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A Global Deal for Climate
Change

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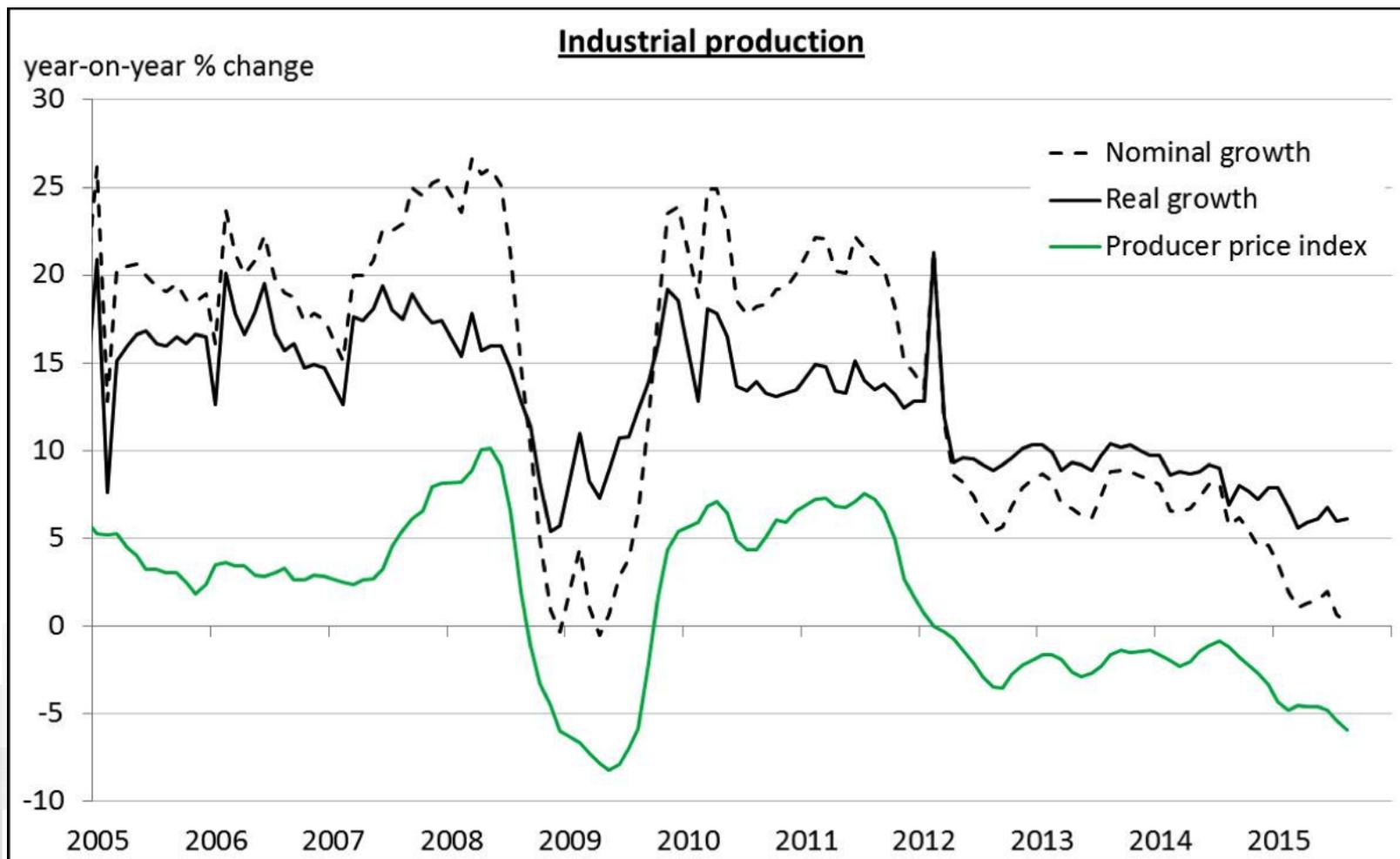
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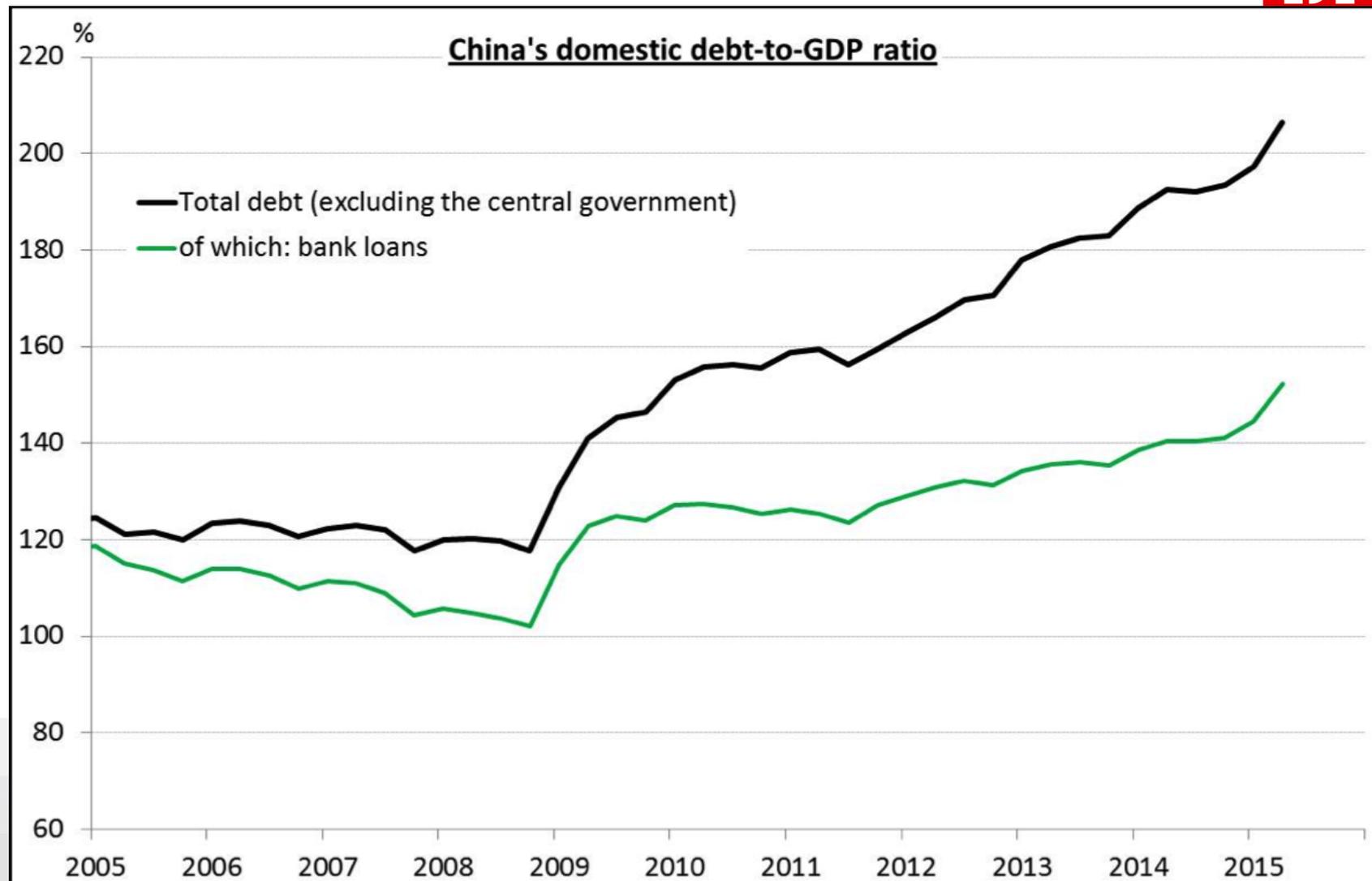


Clear and Present Challenges to the Chinese Economy

Dr. Keyu Jin

March 9th, 2016





Source: NBS, BNP Paribas)

The Coming Collapse of China (2001)

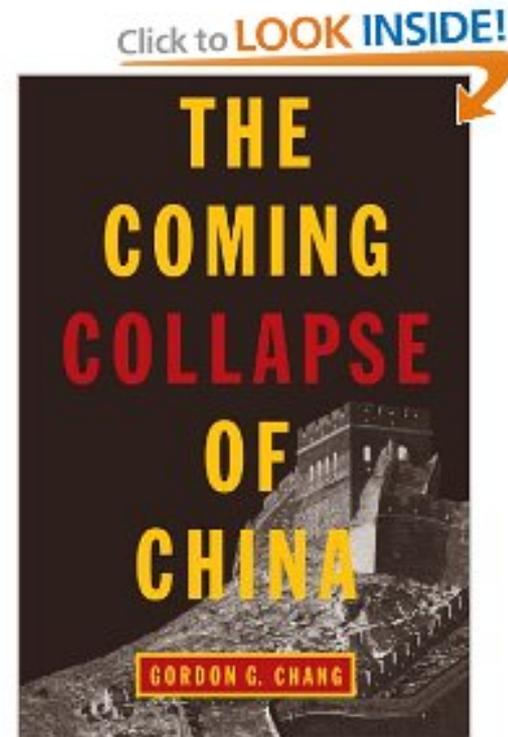


Chapter 2: “Lake of Gasoline: The discontent of the people is explosive”

Chapter 3: “Industrial Theme Parks: State-owned enterprises are dying”

Chapter 6: “The Banks That Sank: Chinese banks will fail”

Chapter 7: “Biting the Snakes: The state attacks the private sector”



China's 'Imminent Collapse'



Gordon Chang (2001):

The end of the modern Chinese state is near. The People's Republic has five years, perhaps ten, before it falls. This book tells why.

As Chang discovered, China is a nation of contradictions. Many of its state industries are virtually [bankrupt](#); its banking system sits on a mountain of unrecognized [bad debts](#); its agriculture is primitive; [pollution](#) is out of control; and government interference and [corruption](#) are killing off a number of new business ventures...

— *The New York Times*, September 9, 2001

And Again...

"The Coming Collapse of China: 2012 Edition", published by Foreign Policy magazine website, Gordon C. Chang admitted that his prediction was wrong, arguing that he was off only by one year: "Instead of 2011, the mighty communist party of China will fall in 2012. Bet on it."

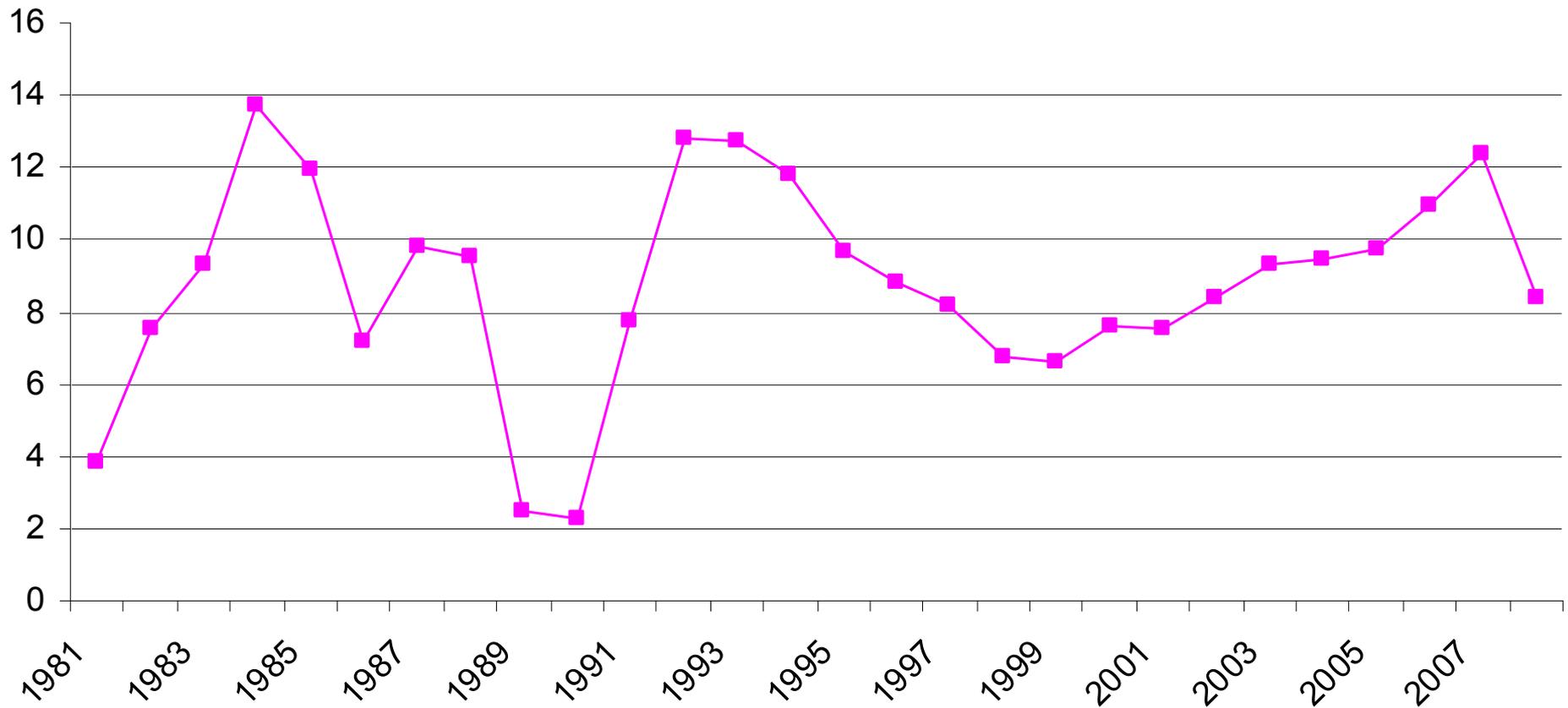
Shambaugh (2015):

Omens of millenarian change. The "endgame of Chinese communist rule has now begun," the system is close to "breaking point" and we are "witnessing the final phase."

Reform Driven Growth Cycles



GDP per capital Growth (% annual)



Sources of Growth



Decomposing China's Growth: 1952–2007

| <i>Average annual growth rates (%)</i> | | | | | |
|---|-----------------------|---------------------------------|-----------------------------|------------------------------|------------|
| <i>Period</i> | <i>GDP per capita</i> | <i>Labor participation rate</i> | <i>Capital/output ratio</i> | <i>Average human capital</i> | <i>TFP</i> |
| 1952–1978 | 2.97 | 0.11 | 3.45 | 1.55 | -1.07 |
| 1978–2007 | 8.12 | 0.57 | 0.04 | 1.18 | 3.16 |
| <i>Contributions to per capita GDP growth</i> | | | | | |
| <i>Period</i> | <i>GDP per capita</i> | <i>Labor participation rate</i> | <i>Capital/output ratio</i> | <i>Average human capital</i> | <i>TFP</i> |
| 1952–1978 | 100 | 3.63 | 116.15 | 52.25 | -72.03 |
| 1978–2007 | 100 | 7.05 | 0.51 | 14.55 | 77.89 |

- Productivity Growth between 1978-2007
 - State sector (1.52%) vs. Private (4.56%)
- Also, rapid productivity growth in private helped absorb labor transferred out of agriculture (420 million jobs)
- Absent private sector productivity growth, GDP/per capita growth 3.79% lower annually
- If not for the large capital misallocation, even larger gains.

Present Challenges, not "New Normal"



1. The Financial Markets

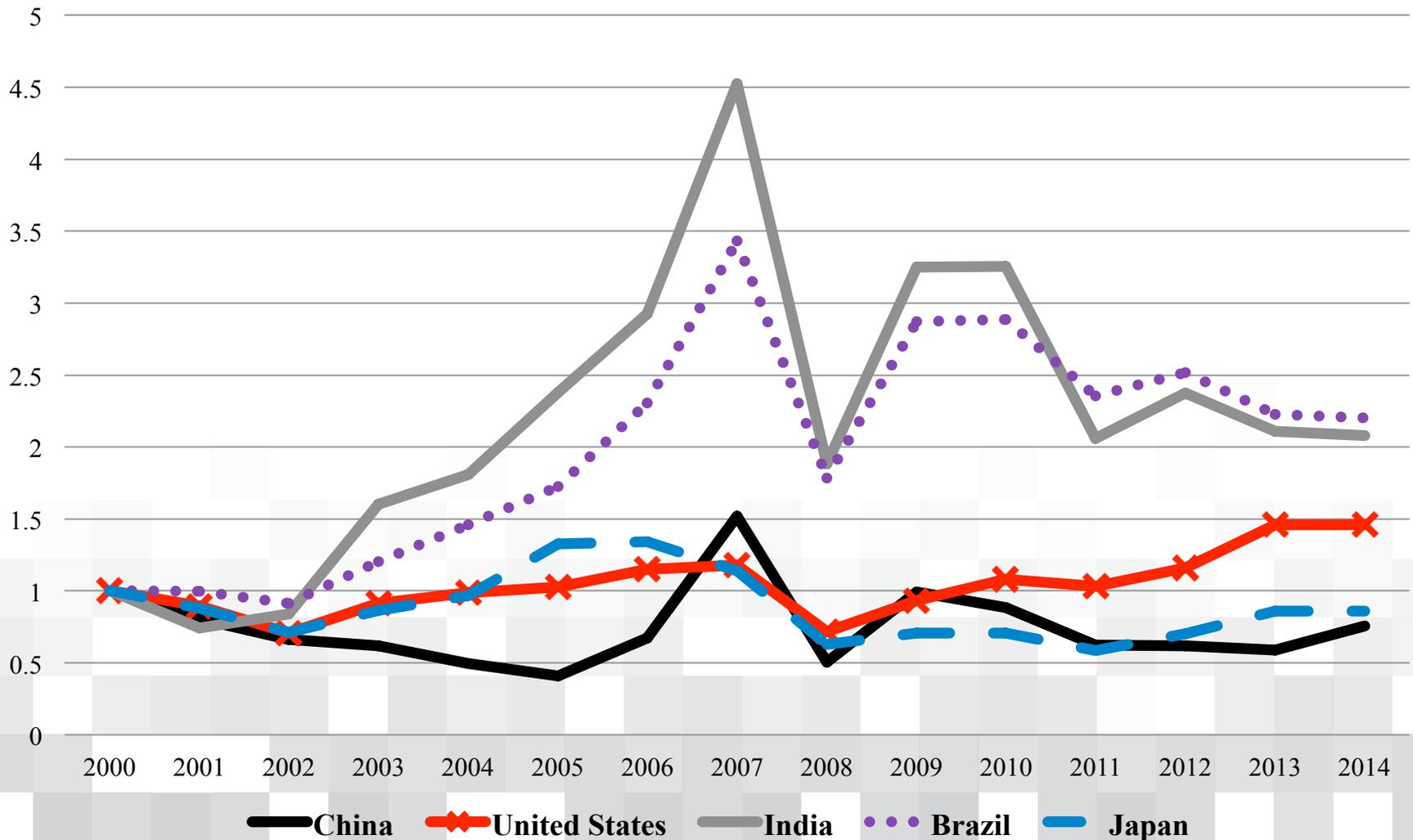
2. The Growth Model

3. Political Reforms

Buy-and-Hold Returns of Listed Stocks in Large Countries (2000-2014; inflation adjusted; dividends included)



Value-Weighted Buy-and-Hold Returns

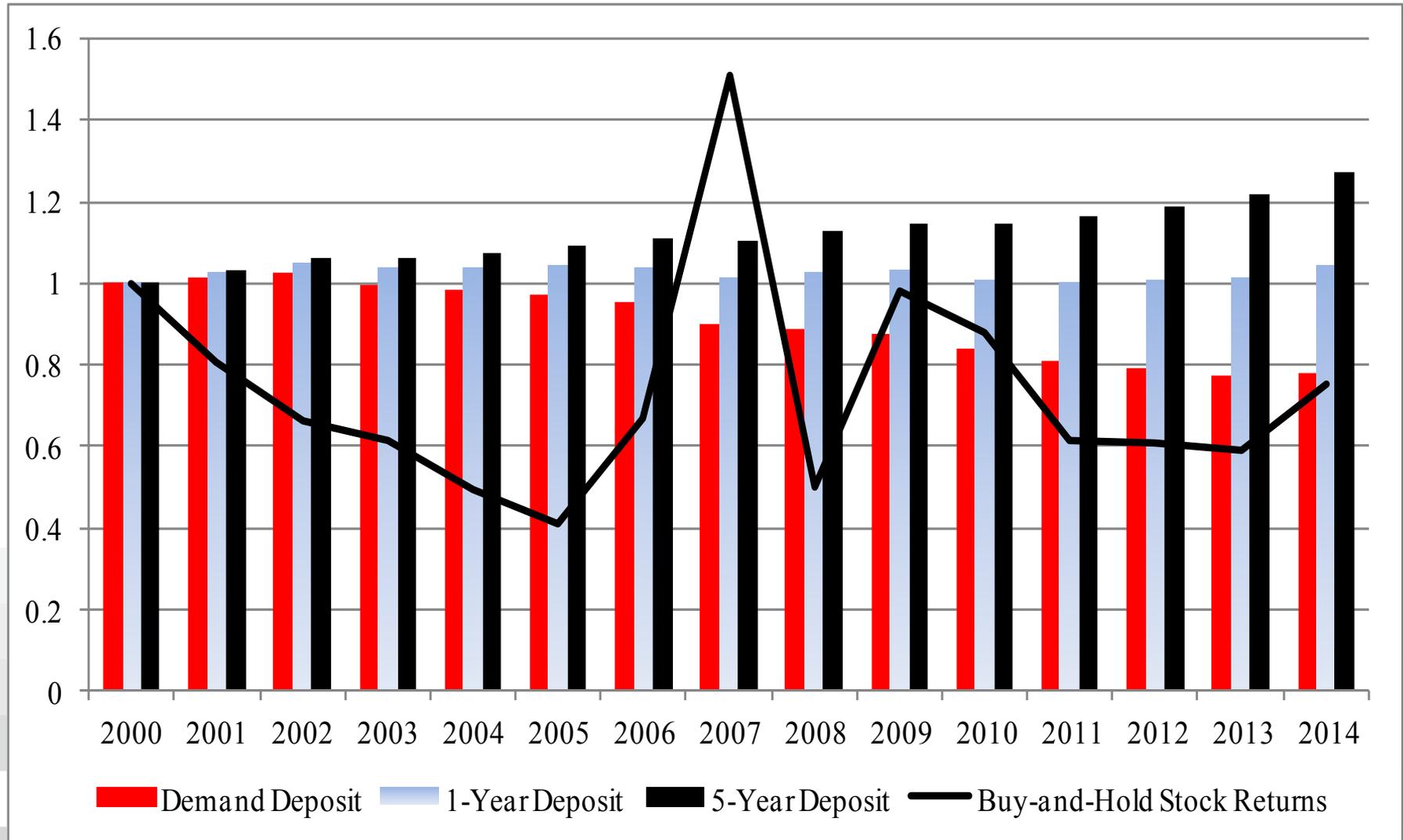


Source: Allen, Qian, Shang, Zhu (2015)

Buy-and-hold Returns of Stocks vs. Bank Deposits in China



(2000-2014; inflation adjusted)



Source: Allen et al. (2015)

Correlation between Economic Growth and Stock Returns

(5-year rolling window until 2013)



| Ranking | Country | Index | Period | Correlation | p-value |
|---------|----------------|--------------------|-----------|-------------|-----------|
| 1 | United States | S&P500 US | 1950-2013 | 46.32% | 0.0001*** |
| 2 | China | SSE China | 1992-2013 | 9.67% | 0.7120 |
| 3 | Japan | Nikkei Japan | 1971-2013 | 65.04% | 0.0000*** |
| 4 | Germany | DAX Index | 1992-2013 | 84.65% | 0.0000*** |
| 5 | France | CAC 40 | 1988-2013 | 77.63% | 0.0000*** |
| 6 | United Kingdom | FT30 UK | 1956-2013 | 54.40% | 0.0000*** |
| 7 | Brazil | IBOV | 1990-2013 | 43.49% | 0.0627* |
| 8 | Russia | RTS Russia | 1996-2013 | 74.49% | 0.0035*** |
| 9 | Italy | FTSE MIB Index | 1998-2013 | 66.89% | 0.0244** |
| 10 | India | BSE Sensex | 1980-2013 | 4.32% | 0.8238 |
| 11 | Canada | SPTSX Index | 1961-2013 | 9.15% | 0.5364 |
| 12 | Australia | ASX 200 Index | 1993-2013 | 73.38% | 0.0012*** |
| 13 | Spain | IBEX 35 Index | 1988-2013 | 53.58% | 0.0123** |
| 14 | Mexico | Mexbol Index | 1995-2013 | 14.48% | 0.6213 |
| 15 | South Korea | KOSPI Korea | 1981-2013 | 55.39% | 0.0022*** |
| 16 | Indonesia | JCI Index | 1984-2013 | 54.78% | 0.0046*** |
| 17 | Turkey | XU100 Index | 1989-2013 | 10.08% | 0.6725 |
| 18 | Netherlands | AEX | 1984-2013 | 76.68% | 0.0000*** |
| 19 | Saudi Arabia | DFMGI Index | 1995-2013 | 18.61% | 0.5241 |
| 20 | Switzerland | OMX | 1987-2013 | 19.02% | 0.3966 |
| A1 | South Africa | TOP40 South Africa | 1996-2013 | 84.96% | 0.0002*** |
| A2 | Taiwan | TAIEX Taiwan | 1981-2013 | 56.81% | 0.0016*** |

Source: Allen et al. (2015)

Why is there a divergence from overall economic growth?

Explanations:

- Selection Bias
- Entry (IPO) and Exit (delisting) and adverse selection
- How efficient is large-scale investment?

Allen et al. (2015)

Corporate Sectors in China



Panel B1. Net Income Percentage

| Year | SOE/All | Listed/All | Listed SOE/Listed All | Unlisted Non-SOE/Unlisted All |
|------|---------|------------|-----------------------|-------------------------------|
| 2000 | 53.74% | 35.10% | 89.94% | 65.84% |
| 2001 | 49.03% | 24.96% | 94.50% | 66.09% |
| 2002 | 44.10% | 24.23% | 90.71% | 70.81% |
| 2003 | 43.66% | 25.42% | 88.31% | 71.55% |
| 2004 | 41.41% | 25.85% | 89.85% | 75.47% |
| 2005 | 39.58% | 23.72% | 92.46% | 76.87% |
| 2006 | 39.92% | 22.15% | 90.26% | 74.40% |
| 2007 | 36.63% | 21.20% | 86.68% | 76.84% |
| 2008 | 27.98% | 17.45% | 85.02% | 84.07% |
| 2009 | 26.02% | 15.73% | 80.97% | 84.24% |
| 2010 | 27.34% | 15.14% | 79.88% | 82.04% |
| 2011 | 25.65% | 14.42% | 77.43% | 83.08% |
| 2012 | 23.48% | 13.70% | 78.17% | 85.20% |
| 2013 | 21.25% | 17.62% | 79.20% | 91.14% |
| 2014 | NA | 19.32% | 75.55% | NA |

Source: Allen et al. (2015)

Corporate Sectors in China



Panel B2. Net Income Growth

| Year | All | SOE | Non-SOE | Listed | Unlisted | Listed SOE | Listed Non-SOE | Unlisted Non-SOE |
|-------------|---------|--------|---------|--------|----------|---------------|-------------------|---------------------|
| 2001 | 0.077 | -0.008 | 0.181 | -0.192 | 0.238 | -0.217 | 0.018 | 0.197 |
| 2002 | 0.222 | 0.102 | 0.344 | 0.270 | 0.203 | 0.107 | 1.307 | 0.264 |
| 2003 | 0.441 | 0.457 | 0.428 | 0.625 | 0.366 | 0.586 | 0.743 | 0.381 |
| 2004 | 0.431 | 0.421 | 0.439 | 0.418 | 0.437 | 0.468 | 0.278 | 0.470 |
| 2005 | 0.241 | 0.196 | 0.279 | 0.130 | 0.294 | 0.132 | 0.122 | 0.305 |
| 2006 | 0.318 | 0.302 | 0.330 | 0.215 | 0.361 | 0.176 | 0.341 | 0.329 |
| 2007 | 0.392 | 0.272 | 0.485 | 0.382 | 0.396 | 0.327 | 0.538 | 0.477 |
| 2008 | 0.125 | -0.160 | 0.314 | -0.355 | 0.304 | -0.361 | -0.339 | 0.412 |
| 2009 | 0.130 | 0.025 | 0.175 | 0.403 | 0.080 | 0.291 | 0.668 | 0.140 |
| 2010 | 0.536 | 0.587 | 0.517 | 0.588 | 0.523 | 0.556 | 0.646 | 0.504 |
| 2011 | 0.157 | 0.117 | 0.173 | -0.014 | 0.200 | 0.010 | -0.056 | 0.199 |
| 2012 | 0.008 | NA | NA | -0.111 | 0.033 | -0.134 | -0.070 | NA |
| Average | 0.257 | 0.210 | 0.333 | 0.197 | 0.286 | 0.162 | 0.350 | 0.334 |
| Correlation | 0.597** | 0.388 | 0.531* | 0.390 | 0.610** | 0.410 | 0.170 | 0.531* |
| P-Value | 0.040 | 0.239 | 0.093 | 0.210 | 0.035 | 0.186 | 0.597 | 0.093 |

Source: Allen et al. (2015)

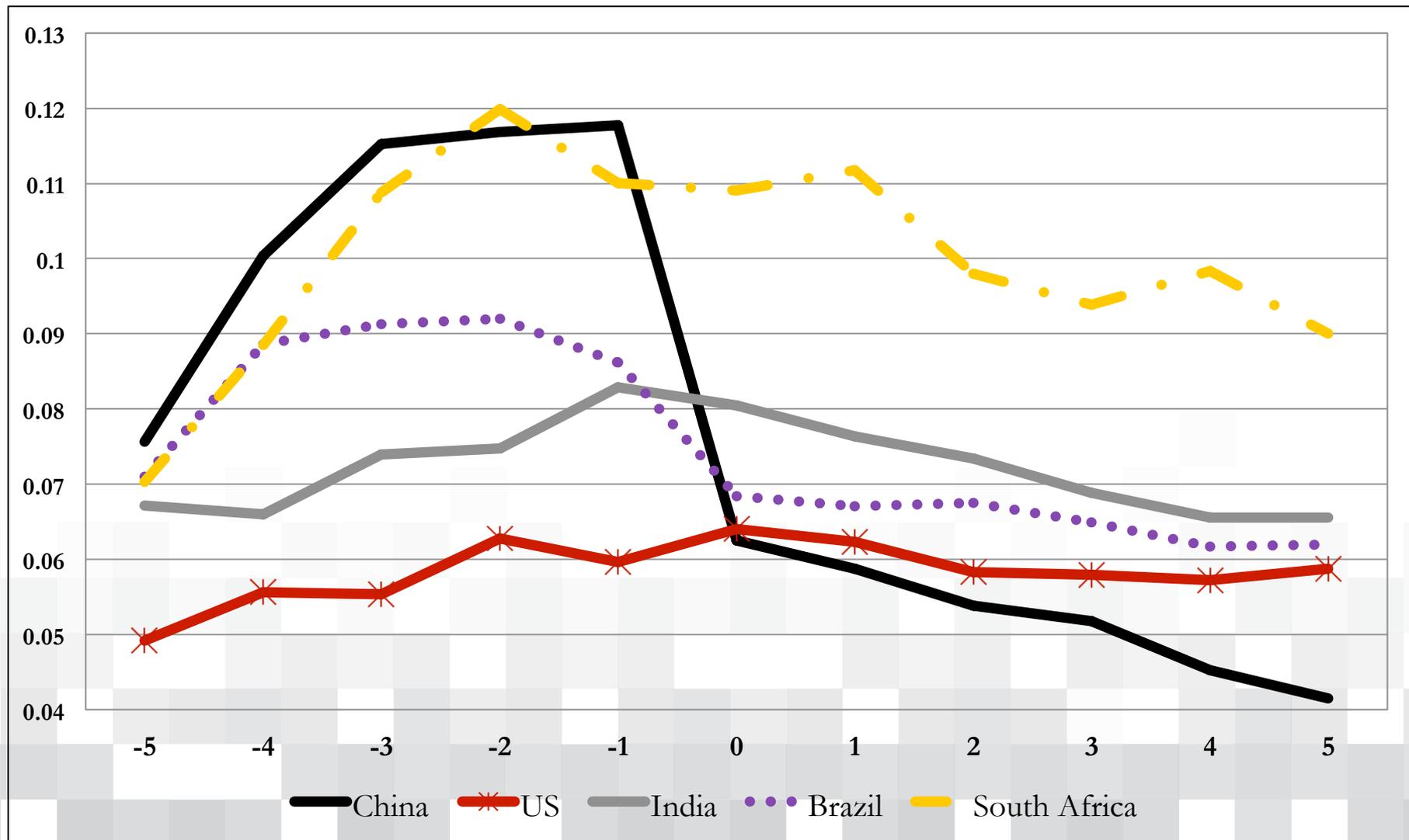
Problematic Listing Process



*BAT---Baidu, Alibaba and Tencent all publicly listed—
abroad*

- Each IPO must be approved by the CSRC, and now explicit quotas allocated to different regions
- Firms must also show profits in 3 consecutive years, among other financial requirements
- Initial purpose of setting up stock market was to help privatization of SOEs
- Firms with connections to regulators are more likely to be listed

ROA around IPO: Listed firms



Source: Allen et al. (2015)

Problems with Exit, and Tunneling



- **Bad firms don't exit**
 - 1% delisted every year (compared to 10-20% on average in other countries)
 - Fewer than 10 firms delist due to negative earnings.
 - Valuable 'shell'
 - Poor performing firms that linger contribute to the poor stock performance
- Also, listed firms make larger but less inefficient investment (8% capital exp/assets compared to 3.5% in US and yet lower net cash flows)
- Controlling shareholders divert assets by providing loan guarantees to related parties (**deficiencies in corporate governance**)

Why Stock Market Reform is key



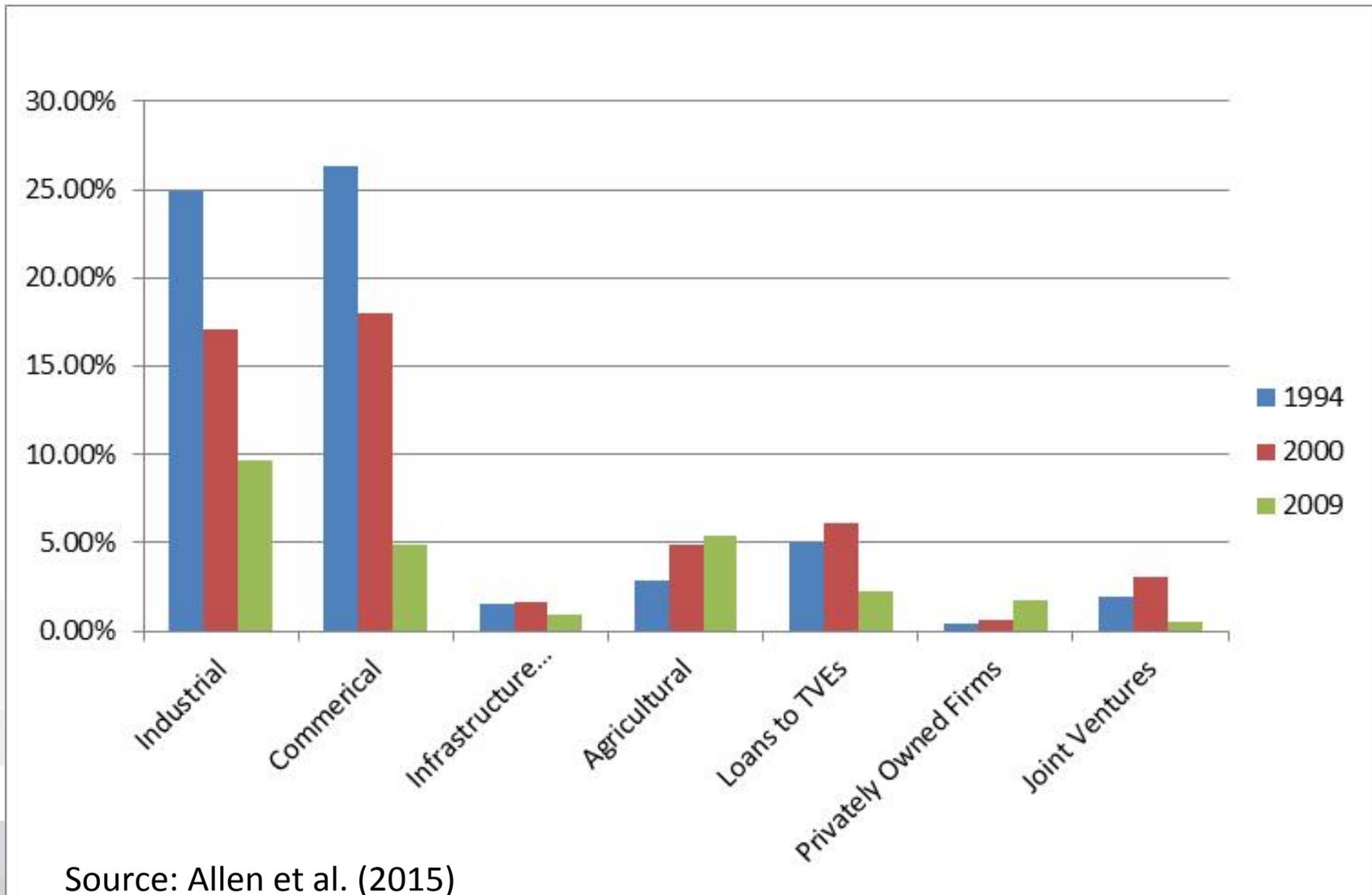
- Resources flow into real estate
- Major real distortions
- Deprives source of funding for consumption and service, high tech sectors
- Risk and rising household saving

Overview of China's Financial Markets



1. 2001-2011: China's stock market is 63% of GDP (compared to 57% for average of major EM)
2. Value traded (size of market): 82% of GDP (compared to 29% in EM)
3. Bank Credit/GDP: 111% compared to 40% in EM
4. NPLs/Loans at 11% compared to 8% (low efficiency)
5. Bank credit **more important** than stock market compared to EM, also comparatively **less efficient** than markets, and by law commercial banks **face tighter restrictions**

Breakdown of Bank Loans



Source: Allen et al. (2015)

Misallocation



Large differences in capital-labor ratio

- State (1.75) vs. Private (0.67)
- Investment/GDP ratio increased from 24% to 45% between 1978-2008
- 2.51% average growth for non-state, 6.43% for state

State absorbs half of the investment, while contributing to less than 1/3 of GDP.

Puzzle 2



Despite repressive financial markets, extraordinary growth

1. Stock market inefficiency and ineffectiveness in allocating resources
2. Bank loans primarily lent to SOEs
3. How did firms grow? **Alternative Financing**

Alternative Financing



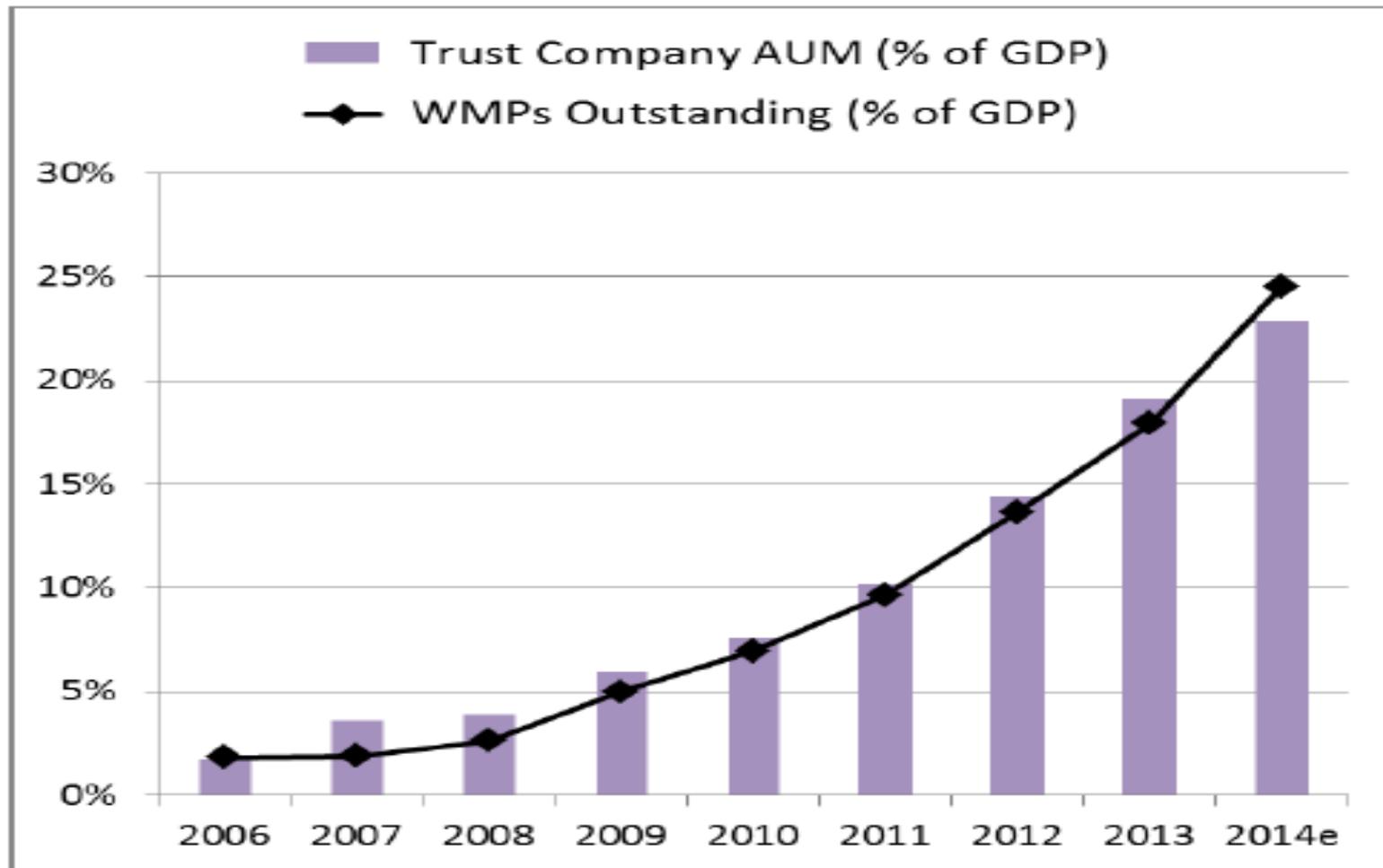
During startup phase

- a. funds from family and friends
- b. Since 2010, peer-to-peer lending (\$1.6 billions)
- c. Internal financing

Even illegal channels, smuggling, bribery, insider trading and speculations of financial markets and real estate, underground or unofficial businesses to accumulate seed capital

Growth phase: financing from private credit agencies and trade credits rather than banks

The Rise of Shadow Banking



Source: PBOC, CBRC, IMF from Hachem and Song (2015)

Rise of Shadow Banking



Circumvent regulatory requirements

- a. Funding demand much higher than supply of bank loans due to regulatory restrictions
- b. Restrictions on real estate loans falls short of meeting local gvt financing platform and demand in real estate (only through trust loans)
- c. Chinese households demanding higher required return than deposit interest rates
- d. Banks have to meet LTD by raising funds issuing wealth management products (WMP)
 - 2011-2013 : 2.3 trillion to 9.5 trillion RMB

Corporate Governance? Institutions?



How to overcome lack of legal and contract enforcements?

1. Competition in product and input markets, only strongest firms survive
2. Reputation, trust, and relationships
3. Absent religion, Confucian social values, highest level of social trust among a group of 40 countries

Evidence that reputation and relationships make financing channels and governance mechanism work

Key Financial Reforms



Banking Sector:

- Increasing consumer loans (1% to 17% between 1998-2013)
- Privatizing banks (listing) enhances efficiency
 - 4 of the 10 largest banks are Chinese
- More competition through entry of private and foreign banks?
- Government being majority owner (enhance regulation of large financial institutions and prevent banking and financial crises)
- Poor and inconsistent enforcement of bankruptcy laws and credit protection

Present Challenges

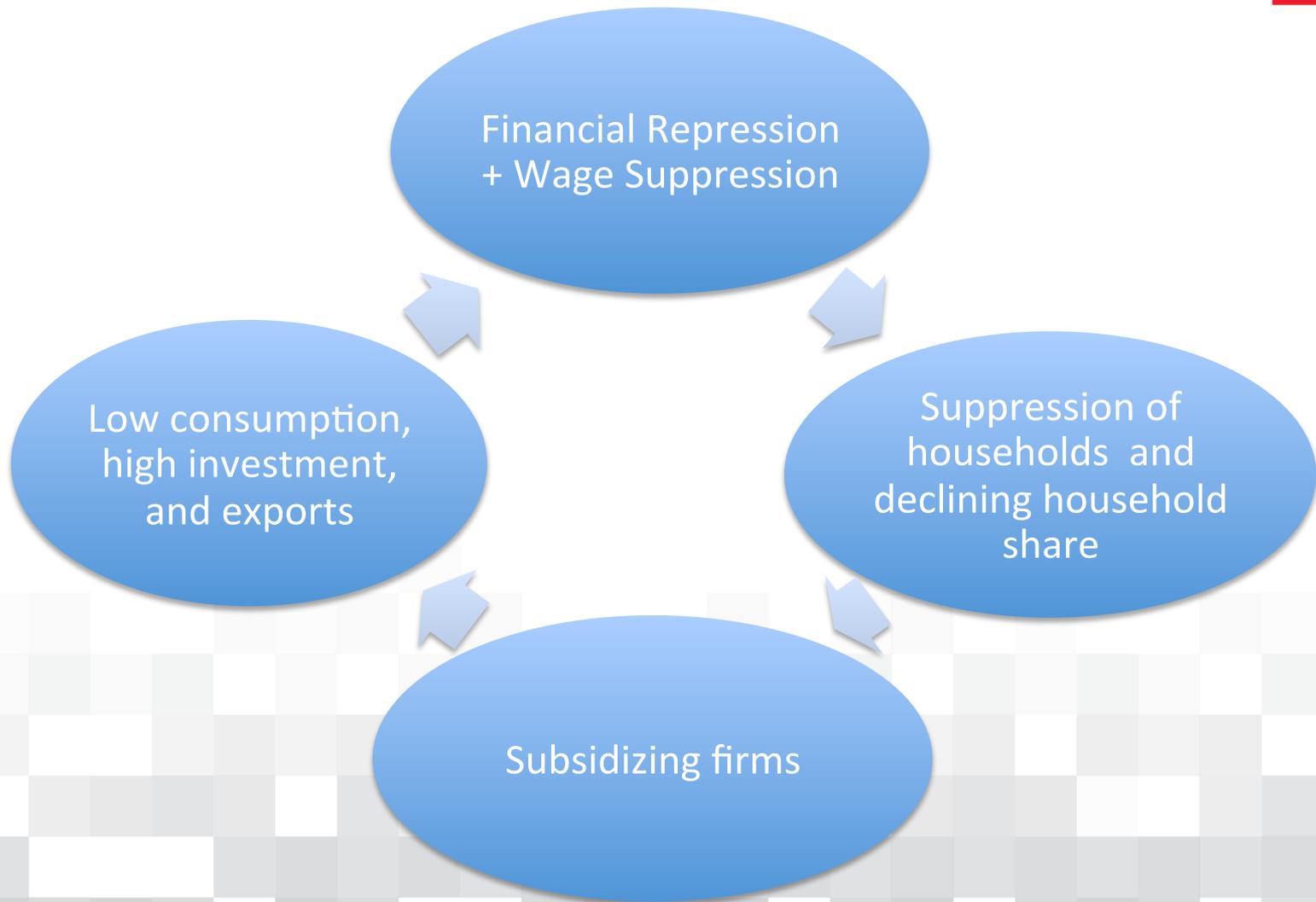


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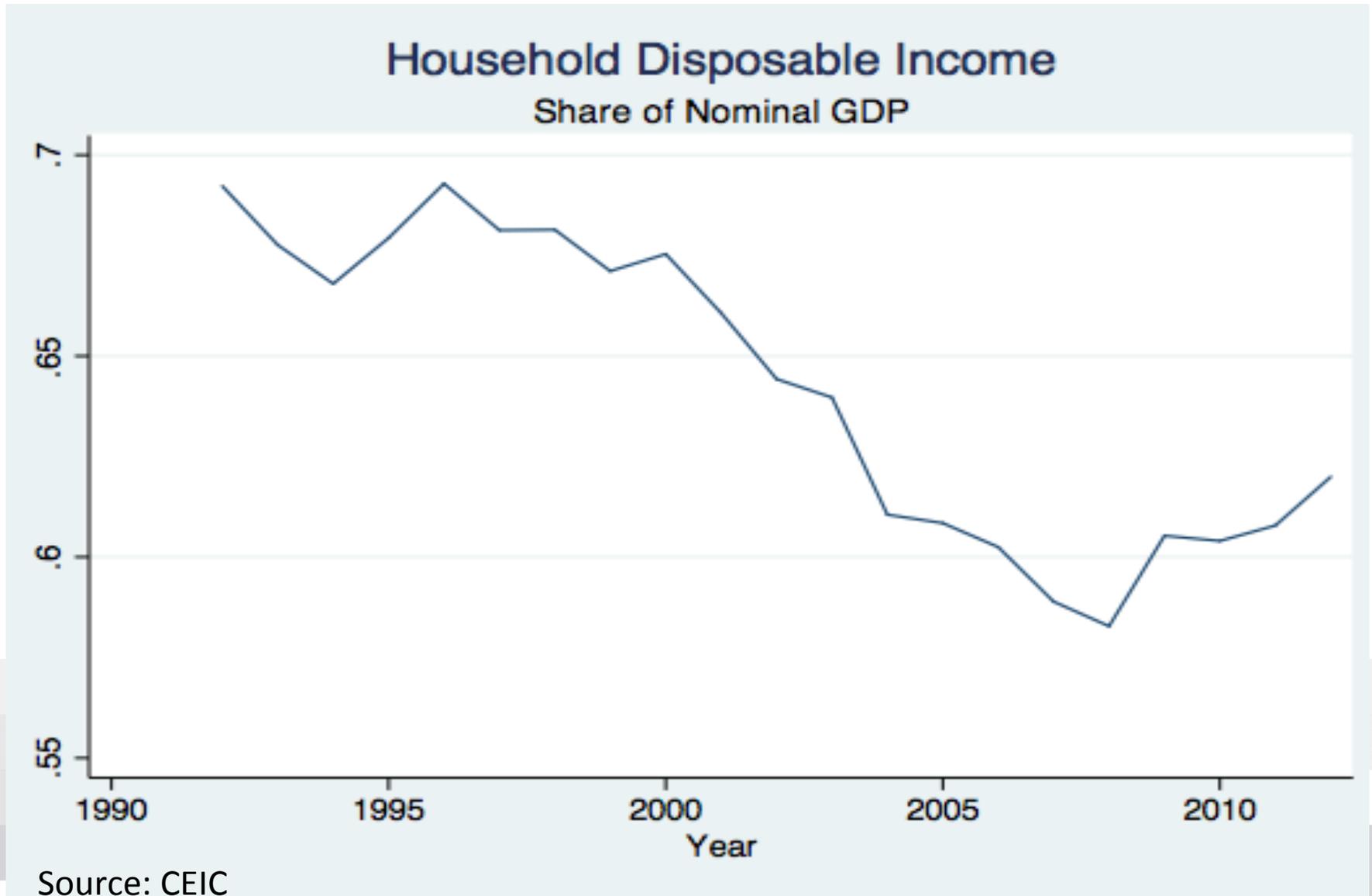
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Vicious Loop



A new normal of consumption-led growth?



3. Reform Challenges



- First ideological shift: **economics**
- Second ideological shift: **institutions**
- New Normal or hard work about to begin?
- Necessity of **Political Reforms**
 - Conflicts of interest
 - Social concerns

Some Room for Optimism?



- Urbanization
- Developing services
- Human capital
- Government levers

“The old world is dying, and the new world struggles to be born: now is the time of monsters.”

----Gramsci