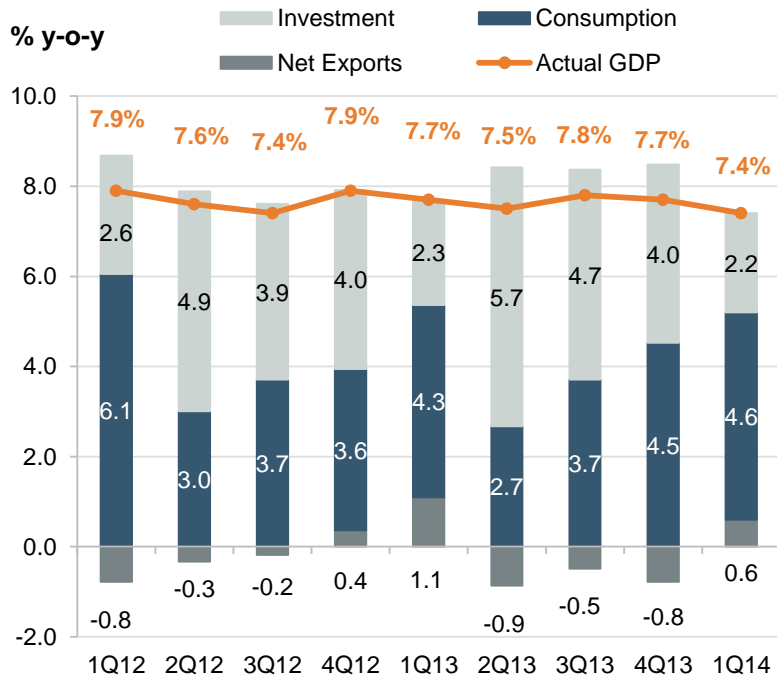
# URBANIZATION APPROACHES INDUSTRIALIZED NATION LEVELS



Source: World Bank

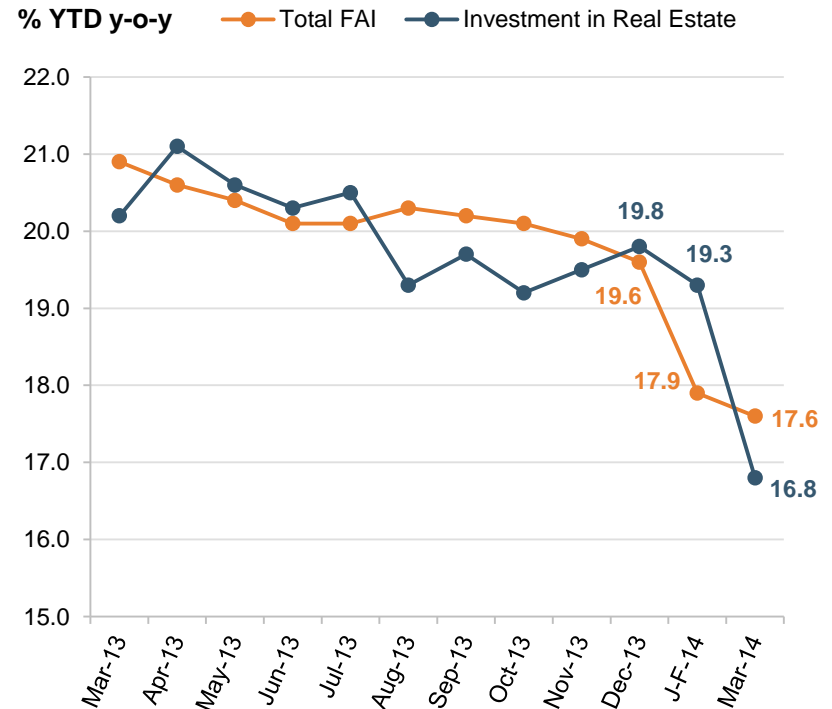
# GROWTH SHIFTS TO CONSUMPTION

Sharp m-o-m expansion in industrial production and retail sales in March pushed 1Q GDP to a 7.4% annual growth rate, above the consensus forecast. Capex decelerated, especially in real estate. That is consistent with our forecast of a shift towards consumption-driven growth, away from the cheap-credit fueled investment-led boom



**GDP Expenditure Components**

Source: NBS, REORIENT

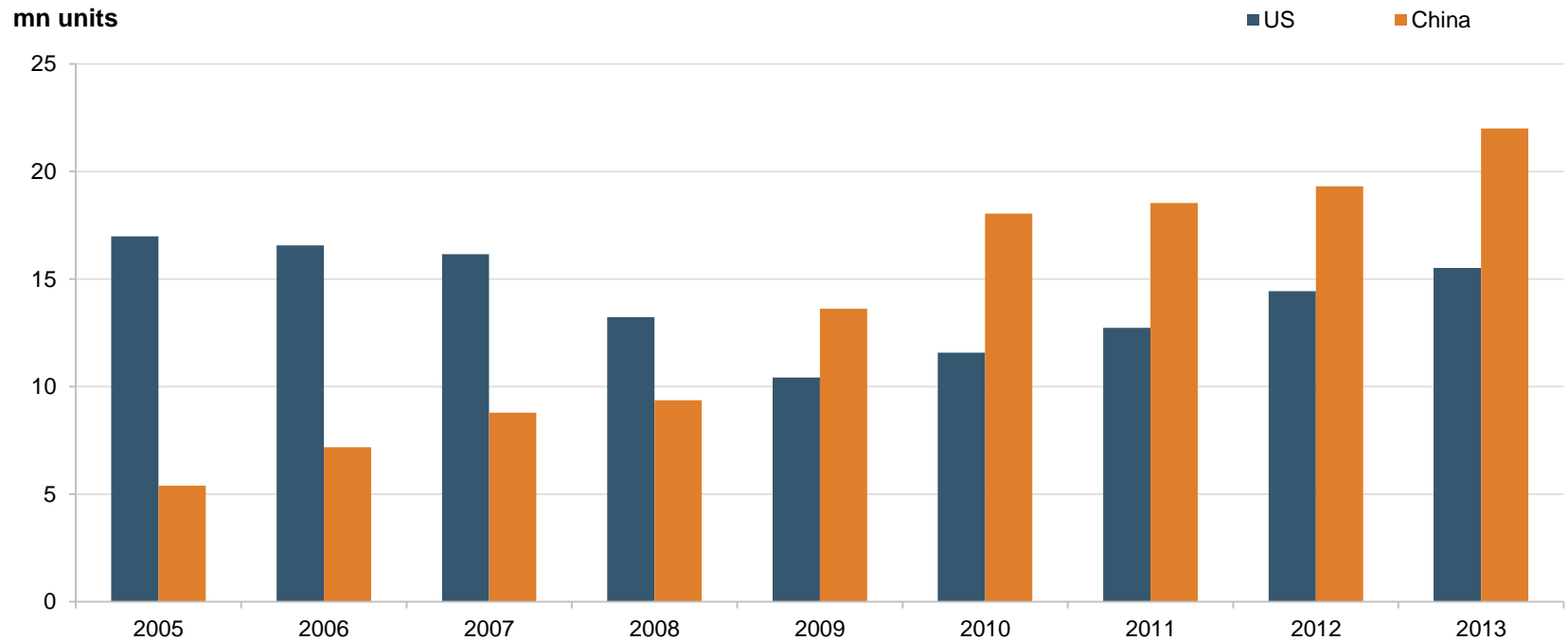


**FAI: Total vs. Real Estate**

Source: NBS

# TOTAL AUTO SALES: CHINA VS. US

China's auto sales growth was not interrupted by the financial crisis of 2008, unlike the US



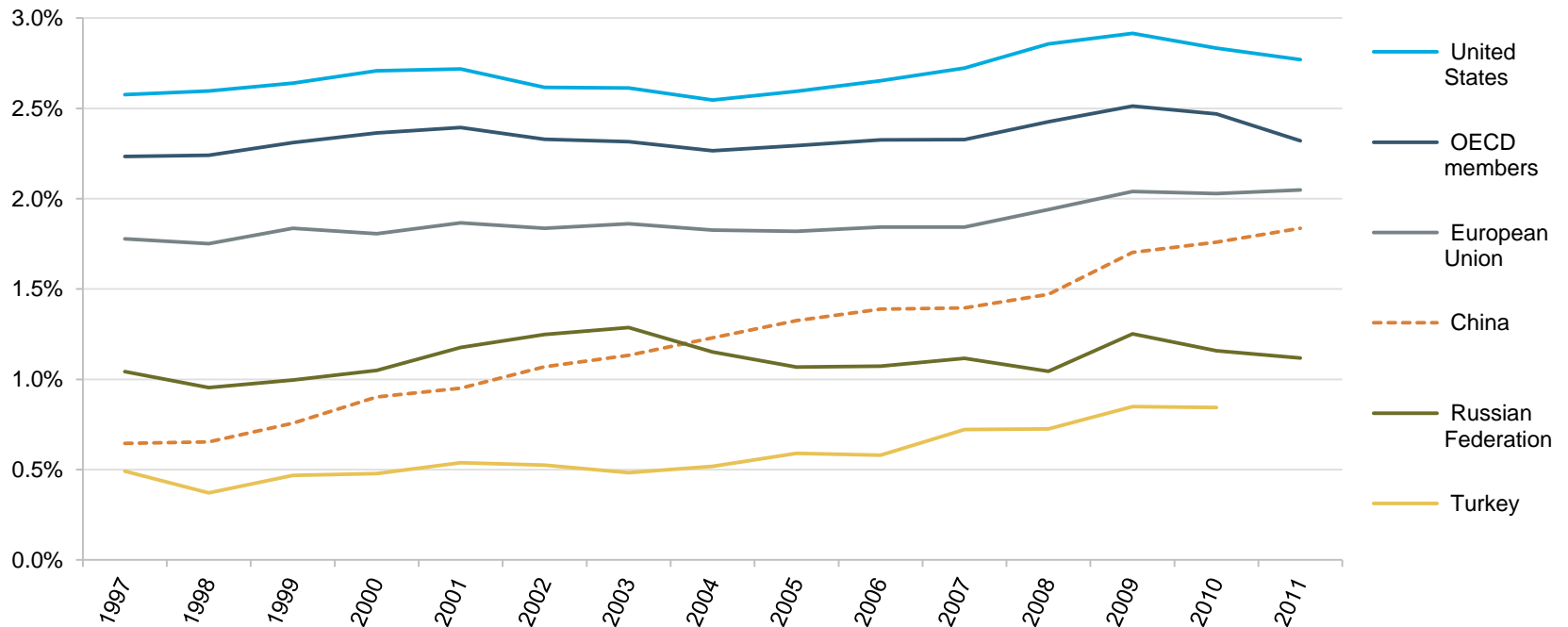
Total Auto Sales

Source: China Automotive Information Net, Bloomberg



# R&D SPENDING AS PERCENTAGE OF GDP

China's R&D spending as a % of GDP is now on par with the EC

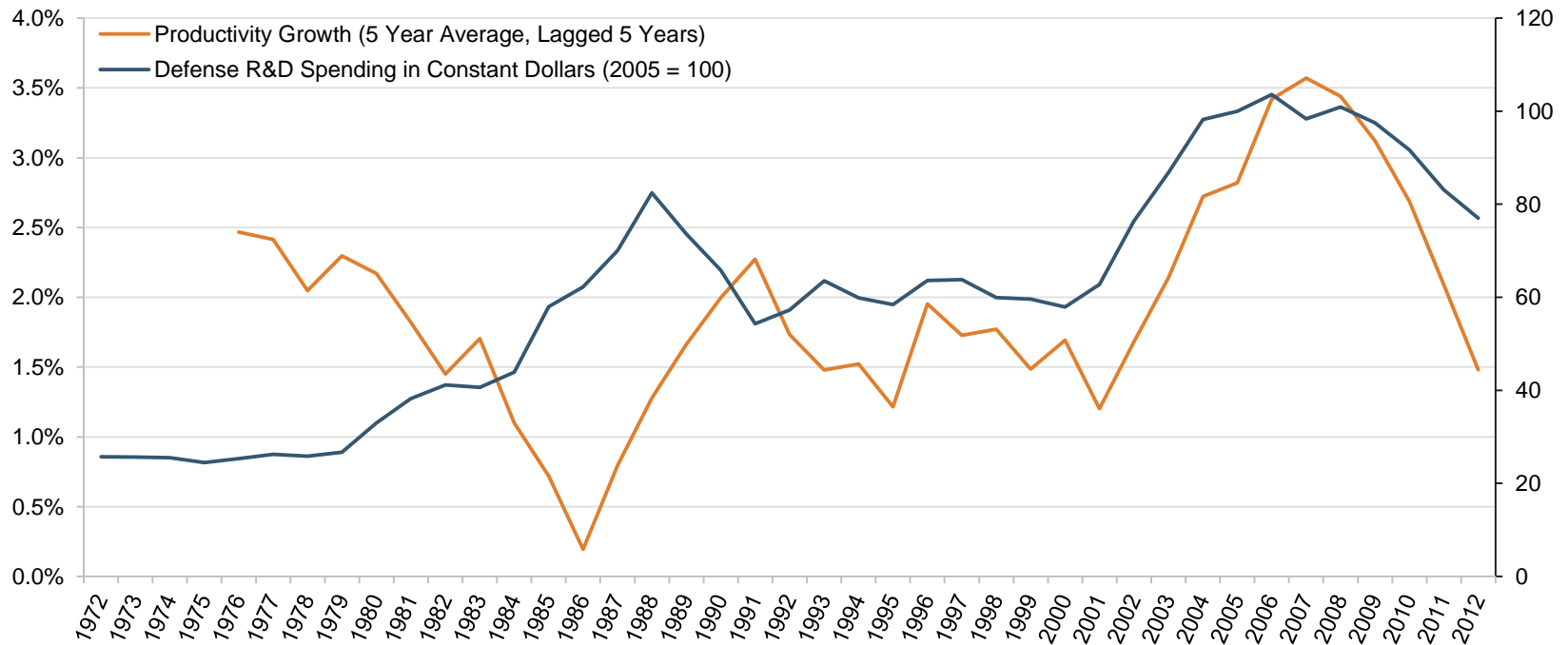


Gross Domestic Expenditure on R&D as % of GDP

Source: World Bank

# DEFENSE R&D LED US PRODUCTIVITY GROWTH | 26

Defense R&D spending led US productivity growth in the past



Productivity Growth vs. Military R&D Spending

Source: U.S. Bureau of Economic Analysis

# CHINA EMULATES THE US DEFENSE-DRIVER MODEL | 27

- “Beijing presses ahead with an ambitious program to privatize most of a vast arms industry employing more than a million workers at more than 1,000 state-owned enterprises. The long-term goal is to transform some of the leading contractors, such as China State Shipbuilding Corporation (CSSC), Aviation Industry Corporation of China (AVIC) and China Aerospace Science and Industry Corporation into homegrown versions of American giants Lockheed Martin and Northrop Grumman or Britain's BAE Systems.” (Reuters 9/16/2012)
- “The Chinese have aggressively pursued a dual-use R&D strategy that stresses the development of advanced civilian technologies – particularly in the areas of electronics and information technologies, aviation, space launch vehicles, satellites, and advanced manufacturing – that can be spun off to defense products and production. Over the past decade, Beijing has worked hard both to encourage further domestic development and growth in these sectors and to expand linkages and collaboration between China's MIC and civilian high-technology sectors – and it appears to be paying dividends.” (Richard Bitzinger, 2008)
- “China allows private investment in army equipment - China will open its defense sector to private enterprises by relaxing market access for military products. Concrete measures will include lowering market access requirements, reducing approval procedures, improving the pricing mechanism for military products and taxation policy, according to the People's Liberation Army's General Armament Department. The department said it will open a website for military procurement, regularly publicizing information on the demand for weapons and other equipment. It will strive to ensure fair market competition to encourage private enterprise to participate in the research, production and maintenance of military equipment. China began addressing private investment in defense sector in 2010 and pledged equal treatment to private investors in the industries and state-owned military enterprises in a 2012 guideline.” (China Daily 5/30/2014)

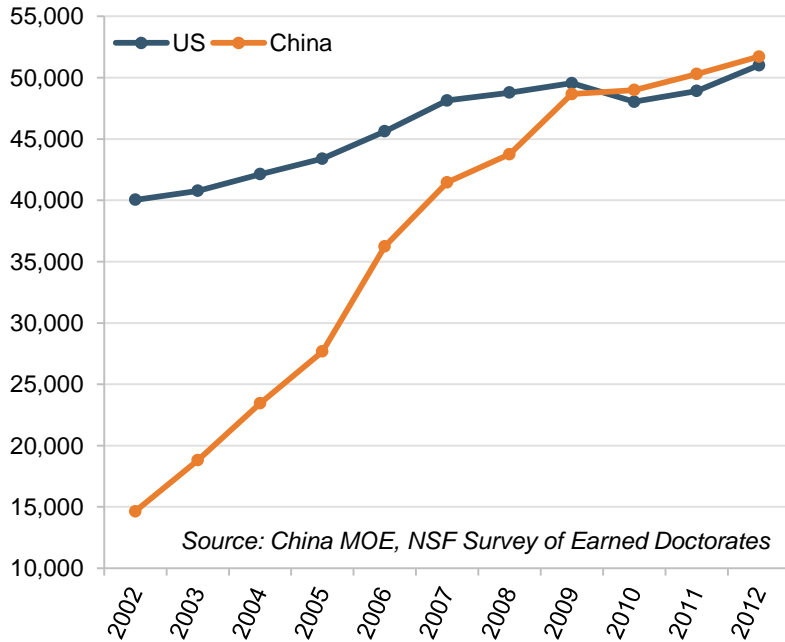
# TECH DRIVERS OF CHINESE GROWTH

- China will have the most industrial robots of any country by 2014 (Booz Allen)
- Tianhe-2 is the world's fastest supercomputer
- Beijing Genomics Institute has the world's largest DNA sequencing capacity
- China had 505 million internet users in 2011 and expects e-commerce to double between 2012 and 2015
- China sold its first CNC machine tool to Germany in July 2013
- Satellites: "Starting from almost no live surveillance capability 10 years ago, today the PLA has likely equaled the US's ability to observe targets from space for some real-time operations." (World Security Institute)

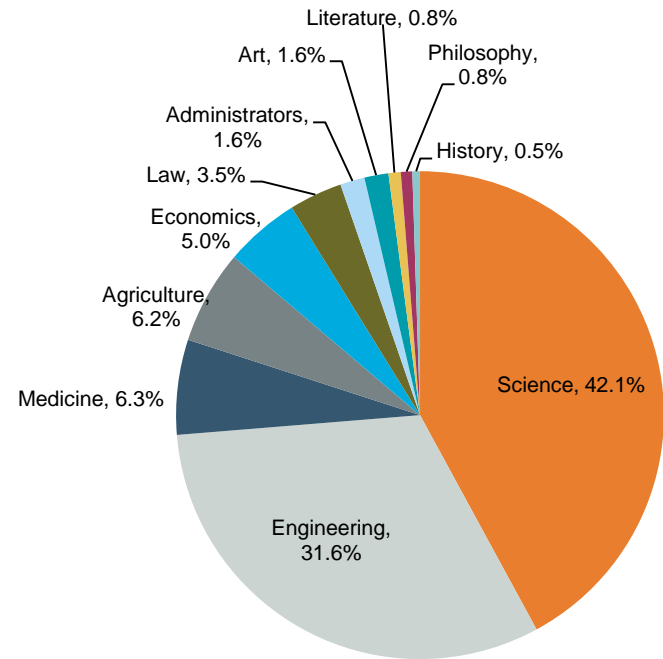
# PHD'S PER YEAR

China awards as many PhDs as the US, but twice as many in science and engineering

Number of Degrees



PhD Degrees Awarded Per Year



2012 Breakdown of Chinese PhD Degrees

Source: China MOE

# CHINA'S LEAPFROG INTO E-FINANCE

China's fast-expanding Internet duo Alibaba and Tencent told the world they plan to compete with the big state-owned banks through their online-based payment platforms. The idea is to bypass the traditional bank payment infrastructure now monopolized by China UnionPay, which is held by a consortium by 85 Chinese banks

## Making An Alipay Payment By Scanning A Barcode



Source: Xinhua

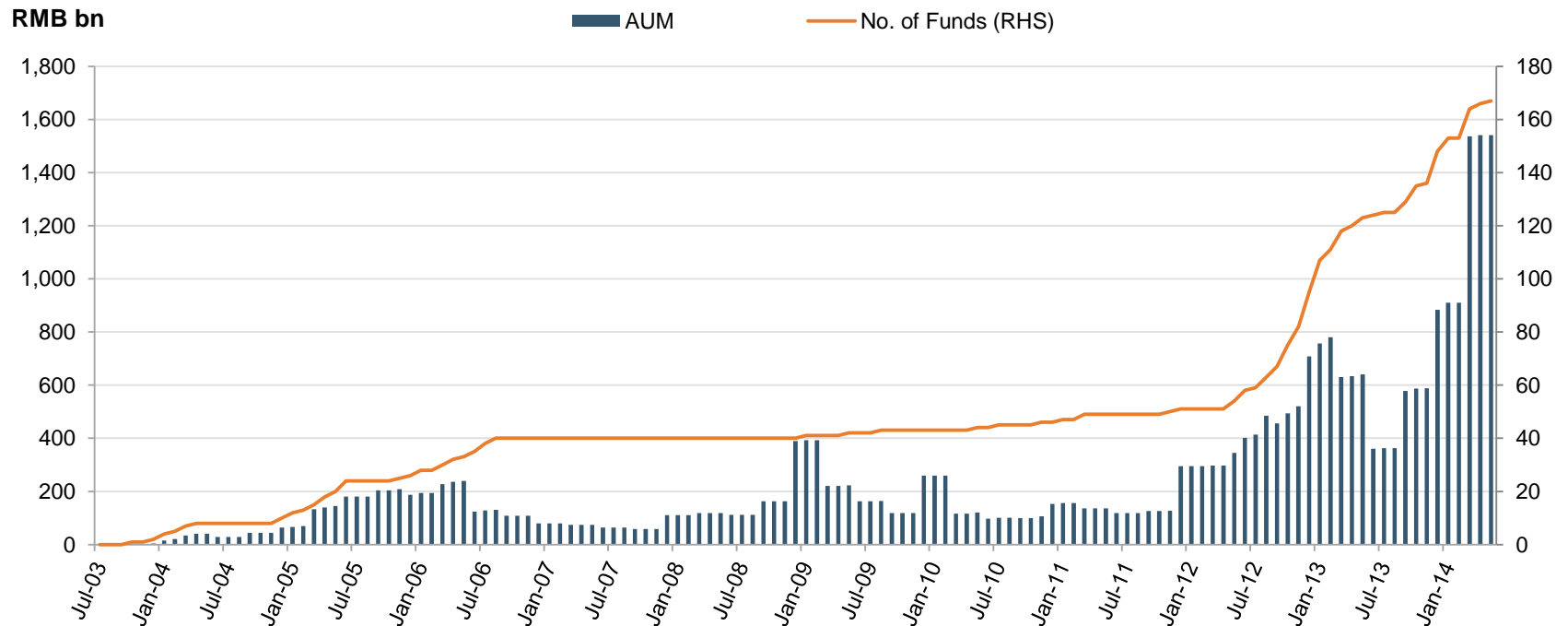
## Guangzhou 7-Eleven To Allow Barcode Registry Check-out



Source: PC Online

# INTERNET GIANTS TRANSFORM FINANCE

Alibaba's *Yuebao* money-market fund became the world's third largest within months. Technology is driving financial reform. Integration of e-commerce and e-finance will shift credit provision away from the chaotic Shadow Banking market into a transparent and information-rich Internet environment with real-time credit rating and flexible financing options

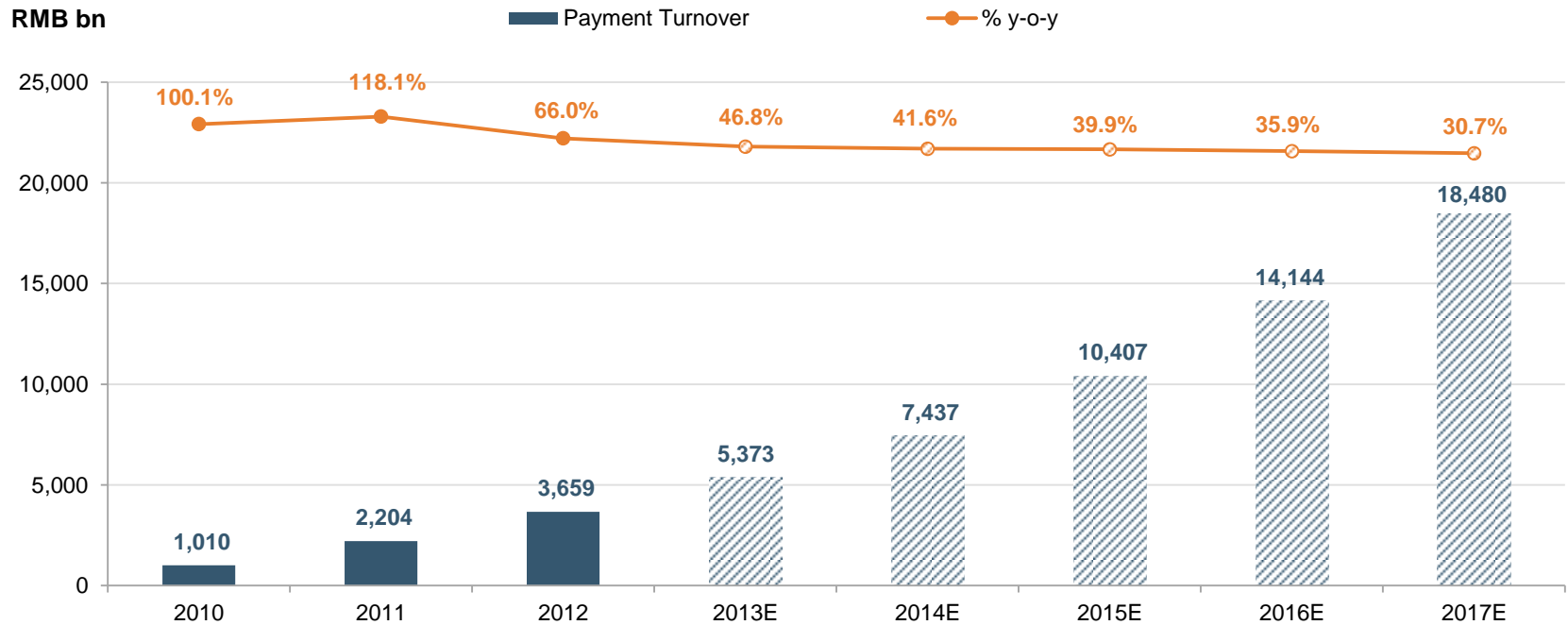


Money Market Funds in China

Source: Wind

# CYBER WORLD

As an illustration of the challenge to the banks, China's online and mobile payment transactions increased last year by 47% to RMB5.37 trn. Banks have responded by offering online payment options and wealth management products



2010-2017 China Online Third Party Payment Turnover

Source: iResearch

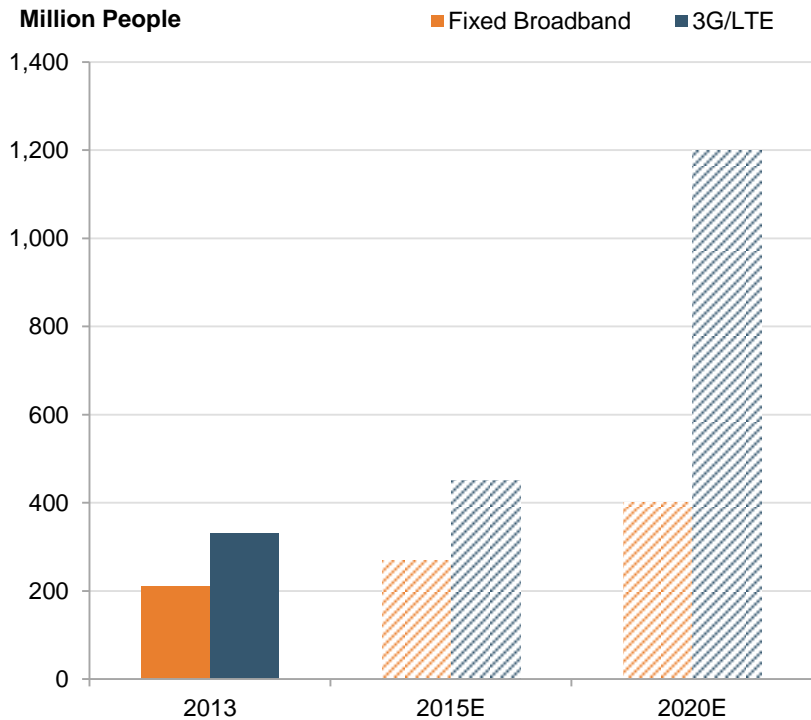


# BROADBAND CHINA STRATEGY

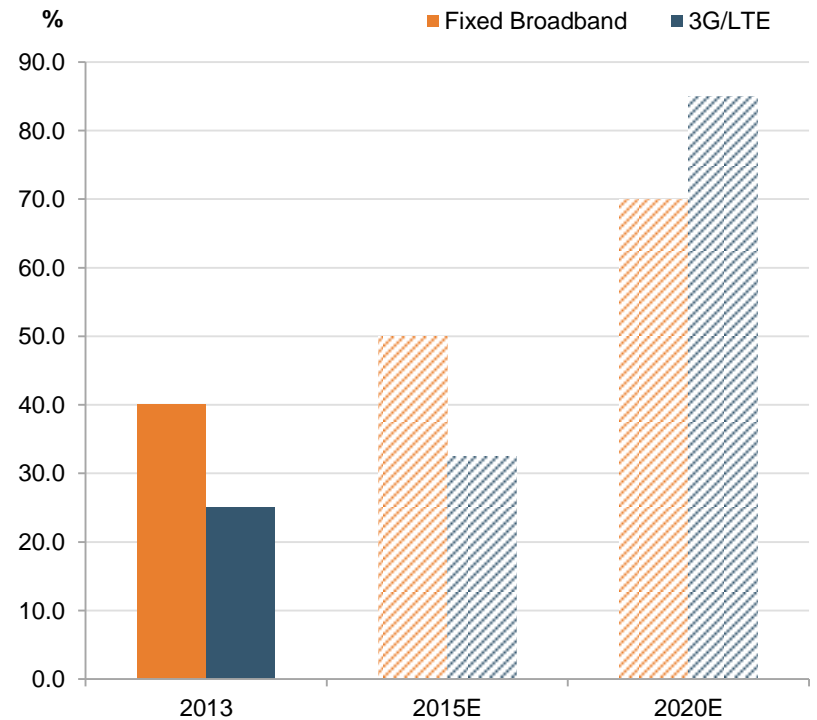
2012 – 2013: Period of all-round acceleration

2014 – 2015: Period of promotion and popularization

2016 – 2020: Period of optimization and upgrading



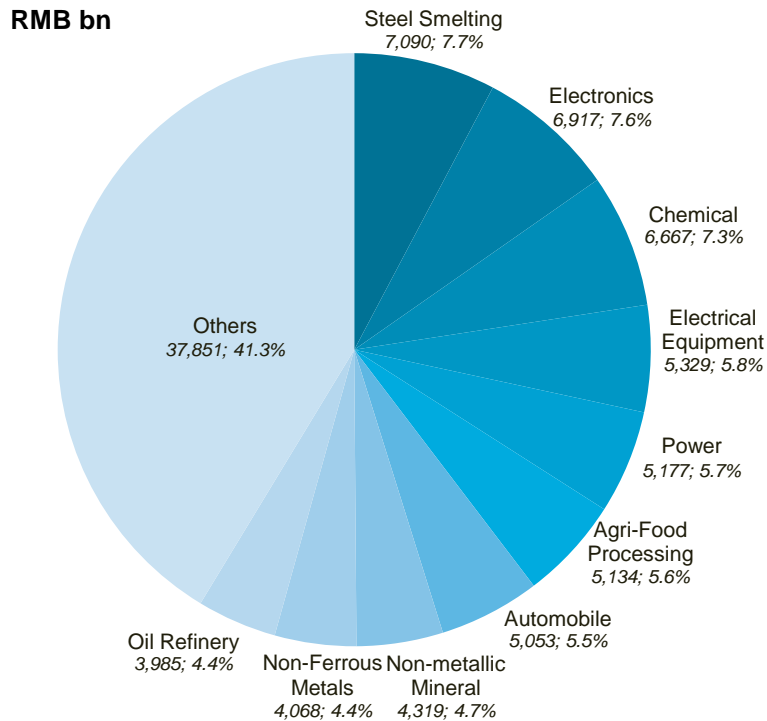
**Number Of Users for Broadband Access** *Source: Chinese Govt*



**Penetration Rate** *Source: Chinese Govt*

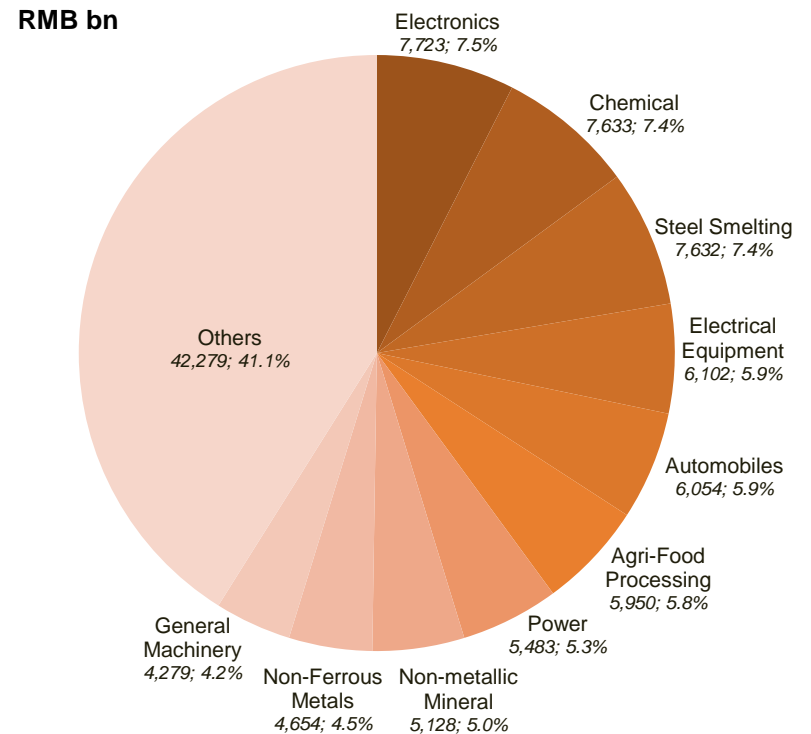
# ELECTRONICS SURPASSES STEEL AS CHINA'S LARGEST INDUSTRIAL SECTOR

For the first time technology companies surpassed the steel industry in aggregate, a continuing sign that the smokestack-and-cheap-labor regime that the Xi government wants to replace and the tech-and-service model it wants to introduce is working



**2012 Industrial Revenue**

Source: NBS

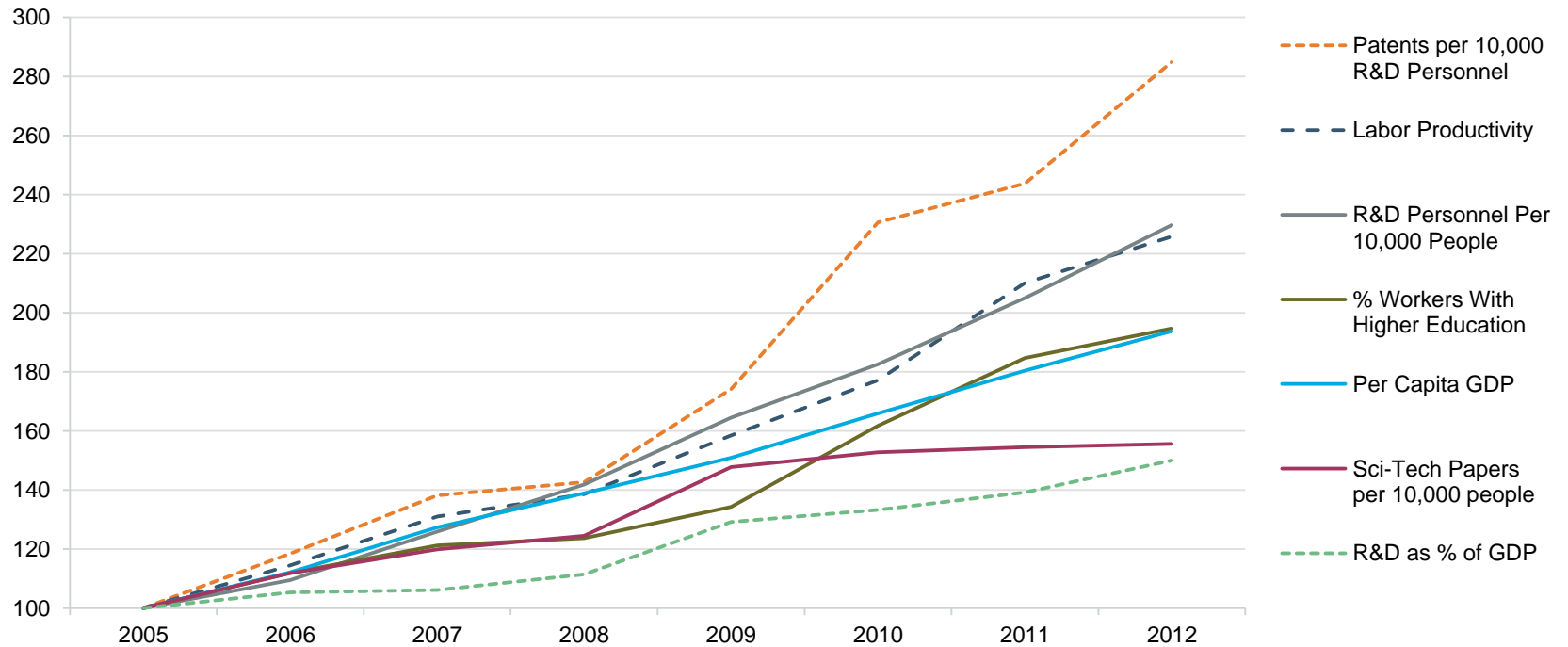


**2013 Industrial Revenue**

Source: NBS

# COMPONENTS OF CHINA INNOVATION INDEX

Significant efforts have gone into raising productivity



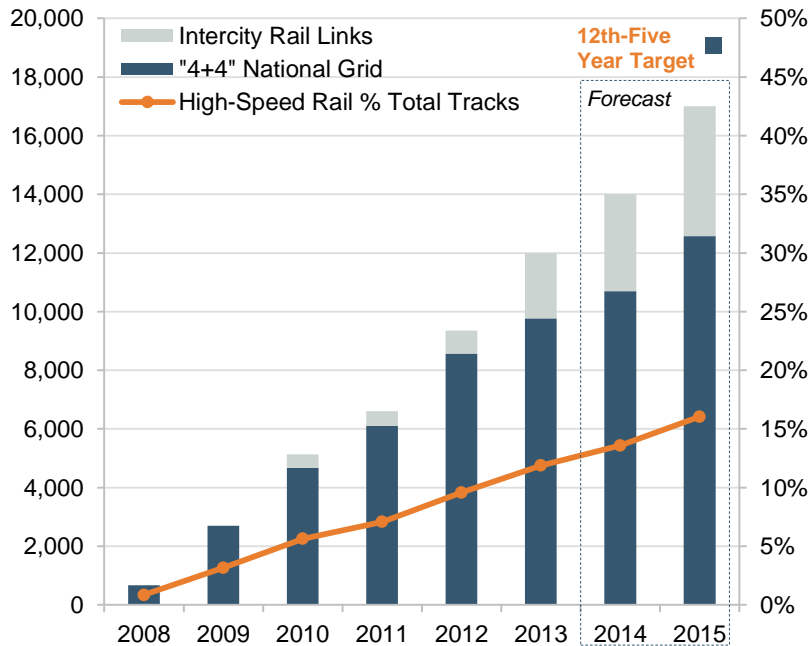
China Innovation Index Components

Source: NBS

# CHINA EXPANDS HIGH-SPEED RAILWAYS

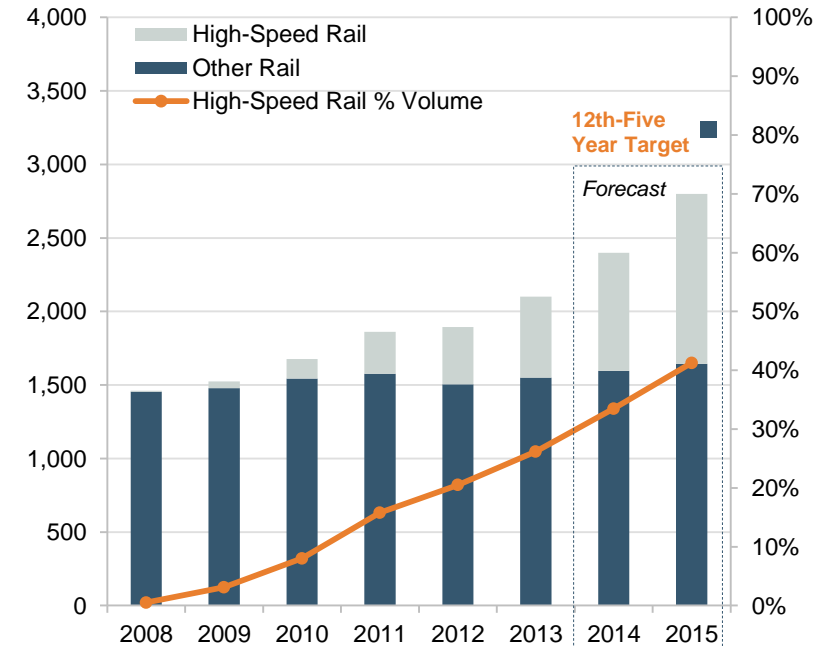
On a single day, Dec. 28, 2013, China opened an unprecedented six new high-speed railway links spanning nearly 2,000km, pushing its total of high-speed track to more than 12,000 km. China is becoming the world's leader in global high-speed service

**Track Length (Kilometers)**



**High-Speed Railway Operation in China** Source: NBS, REORIENT

**Throughput (Mn People)**



**Railway Passenger Volume** Source: NBS, REORIENT

# PREMIER LI PUSHES RAILWAY EXPORTS

2014 is very possibly the year that China inks its first overseas high-speed railway deal. The sale would be a major triumph for Premier Li Keqiang, who has been busy on the road promoting the Chinese system



# “NEW SILK ROAD” IS A GAME-CHANGER

2014 is likely the year that China signs its first overseas high-speed railway deal. China’s “New Silk Road” opens new markets for high-value-added exports and links China to new sources of energy, food, and inexpensive manufacturing labor



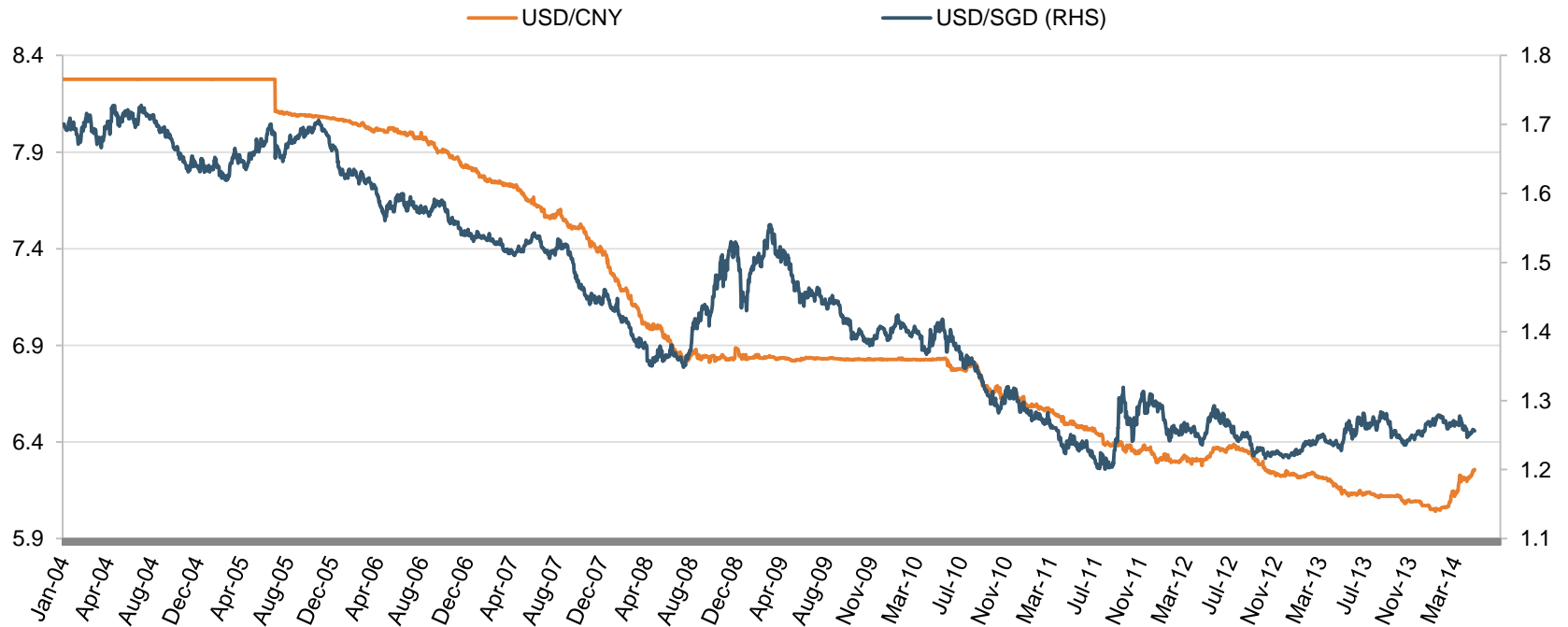
Source: Xinhua

# CHINA'S MARKETS AND FINANCIAL SYSTEM



# CENTRAL BANK LEARNS TO MANAGE THE EXCHANGE RATE

A steadily appreciating yuan encouraged a carry trade that distorted trade numbers and monetary aggregates. China's central bank now aims for constructive ambiguity. A weaker RMB in early 2014 flushed out the carry trade and encouraged corporations to adopt FX hedging techniques



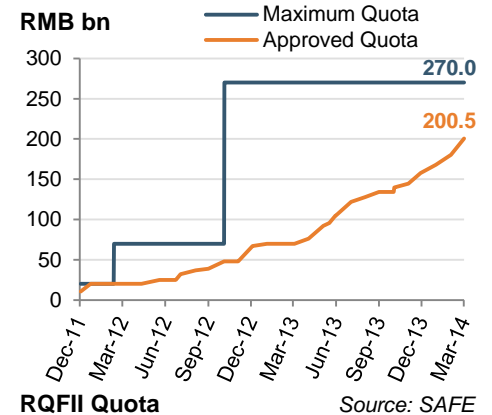
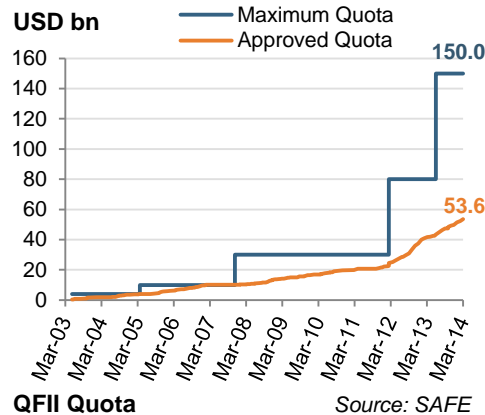
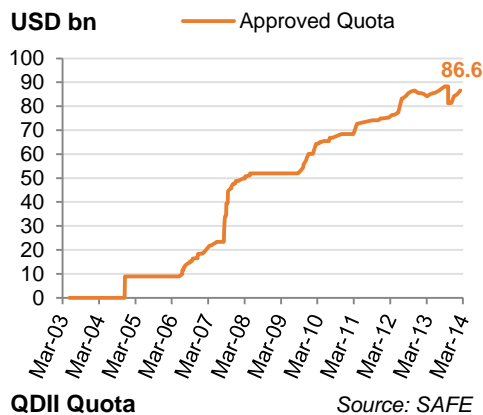
CNY and SGD against USD

Source: Bloomberg



# STOCK THROUGH-TRAIN BY OCTOBER

Mutual market connectivity between Shanghai and Hong Kong, or what we call the “northbound and southbound stock through-trains,” is to be officially launched by October. This marks another key milestone en route to full capital account liberalization. The added cross-flow of capitals will bring the next phase of international financial access to onshore and offshore investors



**Quota to trade in Shanghai:** RMB300 bn total, RMB13.0 bn daily (net position)

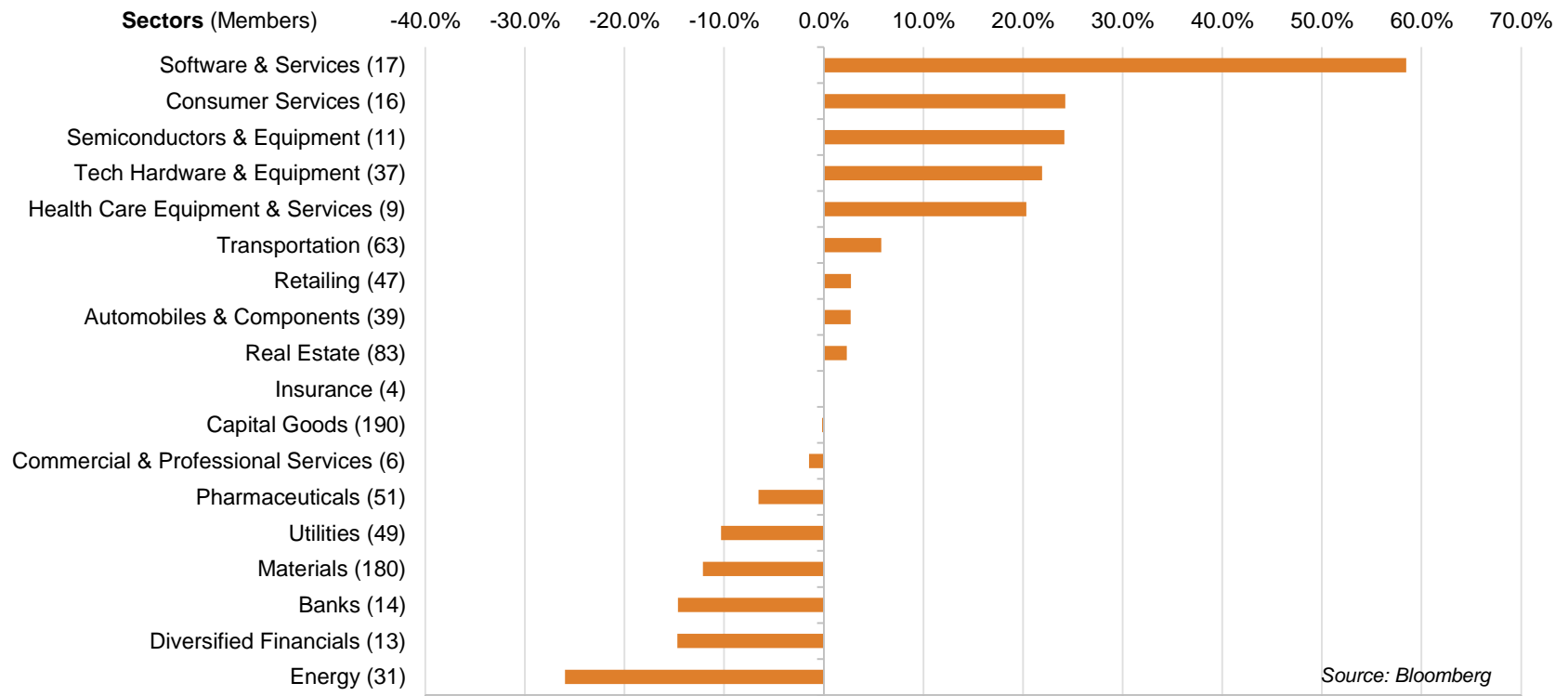
**Quota to trade in Hong Kong:** RMB250 bn total, RMB10.5 bn daily (net position)

**Stocks to trade in Shanghai:** Shanghai 180, Shanghai 380, A+H stocks

**Stocks to trade in Hong Kong:** Hang Seng Large Cap, Hang Seng Mid Cap, A+H stocks

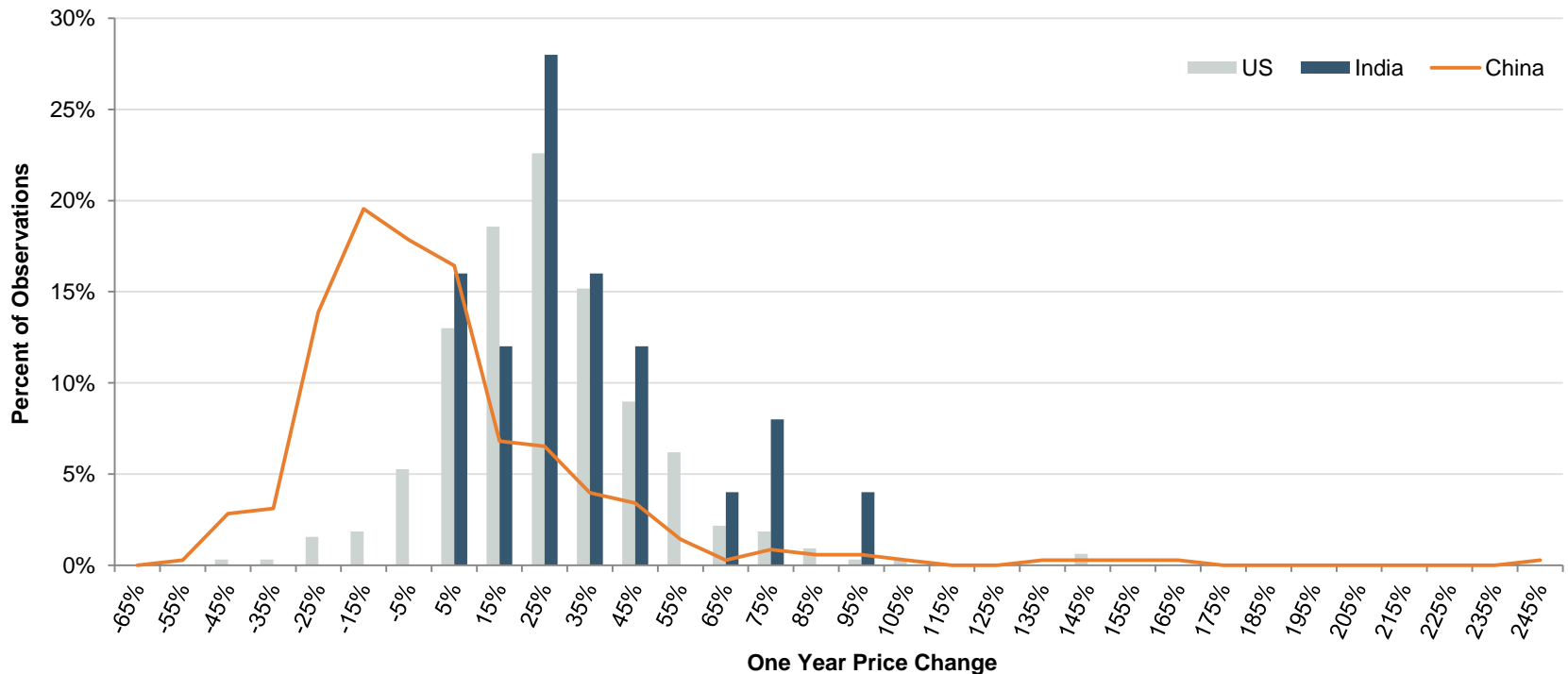
# 12-MONTH EQUITY PRICE CHANGE TO MARCH 31<sup>42</sup>

High-tech stocks are booming while stocks that embody the old China model languish. This is extremely important because it shows that Chinese private investors are sponsoring the shift up the value added spectrum



# DISTRIBUTION OF EQUITY RETURNS (YEAR TO MAY 31)

If macro risk were China's big problem, we would see returns clustered around the mean. But the opposite is the case: there are many things going on, not one big thing



Distribution of Equity Returns (12 Months to May 31)

Source: Bloomberg

# FINANCIAL REFORM AGENDA

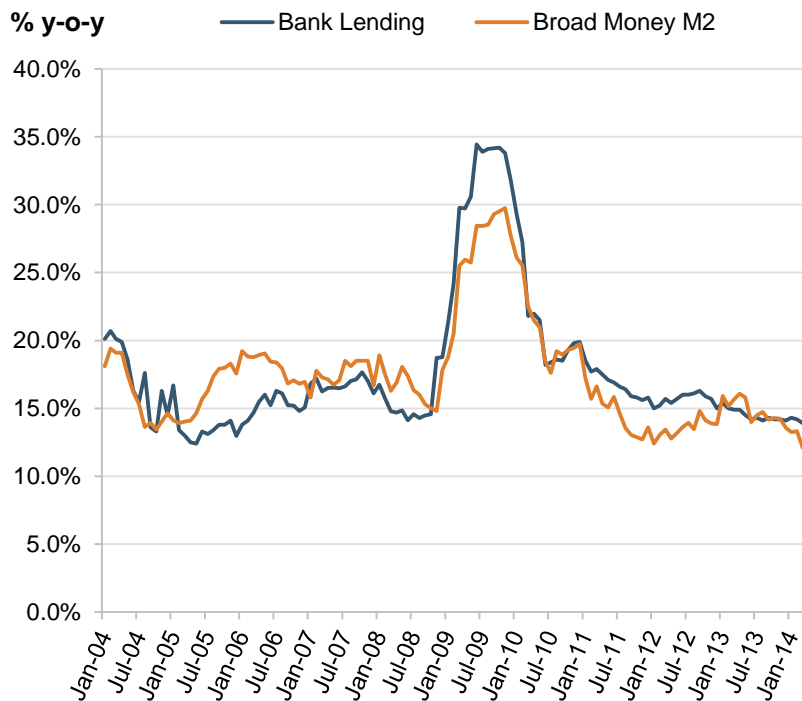
- Liberalize deposit rates and eliminate re-lending to shadow banks (comparable to lifting of Regulation Q in the US in 1982)
- Clean up NPLs in unregulated banking (comparable to America's S&L restructuring during the 1980s)
- Interest rate liberalization is a precondition for renminbi convertibility

# STEPS TOWARD FINANCIAL REFORM

- “China could accomplish basic or partial renminbi capital account convertibility in a few years... In another couple of years, China could announce full capital account convertibility of the renminbi.” – Guan Tao, State Administration of Foreign Exchange, July 3, 2013
- China eliminates floor on bank lending rates July 20
- China removes cap on life insurance lending rates August 5
- More important and more challenging: lifting the cap on deposit rates

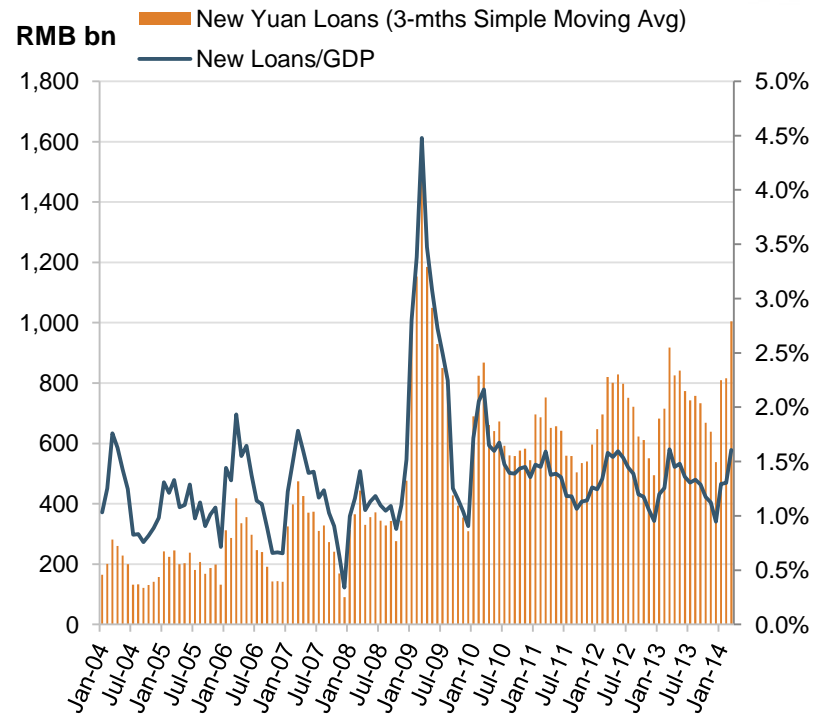
# CHINA'S CREDIT SUPPLY AND MONEY SUPPLY

New loans remained at a steady level since the 2009 and 2010 surge. Excessive credit growth has been brought under control. PBOC 2014 credit policy guidelines: stronger support for economic reorientation and the development of selected strategic and emerging industries against an engineered pullback of unfavorable businesses. Real estate credit policy discourages secondary market speculation in the interests of first-time home buyers



China Money Supply and Bank Lending

Source: PBOC

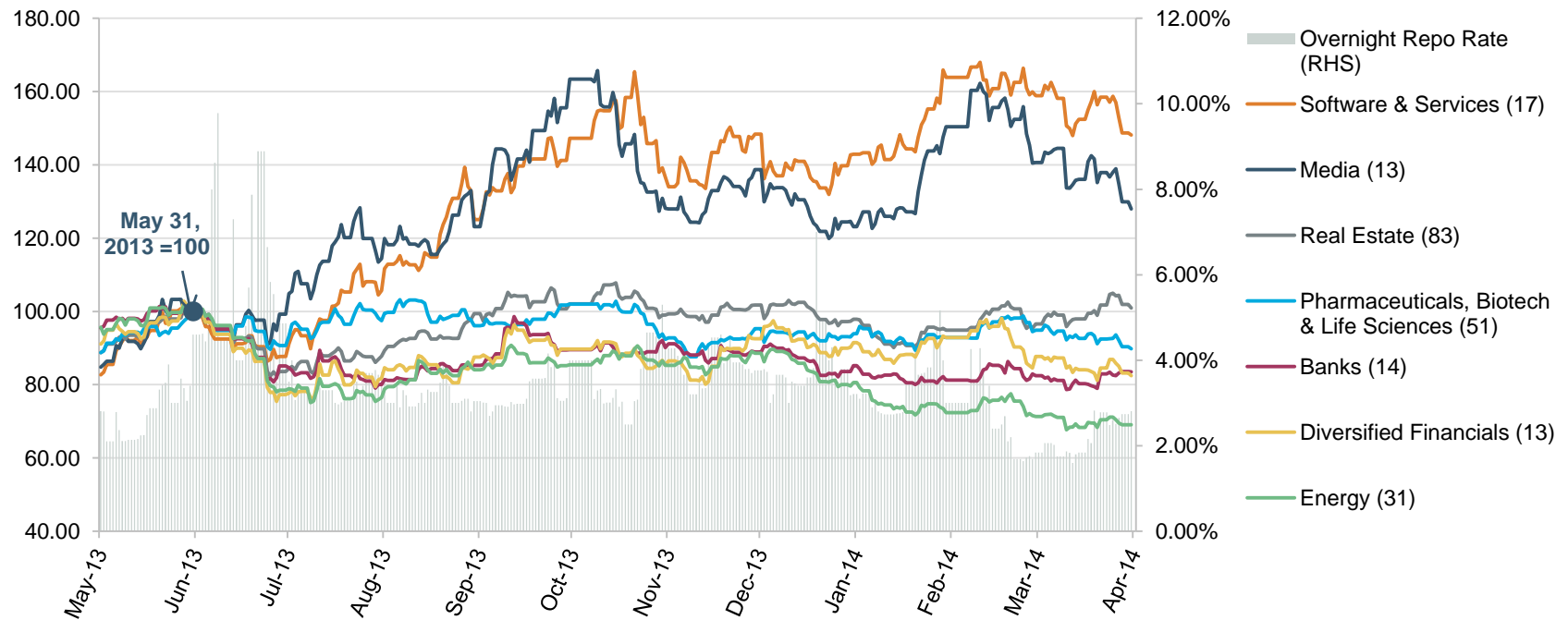


New Yuan Loans vs. GDP

Source: PBOC, REORIENT

# JUNE 2013 INTERBANK LIQUIDITY SQUEEZE

New economy sectors surge and old economy underperforms

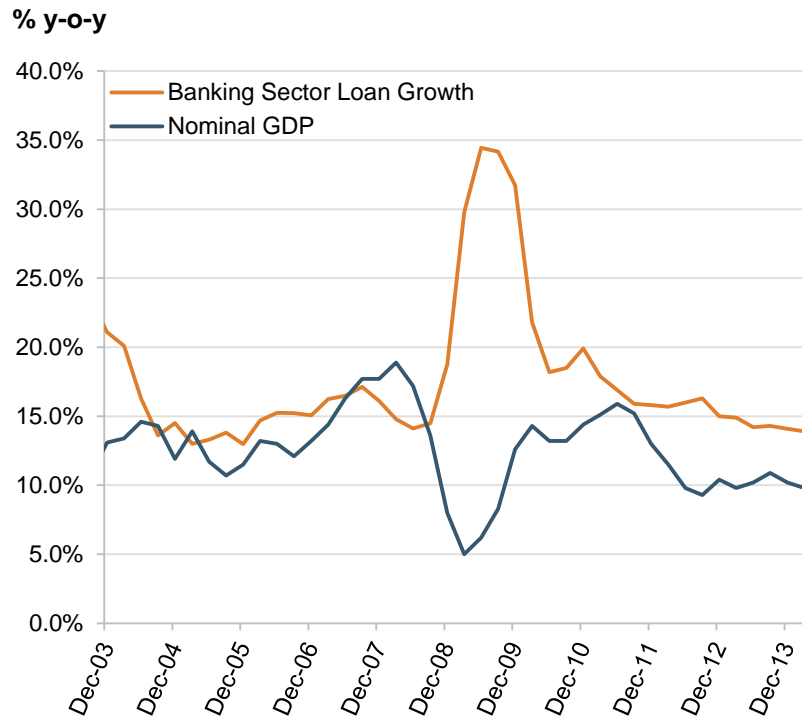


June 2013 Interbank Liquidity Crunch and SHCOMP Performance By Sectors

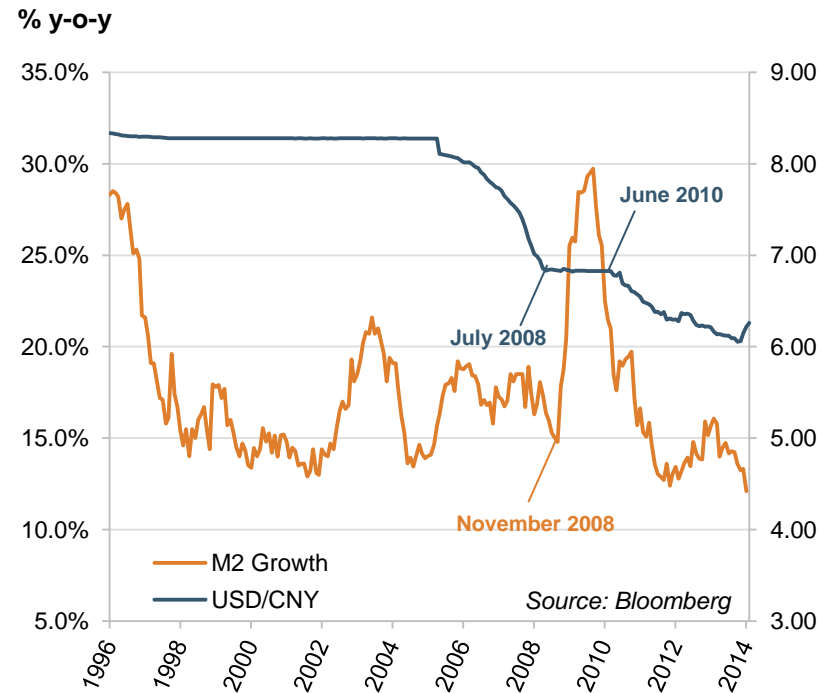
Source: Bloomberg

# CREDIT QUALITY SLIDES WHEN BANK LENDING OUTPACES NOMINAL GDP GROWTH | 48

Rapid credit expansion to push economic growth on an emergency basis after 2008 hurt credit quality. The new government's priority is to clean up bank balance sheets



**Banking Sector Loan vs. GDP Growth** Source: PBOC, NBS

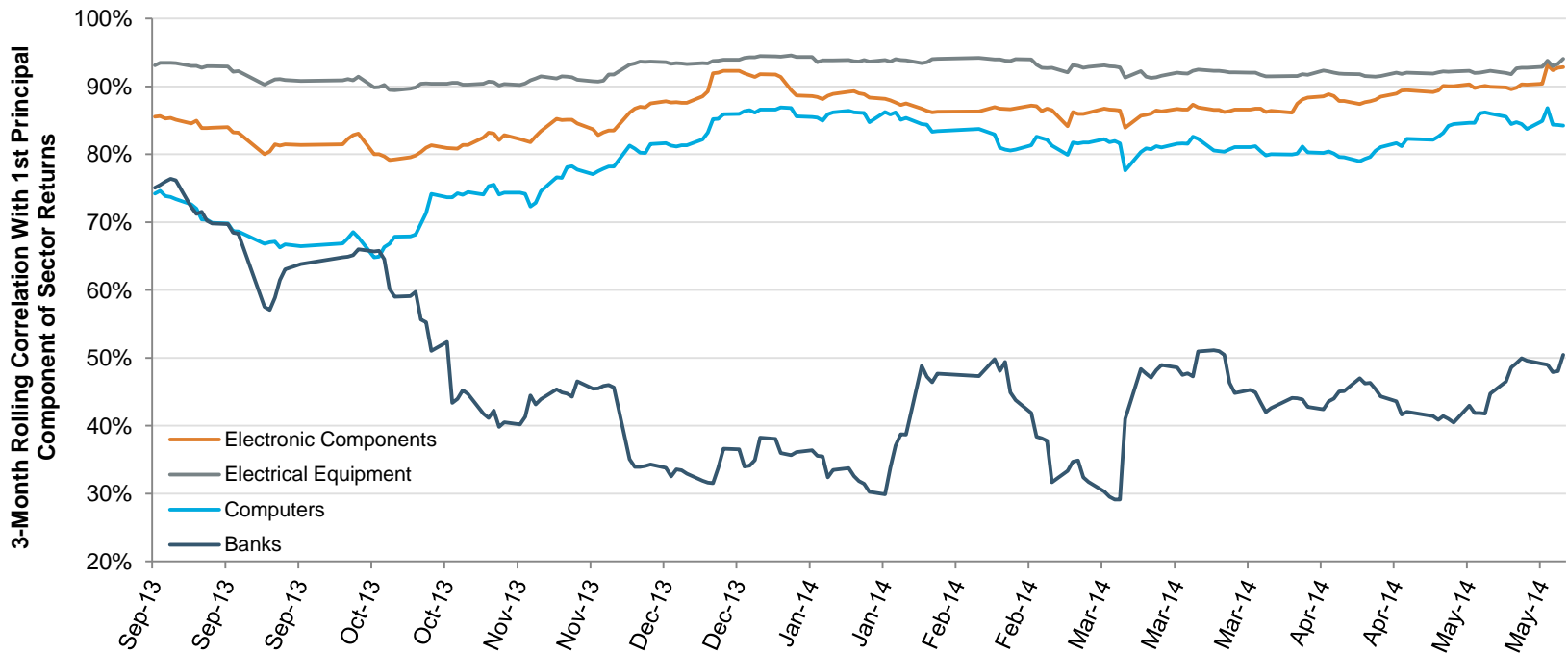


**China Re-Pegged RMB, Boosted Money Supply To Counter Global Crisis** Source: Bloomberg



# BANKS DIVERGES FROM INDEX (12-MONTH TO MAY 31) | 49

Variance decomposition across the universe of SHCOMP sectors tells us that the bank risk has diverged from the index. That's due to excessive worry about bank balance sheets. As banks clean up their books the sector will recover

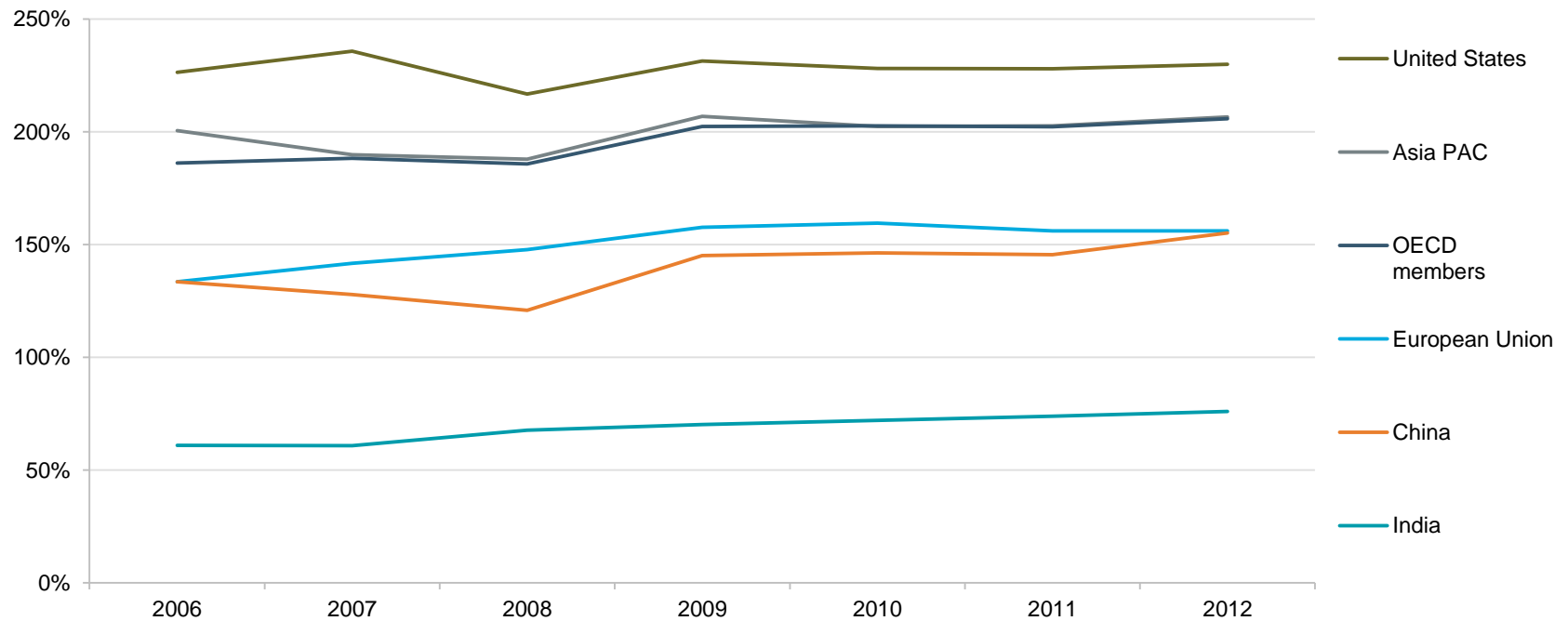


SHCOMP Banks Diverge from Index

Source: Eviews, Wind

# DOMESTIC CREDIT PROVIDED BY FINANCIAL SECTOR (% OF GDP)

Although the pace of credit growth is fast, China still lags OECD members and other big economies

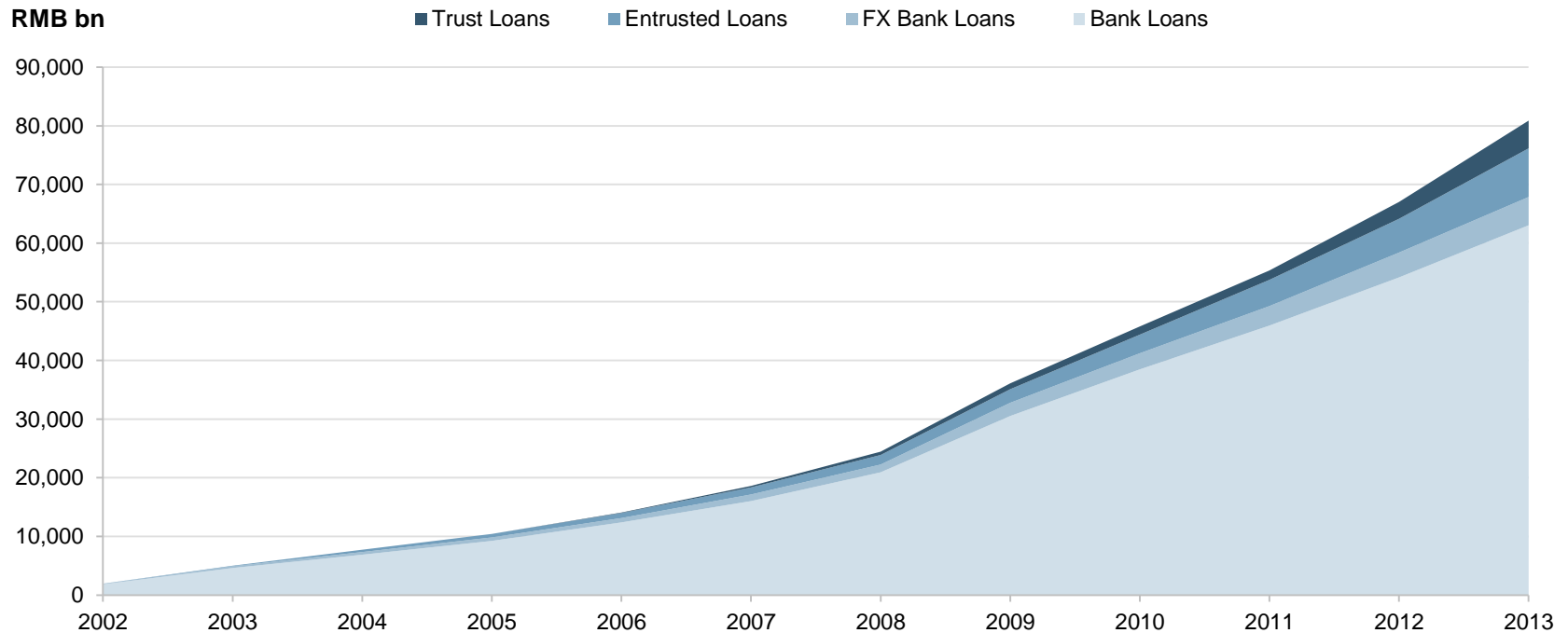


Domestic credit provided by financial sector (% of GDP)

Source: World Bank

# SLIM SHADOW OF CHINA'S BANKING SYSTEM

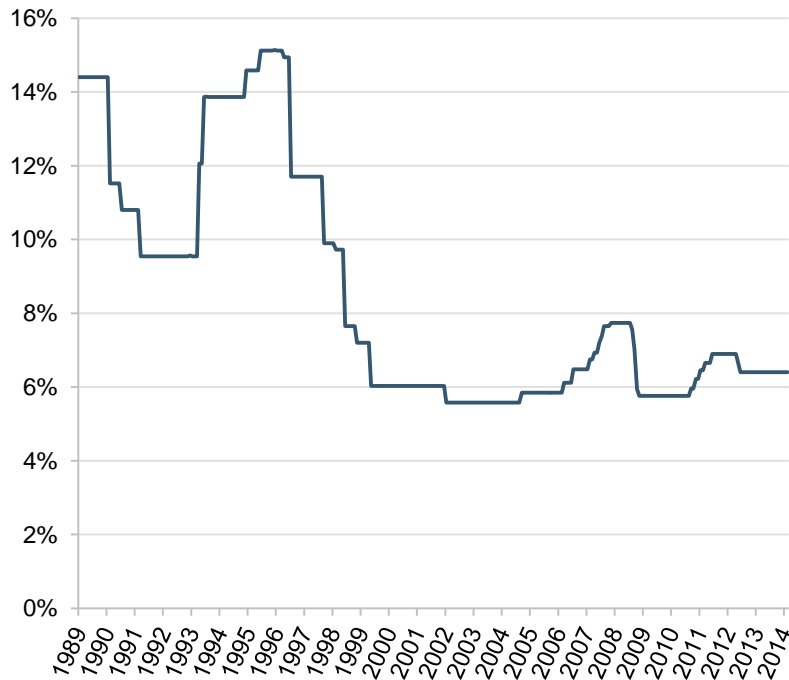
Looking at the breakdown of PBOC's historical time series on 'aggregate financing to the real economy', trust loans, entrusted loans and foreign currency loans stood at approximately RMB17.8 trn as of June 2013. That's equivalent to a quarter of outstanding bank loans. Shadow banking serves borrowers neglected by state banks



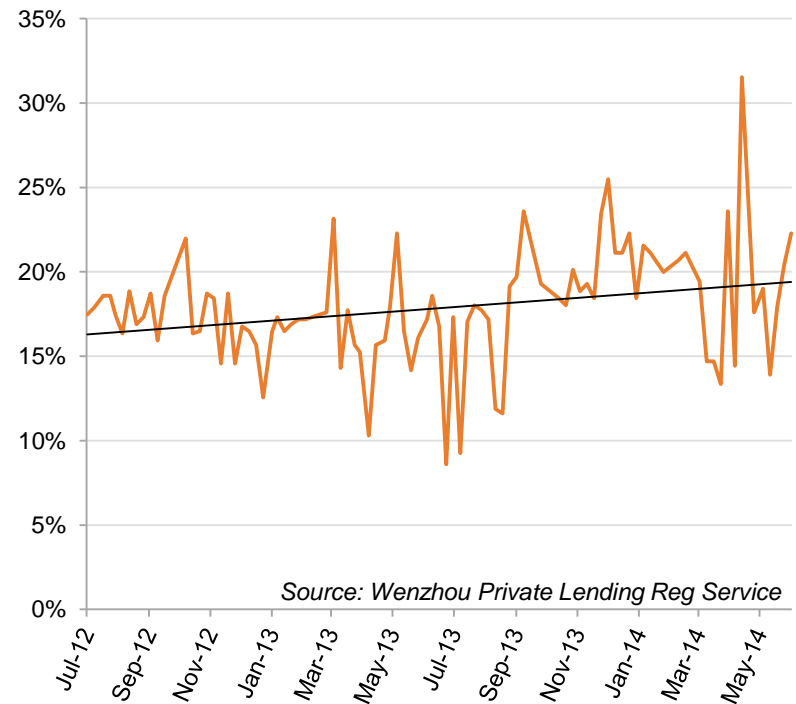
Trust Loans, Entrusted Loans, FX Bank Loans vs. Bank Loans

Source: PBOC

# OFFICIAL LENDING RATE VS. SHADOW RATE



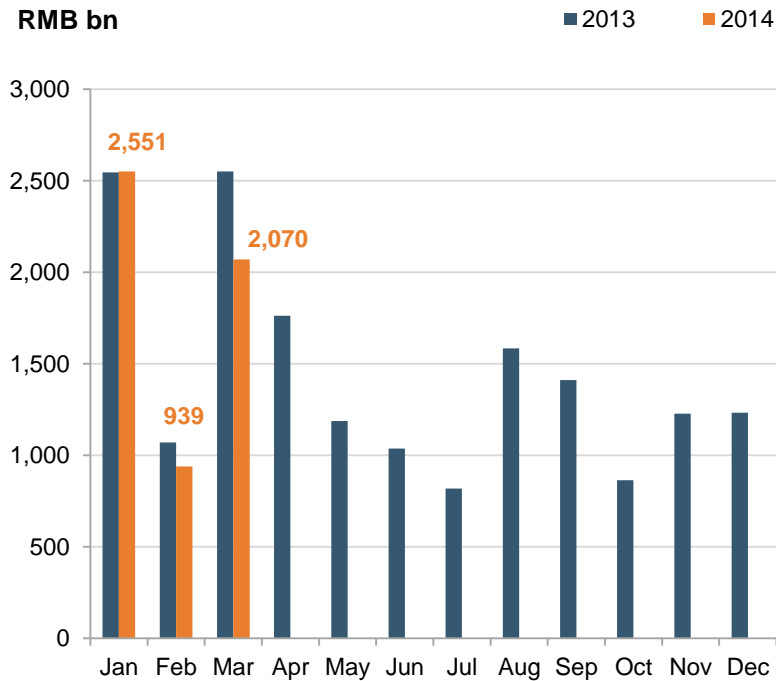
Medium and Long-term Lending Rates 3Y-5Y *Source: PBOC*



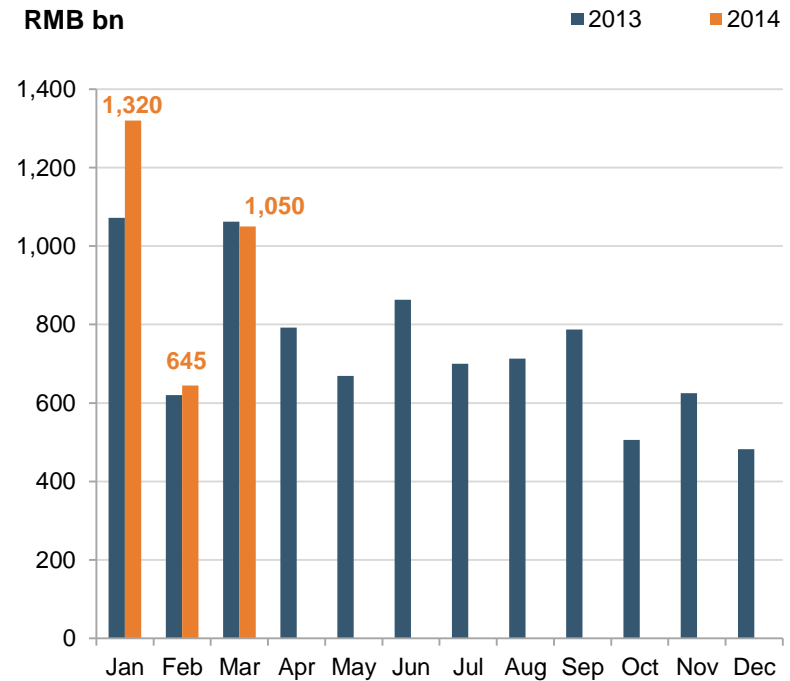
Wenzhou Private Mortgage Rates *Source: Wenzhou Private Lending Reg Service*

# SHRINKING SHADOW BANKING

Shadow banking activity shrank in March while new bank lending was steady y-o-y



Aggregate Financing (Including Shadow Banking) Source: PBOC

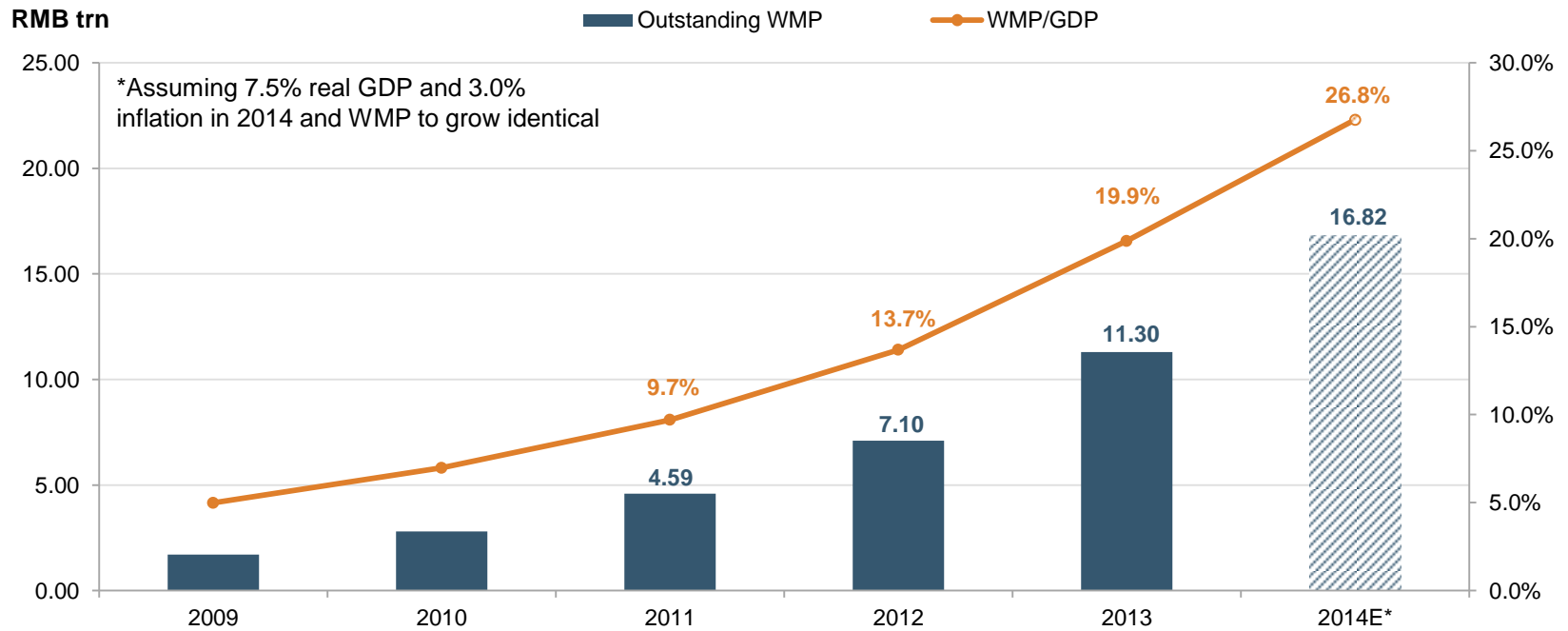


New Yuan Loans

Source: PBOC

# CHINA WEALTH MANAGEMENT PRODUCTS

Wealth management products are growing very quickly, and are expected to reach RMB16.8 trn by end of 2014

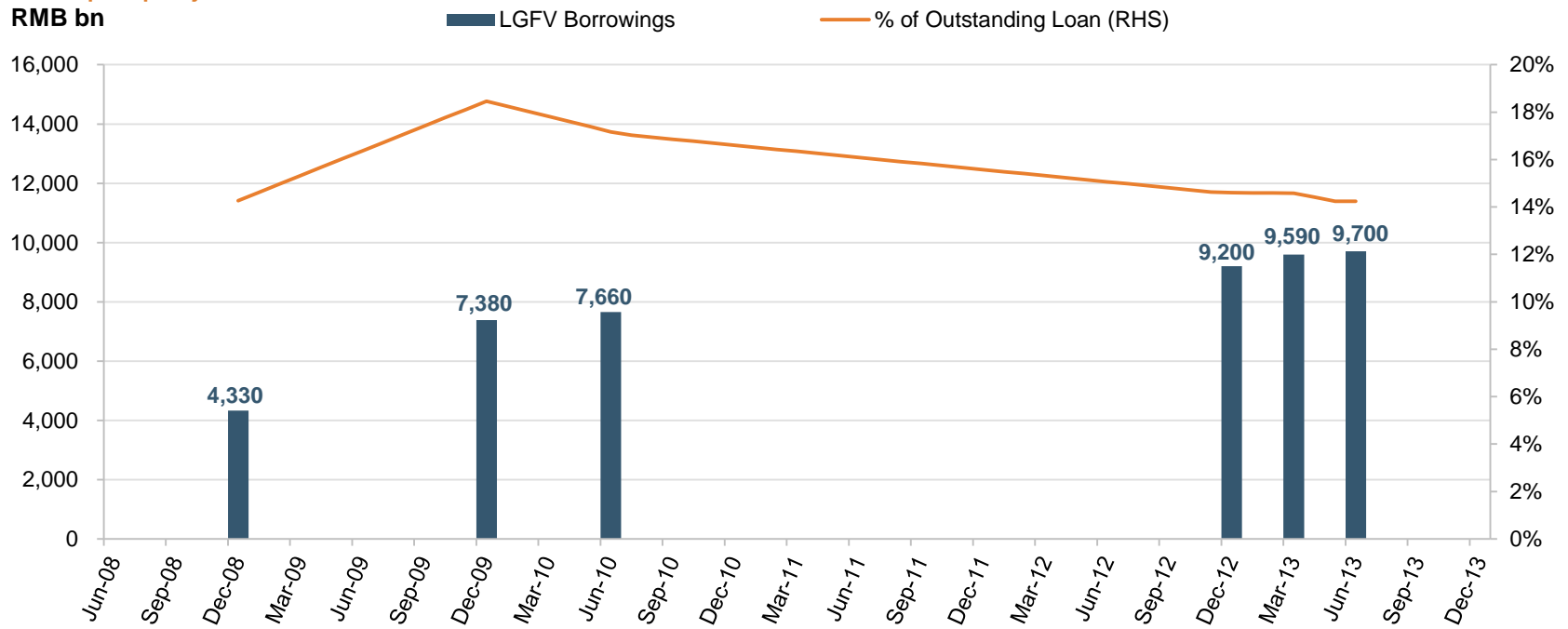


China Bank Wealth Management Products

Source: PBOC, WIND, REORIENT

# BANKING SECTOR'S EXPOSURE TO LGFV BORROWING

LGFVs comprise 14% of bank lending, and grew by 6.2% y-o-y during the 1H of 2013. In comparison, the LGFV borrowing stood at RMB4.3 trn prior to the stimulus package. LGFV (Local Government Financing Vehicle) refers to an entity established by the gov't, promising repayments via cash flows of municipal projects

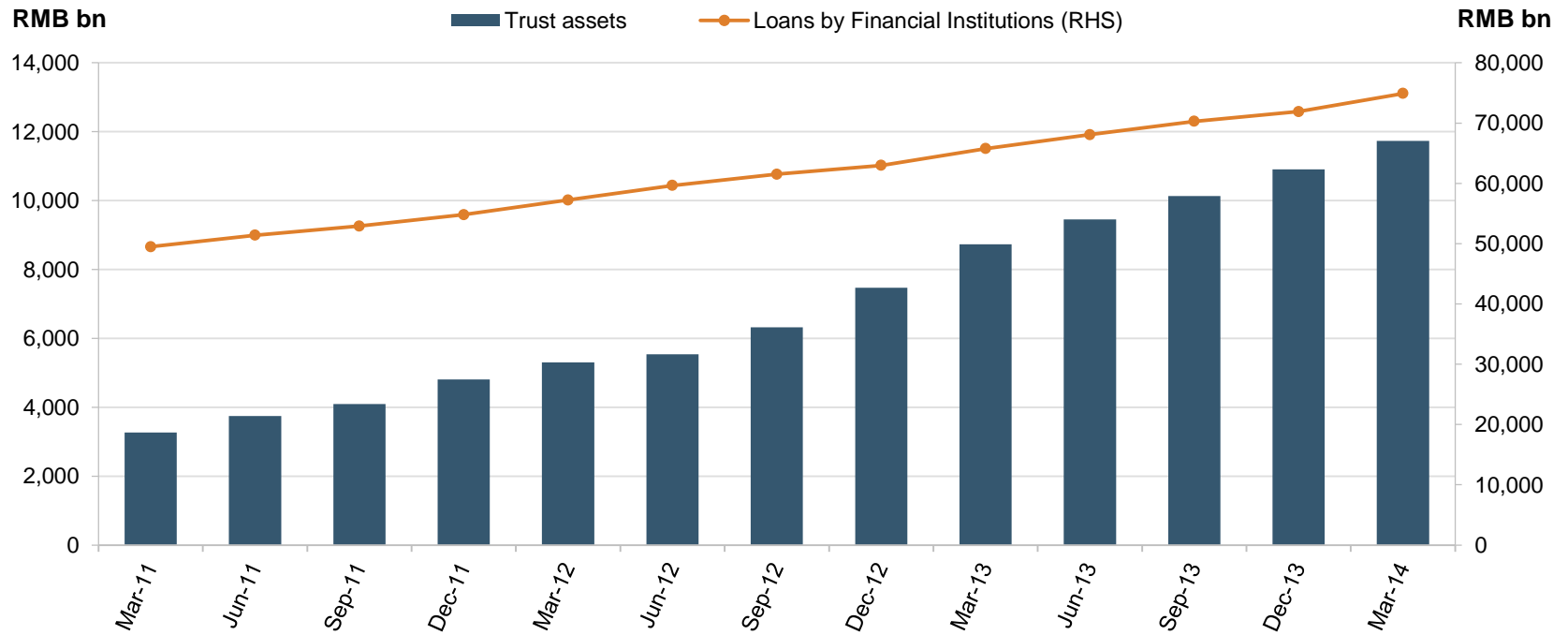


Banking Sector's Exposure to LGFV Borrowing

Source: Wind

# TRUST FINANCING VERSUS TOTAL LOANS BY FINANCE INSTITUTIONS

In the two years 2011-2013, AUM of trust companies has increased on average by 76.32% annually, while total loans by financial institutions rose 16.23% annually. Trust firms are believed to be the most popular institutions for securitizing bad loans



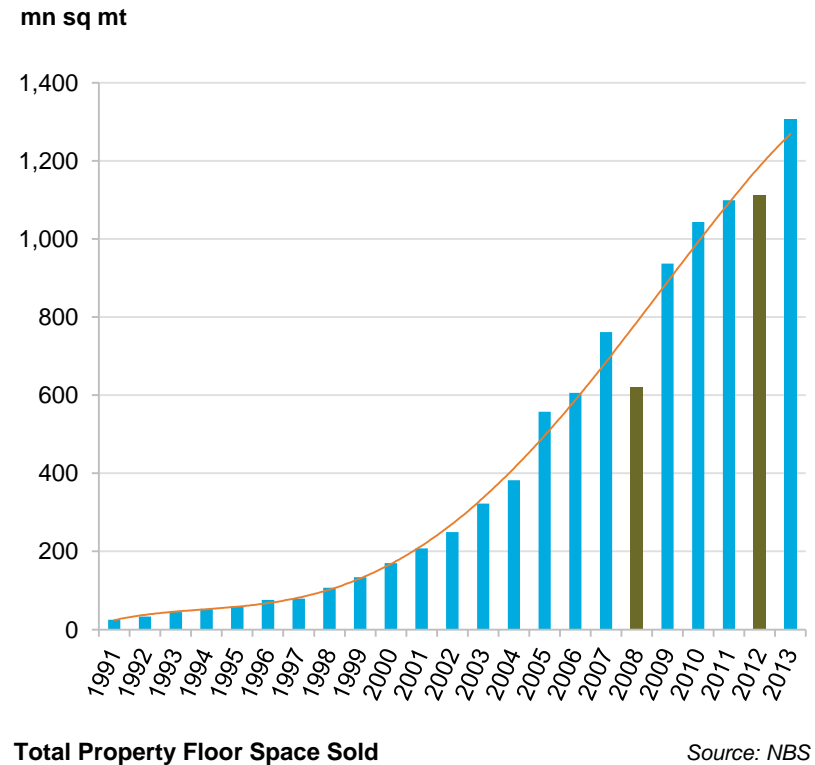
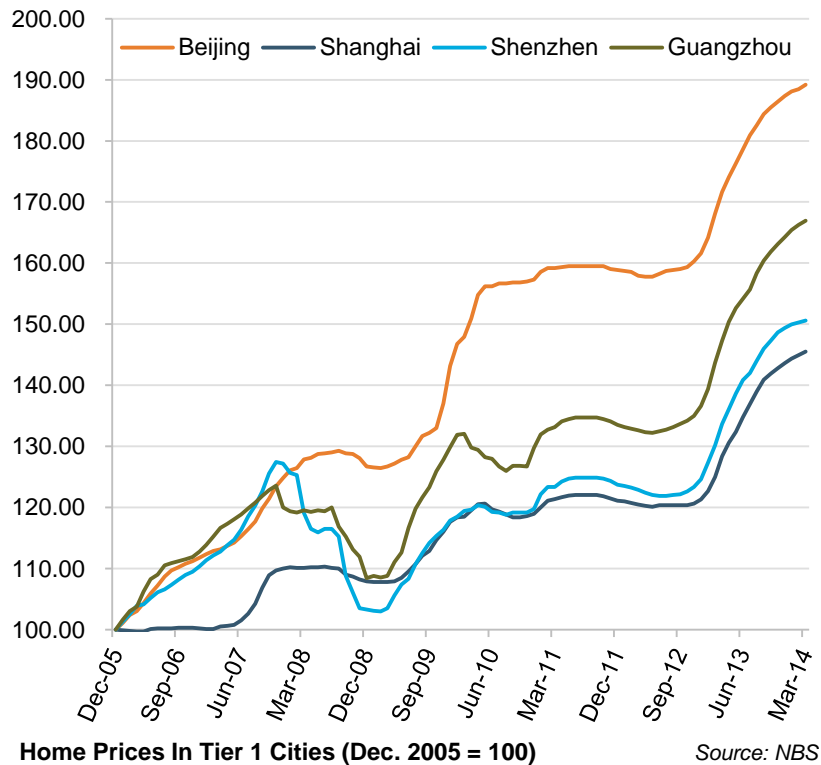
Trust Assets vs. Loans by Financial Institutions

Source: National Trustee Association



# CHINA HOME PRICES AND FLOOR SPACE SOLD | 57

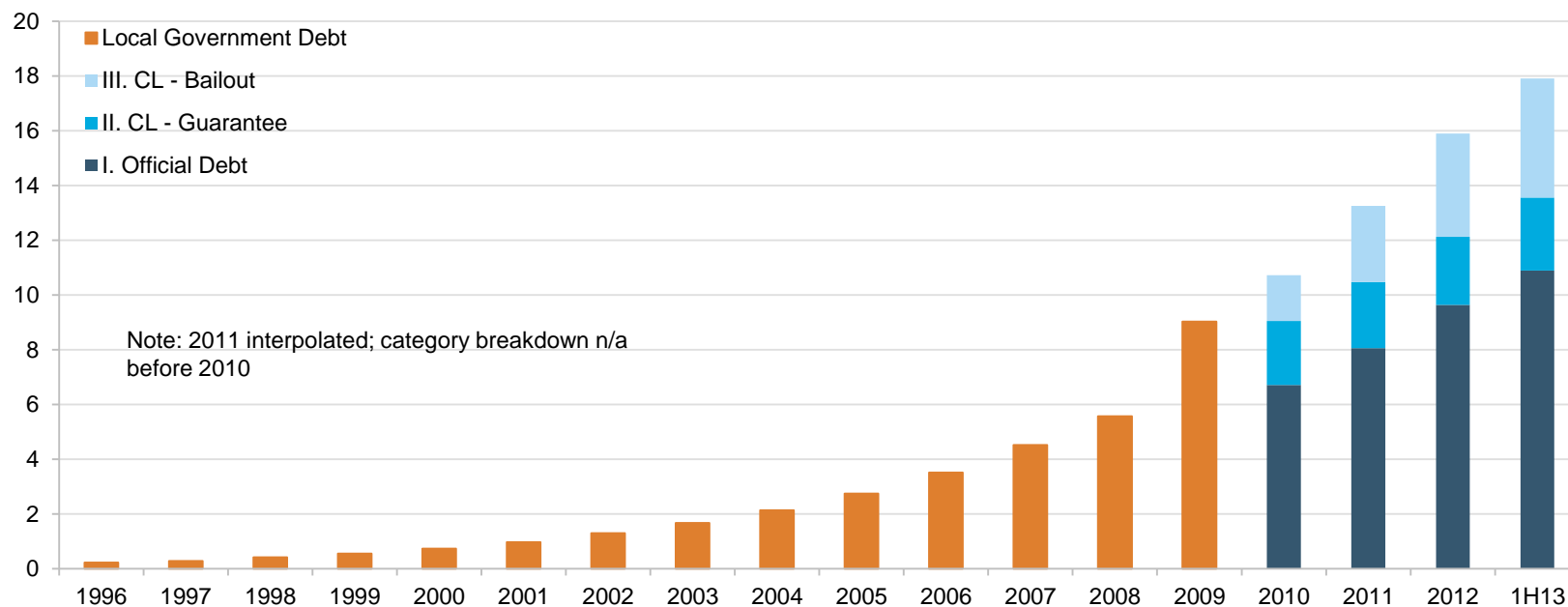
Home prices dipped during the financial crisis in 2008, but recovered very quickly in mid-2009. 2012 was the year when China strengthened property curbs, leading to a more gradual rise in floor space sold



# LOCAL DEBT UNDERSHOOTS ECONOMISTS' FORECASTS

China's long-awaited national debt audit report, released at the end of 2013, says that local government debt is not as big as had been feared. The broadest measure of all local government associated debt, summing up every contingent liability at face value, came in at RMB15.9 trn as at end-2012 and RMB17.9 trn as of this June

RMB trn



Long-Term Time Series of China's Local Gov't Debt

Source: REORIENT

# LOCAL DEBT FUNDED NEEDED INFRASTRUCTURE

86.77% of debt-fueled spending by Chinese local governments went to infrastructure projects rather than consumption. Beijing is confident that these investments will pay off in due course

RMB trn		2010	2012	1H13	1H change
Local	Govt Debt	6.71	9.63	10.89	13.1%
	CL - Guarantee	2.34	2.49	2.67	7.2%
	CL - Bailout	1.67	3.77	4.34	15.1%
	subtotal	10.72	15.89	17.89	12.6%
Central	Govt Debt		9.44	9.81	4.0%
	CL - Guarantee		0.28	0.26	-8.3%
	CL - Bailout		2.16	2.31	6.9%
	subtotal		11.88	12.38	4.2%
Total	Govt Debt		19.07	20.70	8.6%
	CL - Guarantee		2.49	2.67	7.2%
	CL - Bailout		5.93	6.65	12.1%
	subtotal		27.77	30.27	9.0%

CL = contingent liabilities

Source: NAO

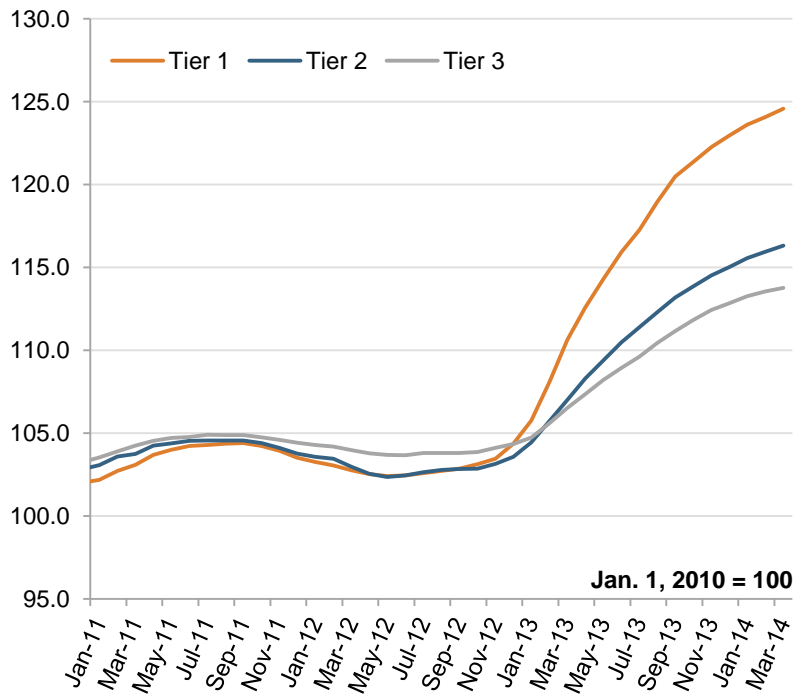
% Nominal GDP		2010	2012	1H13	1H change
Local	Govt Debt	16.7%	18.6%	20.0%	1.4%
	CL - Guarantee	5.8%	4.8%	4.9%	0.1%
	CL - Bailout	4.2%	7.3%	8.0%	0.7%
	subtotal	26.7%	30.6%	32.8%	2.2%
Central	Govt Debt		18.2%	18.0%	-0.2%
	CL - Guarantee		0.5%	0.5%	-0.1%
	CL - Bailout		7.3%	8.0%	0.7%
	subtotal		22.9%	22.7%	-0.2%
Total	Govt Debt		36.7%	38.0%	1.2%
	CL - Guarantee		4.8%	4.9%	0.1%
	CL - Bailout		11.4%	12.2%	0.8%
	subtotal		53.5%	55.6%	2.1%

CL = contingent liabilities

Source: REORIENT

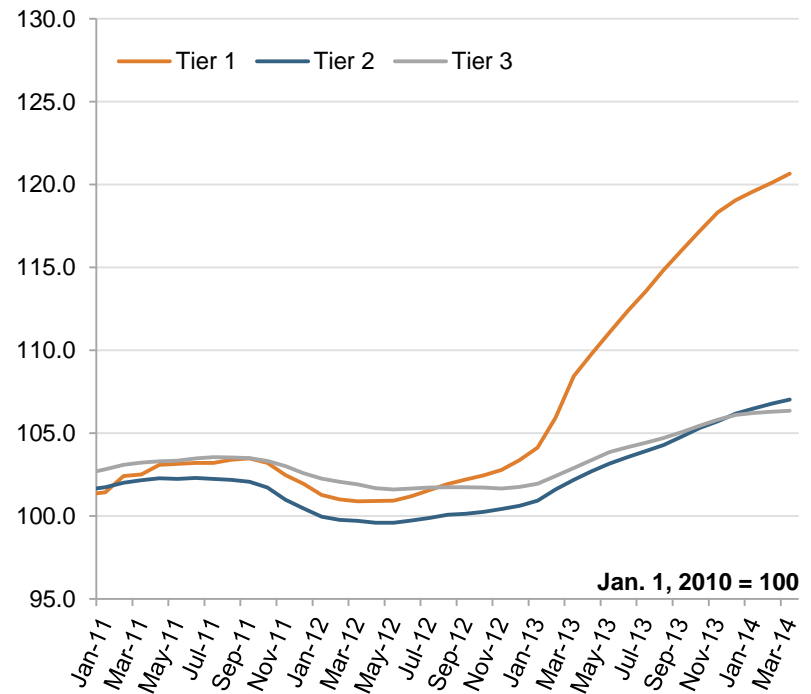
# LOWER-TIER HOME PRICES ARE VULNERABLE TO CORRECTION

Existing home prices have stopped rising in some regions. The lowest-ranked cities are without any doubt the most vulnerable to correction. In the current cycle, their prices were the slowest to rise and the first to fall



New Home Prices

Source: NBS, REORIENT

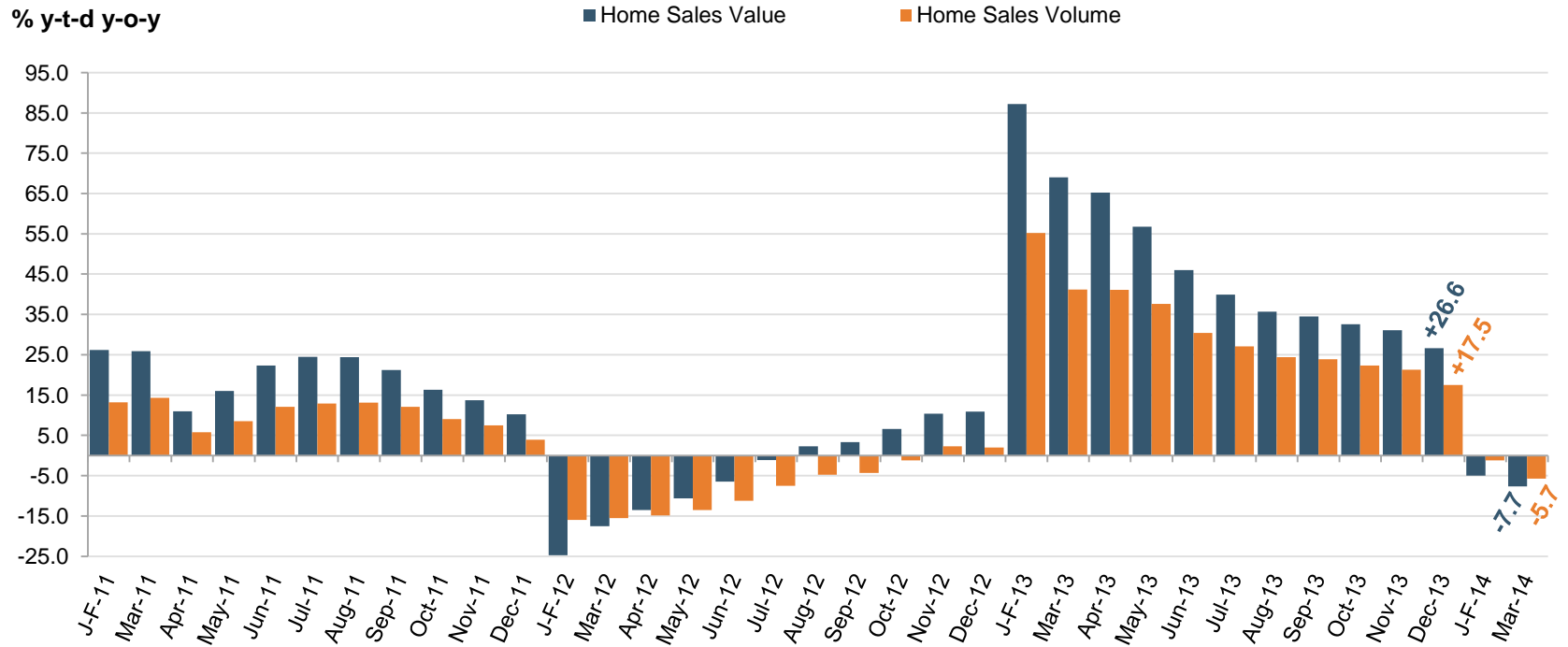


Existing Home Prices

Source: NBS, REORIENT

# NEW HOME SALES

New home sales during the Q1 fell both in value and in square footage after a very strong 2013. Overall sales in the next few quarters are expected to extend the declines, prompting developers alike to offer promotional discounts to move inventory and support sales volume



Home Sales

Source: NBS



## DISCLAIMER

This presentation has been prepared by REORIENT Financial Markets Limited ("RFM"). Copyright and other intellectual property rights in its contents are the sole property of RFM. Sources of information are believed to be reliable, RFM, its affiliates, its officers, employees and partners have made no independent verification and as such do not warrant its accuracy or completeness. Past performance is no guarantee of future results, and futures result may not meet our expectations due to a variety of economic, market and other factors. Any opinions or estimates given may change. RFM undertakes no obligation to provide recipients with any additional information or any update to or correction of the information contained herein. RFM, its officers, employees, affiliates and partners shall not be liable to any person in any way whatsoever for any losses, costs or claims howsoever arising from any inaccuracies or omissions in the information contained herein or any reliance on that information. The information contained herein is for information purposes only, is not intended to form the basis of any investment decision, should not be considered a recommendation by RFM or any other person in relation to any of the companies or securities referred to and does not constitute an offer or solicitation with respect to the purchase or sale of any investment or enter into any transaction. The content of this document are confidential and intended solely for the use of RFM and the client to whom it has been delivered. This information is directed exclusively at market professionals, financial intermediaries and institutional investor customers and is not intended for distribution to retail customers. It may not be reproduced or redistributed outside the recipient's organization. The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries. Persons who come into possession of this document are required to inform themselves of, and to observe, such restrictions. RFM, its officers, employees, affiliates, and partners may, from time to time, have long or short positions in, buy or sell and deal as principal in, the securities, or derivatives thereof, of companies referred to in this presentation. We may have an investment banking or other commercial relationship with and access to information from the issuer(s) of securities, financial products or other interests underlying a financial product or transaction.