



Indicators and Impact of China's Changing Economy

May 2014



China's Great Rebalancing Act

After three decades of rapid economic growth China is now at a critical inflection point – from investment-led growth to a more sustainable model of domestic consumption



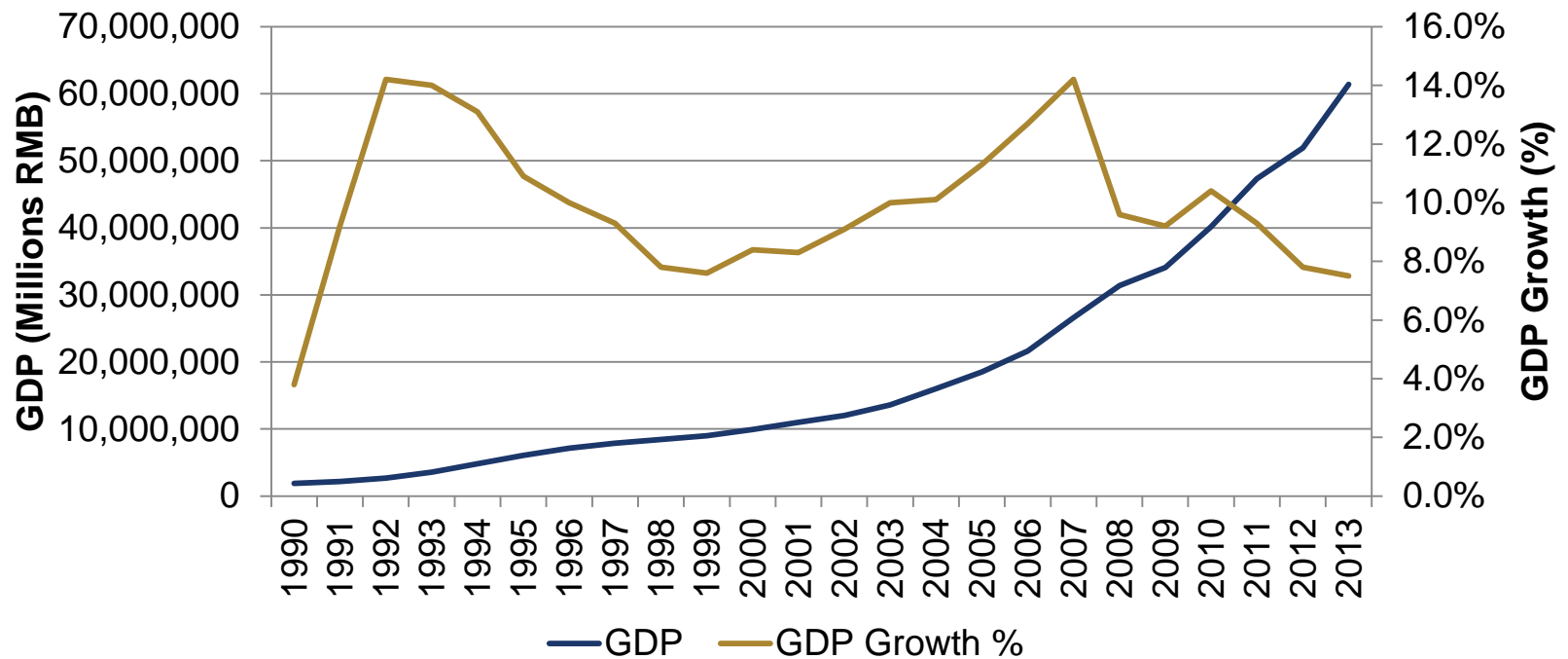
Key Questions:

- Just how imbalanced is China's economy?
- How did China get here?
- What sectors are starting to show signs of vulnerability?
- What are some likely scenarios to come?
- What is the impact on businesses?



China's Economic Growth – The Old Story

The IMF had estimated that the Chinese economy may overtake the US by the end of this decade



According the a recent report by the World Bank's International Comparison Program, China's economy will overtake the US economy in terms of size on a PPP basis sometime in 2014



Growth Prospects - Assessment from the Top

However, China's leadership has recognized the vulnerability of the country's continued economic growth...for some time already



As early as 2007, then Premier Wen Jiabao warned:

“China's' economy is unstable, unbalanced, uncoordinated and unsustainable.”

“中国经济存在不稳定、不平衡、不协调、不可持续的问题。”



Fundamental Sources of Economic Growth

Understanding Premier Wen's comments

There are three basic sources of economic growth:

- Increase in Labor
- Increase in Capital
- Increase in Productivity (from existing labor and capital)

China's economic growth so far has been largely input-driven: first by labor and then by capital/investment.

Input-driven growth – although important at early stages of development – is not sustainable.

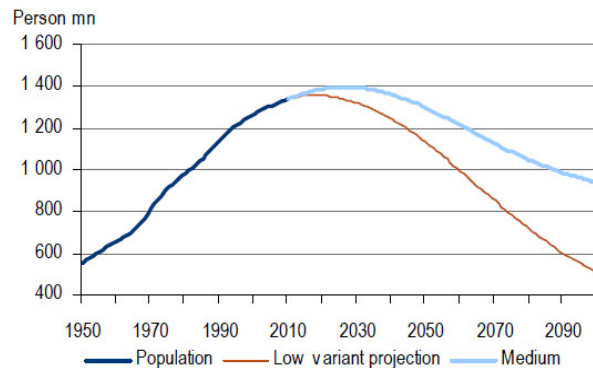
Proxies to analyze China's situation include:

- Labor = Population
- Capital = Fixed Asset Investment
- Productivity = Urbanization

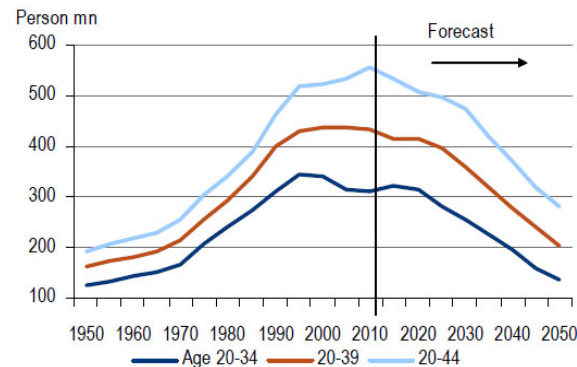


Labor: China an Aging Nation – Consequences of the One-Child Policy

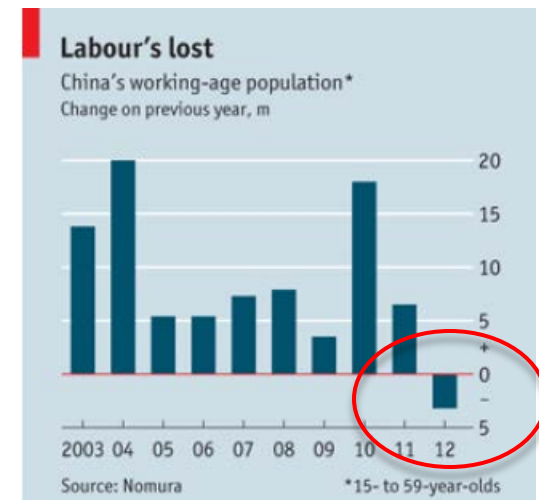
Overall Population Will Peak Around 2020



China's Labor Force Has Already Peaked



2012 Marked a Key Inflection Point



"The demographic dividend that has driven growth in China for many years is now coming to an end." - Ma Jiantang, head of China's National Bureau of Statistics

China's aging demographics mean no further inputs from labor as a source of economic growth



Labor: China an Aging Nation – Trend Will Continue Despite Reform

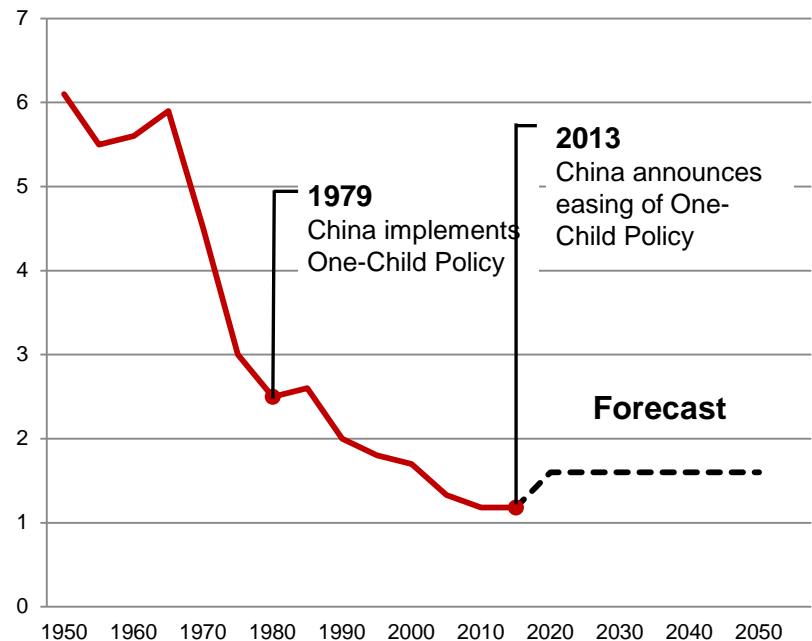
Even with the recent announcement of an easing of the One-Child Policy, the demographic momentum remains in place and the overall trends will not change significantly



"There is no nationwide timetable for the implementation. Each province, city or district should make a specific timetable based on local conditions."
- Wang Peian, Vice Minister of the National Health and Family Planning Commission, Nov. 2013

Total Fertility Rate Estimates

Number of children per woman

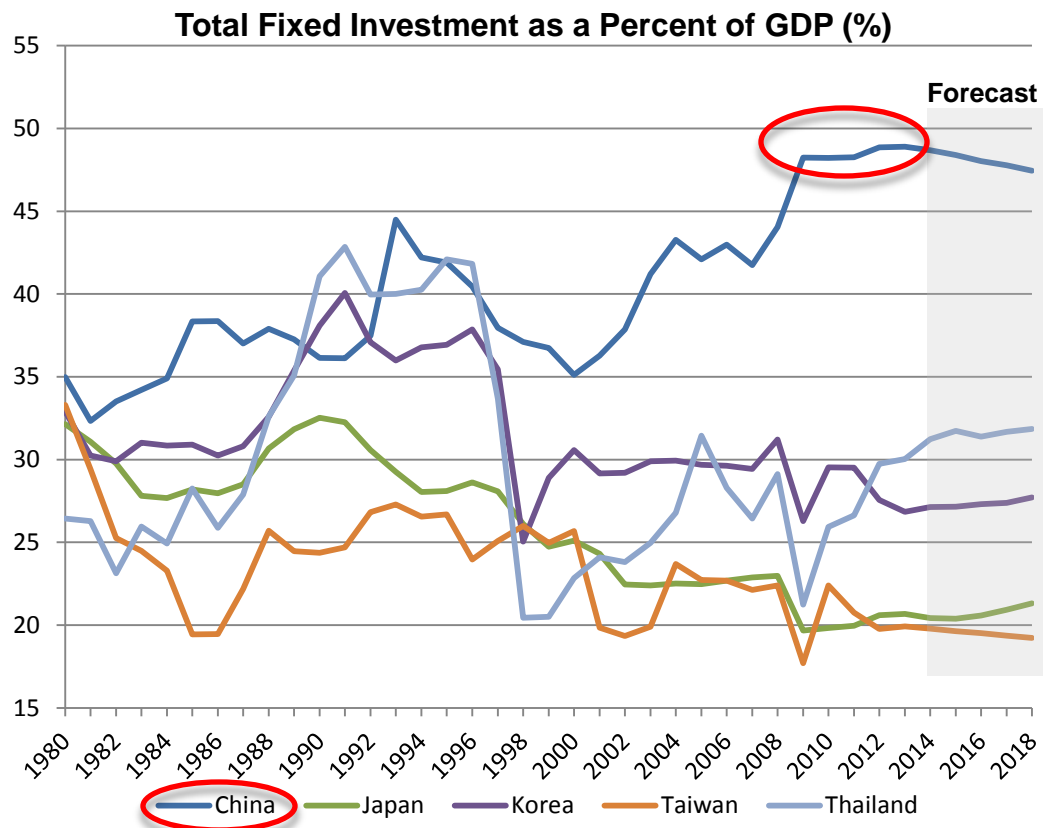


Impact from the policy change may result in an increase in the rate from approximately 1.2 to around 1.8, but still below the 2.1 level required for a stable population

Source: United Nations; International Monetary Fund; The Economist; Los Angeles Times



Capital: China's Overinvestment – Unbalanced and Unsustainable



Fixed investment as a component of China's GDP growth has increased significantly over the last decade to unsustainable levels.

China now has a level higher than Japan (33%) or Korea (38%) at the peak of their growth booms.

Developed economies average about 20% or less.

“Economic growth that is based on expansion of inputs, rather than on growth in output per unit of input, is inevitably subject to diminishing returns.”

Paul Krugman, 'Myth of Asia's Miracle'

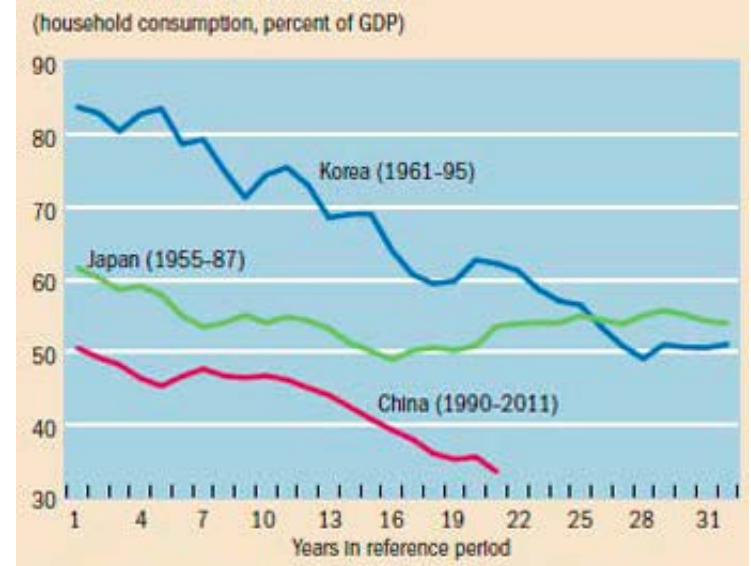
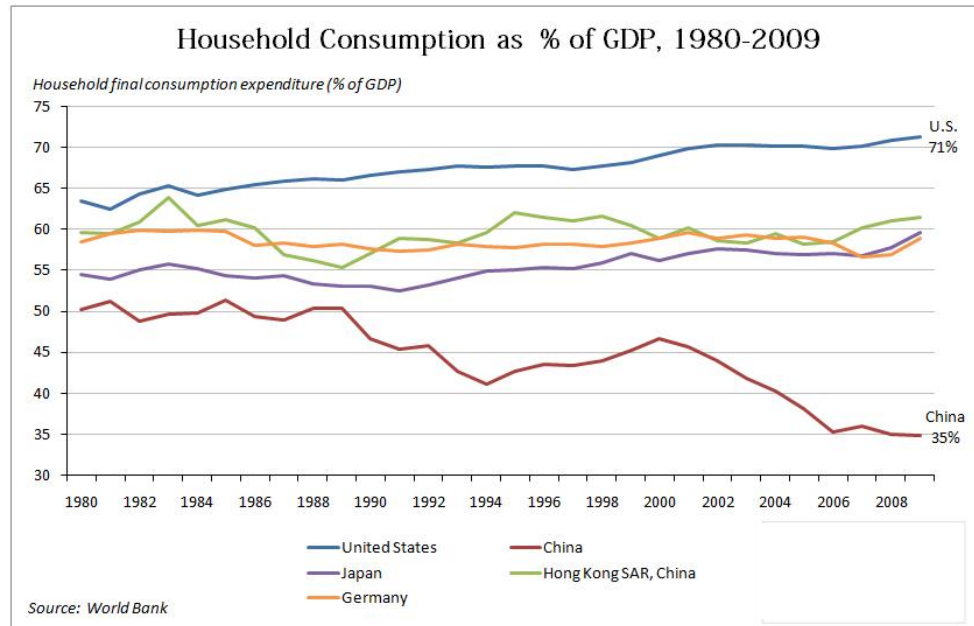


Capital: China's Overinvestment - Domestic Consumption Imbalanced

Domestic consumption as a percentage of GDP has fallen as China's economic growth took off

Domestic Consumption (as % of GDP)				
Year	2000	2011	2012	2013
Percentage	45%	36%	36%	35%

Even much lower by historical comparisons with other Asian economies during their boom years





China's Overinvestment – Unbalanced and Unsustainable

Large-scale capital investment projects have included:

- Infrastructure – China's new high-speed rail system; roads and bridges
- Support for SOEs - growing industrial and manufacturing overcapacity
- Real Estate



Dongguan' New South China Mall – 98% Empty



Ordos – China's "Ghost City" in Inner Mongolia



China's Overinvestment – Unbalanced and Unsustainable



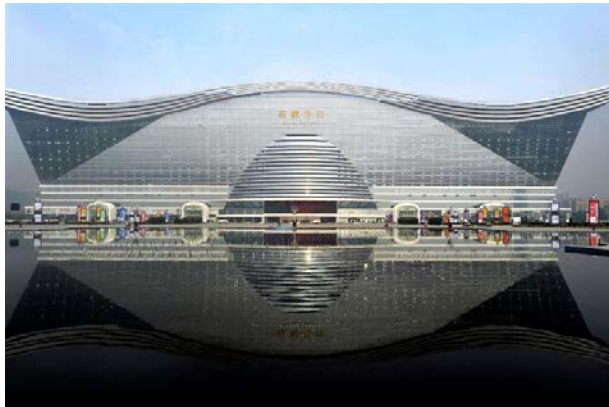
Jiaozhou Bay Bridge (near Qingdao, Shandong Province) - According to Guinness World Records, this is the world's longest bridge over water at 41.58 kilometers (25.84 mi).

Designed to carry 30,000 vehicles per day but it sees only about one-third that amount.

The construction project also included an undersea tunnel along the same route.



China's Overinvestment – Unbalanced and Unsustainable



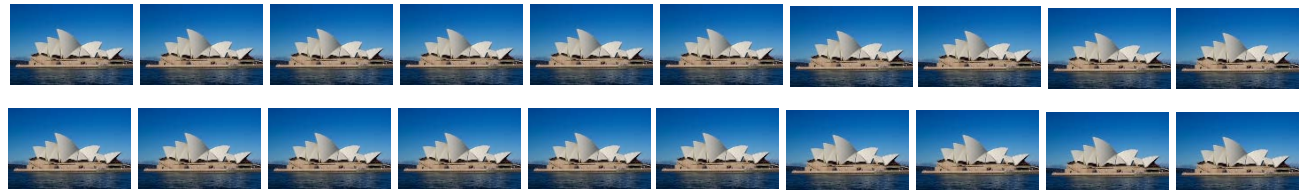
New Century Global Center in Chengdu – “World’s Largest Building” opened in mid-2013 with 5.5 million sq. ft. (511,000 m²) of floor space complete with office area, shopping mall, two five-star 1,000-room hotels, and artificial oceanfront which can accommodate 6,000 visitors on the beach.

For comparison, the New Century Global Center has enough space to hold:

3 Pentagon Buildings...



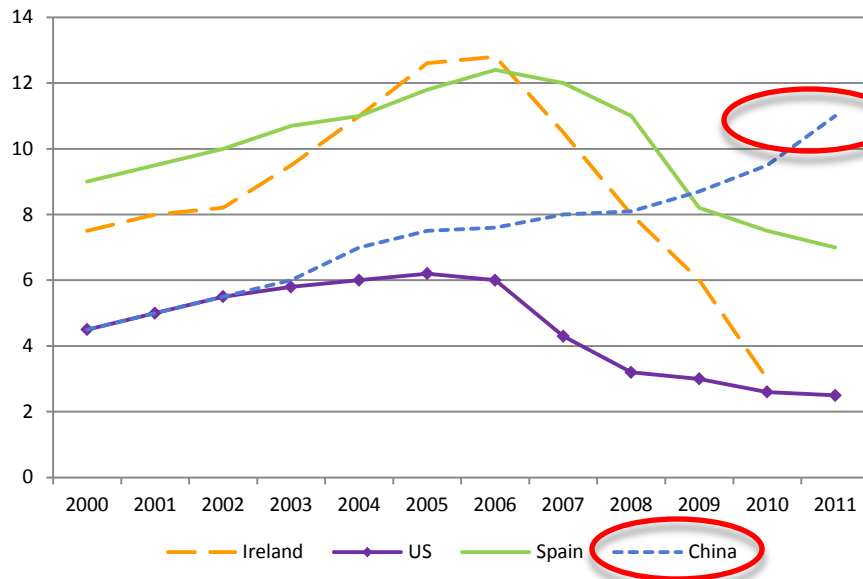
... or 20 Sydney Opera Houses





China's Overinvestment – Unbalanced and Unsustainable

Housing investment has approached peak levels seen in other housing booms (as % of GDP)



Floor Space in China:
New Construction Per Year

Year	Space (m2)
2009	1,154,000,000
2010	1,638,000,000
2011	1,901,000,000
2012	1,834,900,000
2013	2,012,080,000

New floor space equates to about **one-third** of the entire U.S. 2010 building stock

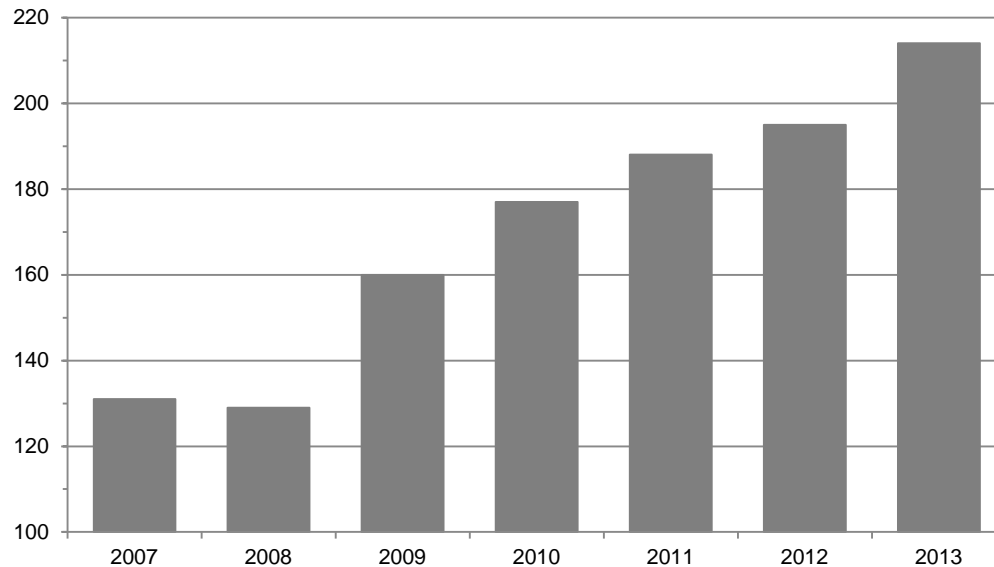
Since 2009 the Chinese government has stopped releasing information on empty apartments.

However, in 2010, China's State Grid reported 64.5 million apartment units – enough housing for approximately 200 million people – used no electricity for at least six consecutive months.



China's Growing Debt Level – A Looming Time Bomb?

China's Debt to GDP (%)



China's debt to GDP ratio is still increasing

Estimates point to levels of 250% next year and 265% in 2016

One key question is exactly how big the debt problem really is – even the Chinese government seeks to grapple with this issue

ASIA NEWS | July 28, 2013, 6:43 a.m. ET

China Plans Urgent Audit of Public Debt

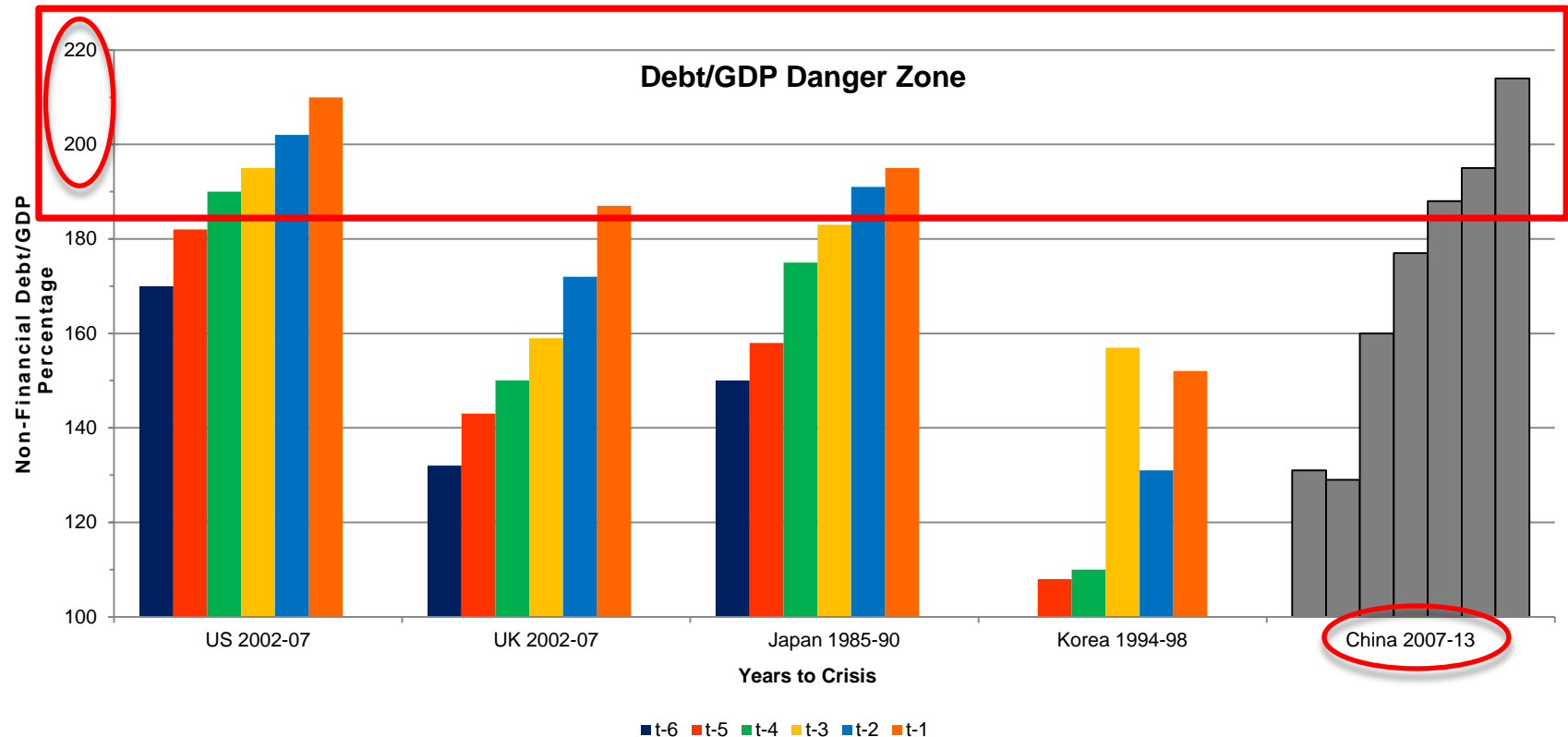
Burgeoning Borrowing Adds to Stress on China's Financial System



Rapid Credit Growth Precedes Busts – Recent Comparisons

Five Credit Bubbles

Rapid Credit Growth Precedes the Busts



Source: Fitch; GMO



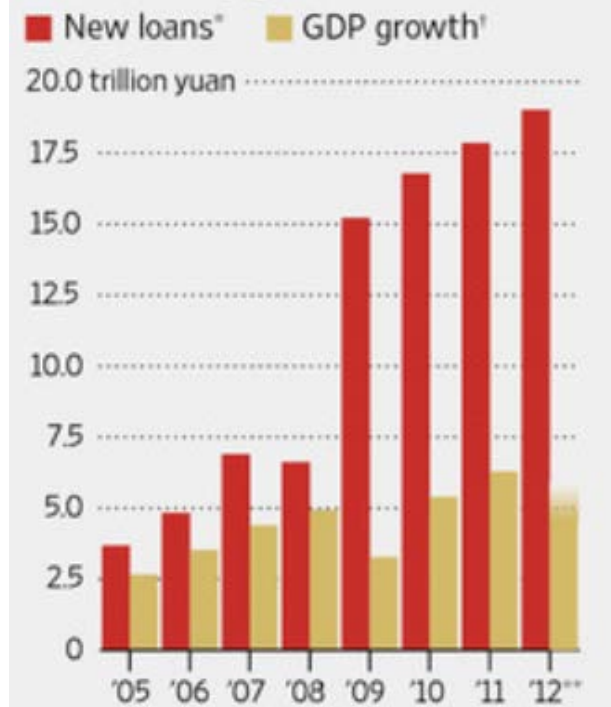
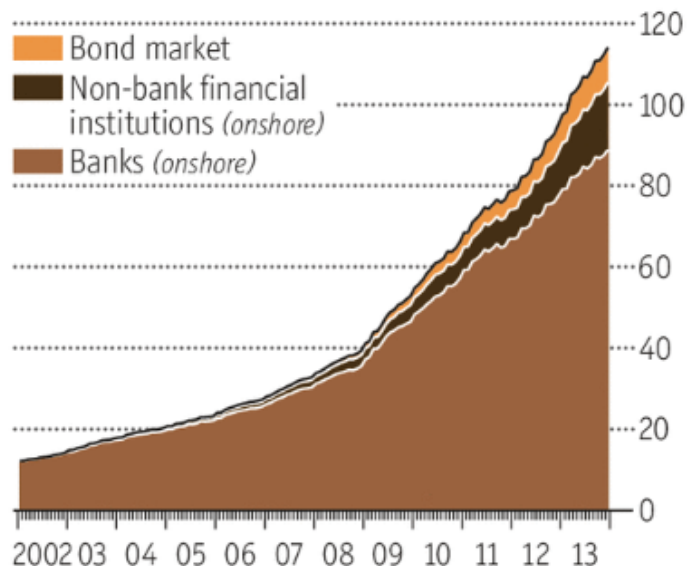
Diminishing Returns – Deteriorating Asset Quality

According to Fitch, from the end of 2008 through the end of 2013, banking sector assets increased by about \$14 trillion

Equivalent to the size of the entire US commercial banking sector

However, the dramatic increase in credit is failing to generate corresponding GDP growth

China's credit outstanding, yuan trn

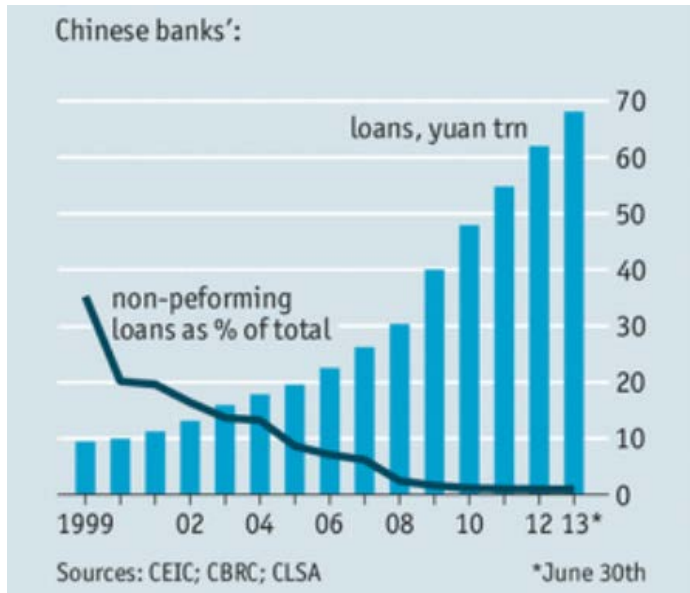


Source: The Economist; The Telegraph; Fitch; Standard Chartered



Diminishing Returns – Deteriorating Asset Quality

A dramatic rise in credit should result in a corresponding increase in non-performing loans.



However, China's official NPL rate is about 1%...less than half the average rate of the world's top 50 banks.

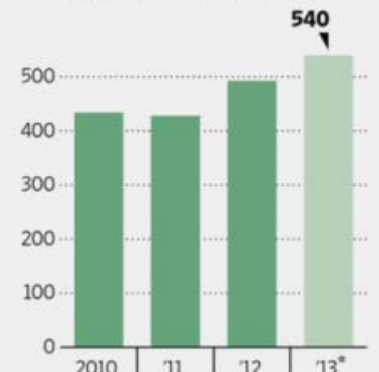
Bad Loans Rising

China boasts one of the lowest nonperforming loan ratios in the world, but that could change now that its banks' bad debts are increasing.

Nonperforming-loan ratios for selected countries, 2012

Luxembourg	0.4%
Canada	0.6
China	0.9
South Korea	1.5
India	3.0
U.S.	3.9
Russia	6.7
Greece	17.2

Nonperforming loans in China's banking system, in billions of yuan



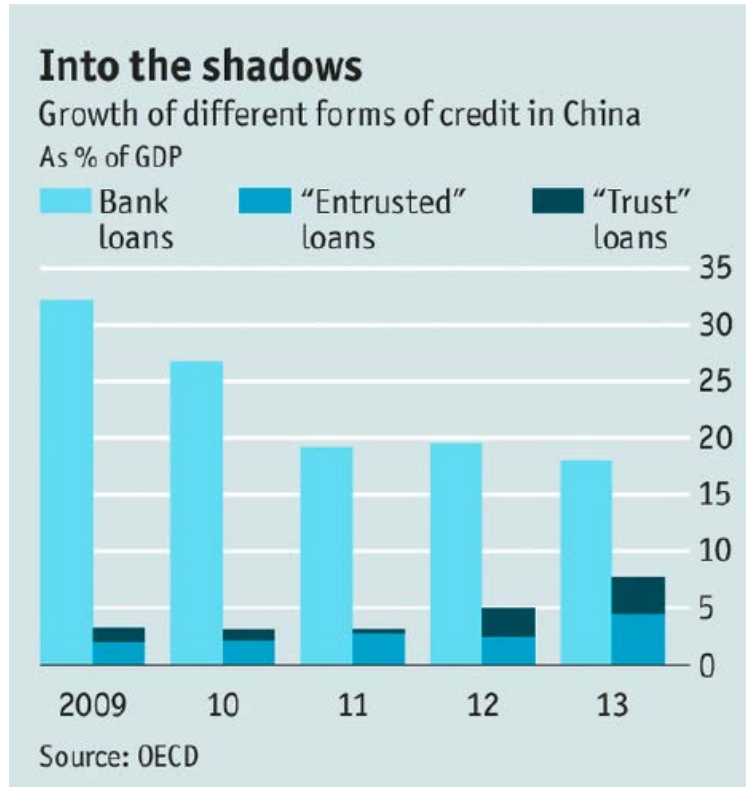
Sources: World Bank (ratios); CBRC; Barclays Research
The Wall Street Journal

Such a low NPL rate in the midst of a credit boom indicates that banks are likely just rolling over the maturing loans.

This just 'kicks the can' into the future and makes eventual resolution more difficult.



China's Shadow Banking System – Looming Over the Economy



Over \$400 billion in trust products are due to mature in 2014

Most of China's loans come from the state-owned banks, and ten years ago these were essentially the source of all lending in China

However, recent years have seen an increase in the shadow banking sector including:

- **Entrusted Loans** – loans from cash-rich SOEs to other companies unable to borrow from banks
- **Trust & Wealth Management Products** – creative ways designed to make risky corporate loans look like safer lending between banks or are sold to retail investors (and thus avoiding a bank's capital and loan-to-deposit ratio requirements)

Shadow banking loans tend to go risky sectors showing signs of overinvestment such as property and steel...ones shut out from state bank lending...but the cash-rich companies who lend to them through "entrusted loans" risk being dragged down themselves

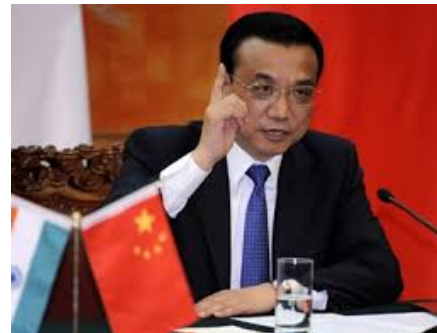


Cracks in the Debt Dam – Notable Recent Defaults

振富能源集团
Zhenfu Energy Group



浙江兴润置业投资有限公司
Zhejiang Xingrun Real Estate Co.



Premier Li Keqiang stated that future defaults on bonds and other financial products are unavoidable

A Possible ‘Catch the Big, Release the Small’ 抓大放小 Approach to Bailouts



The China Industrial Complex – A Partially Reformed Economy

China has an economy stuck in transition:

Approximately 50% of China's GDP comes from state-owned or controlled companies which dominate key industries

In recent years there has been a general abandonment of state-sector reform, replaced by a renewed emphasis on the state's direct role in the economy

In contrast to the reforms announced in November 2013, the state sector remains a “foundation” of the economy and the “Socialism with Chinese Characteristics” system



**Continuation of 国进民退
“The state advances while the people retreat.”**

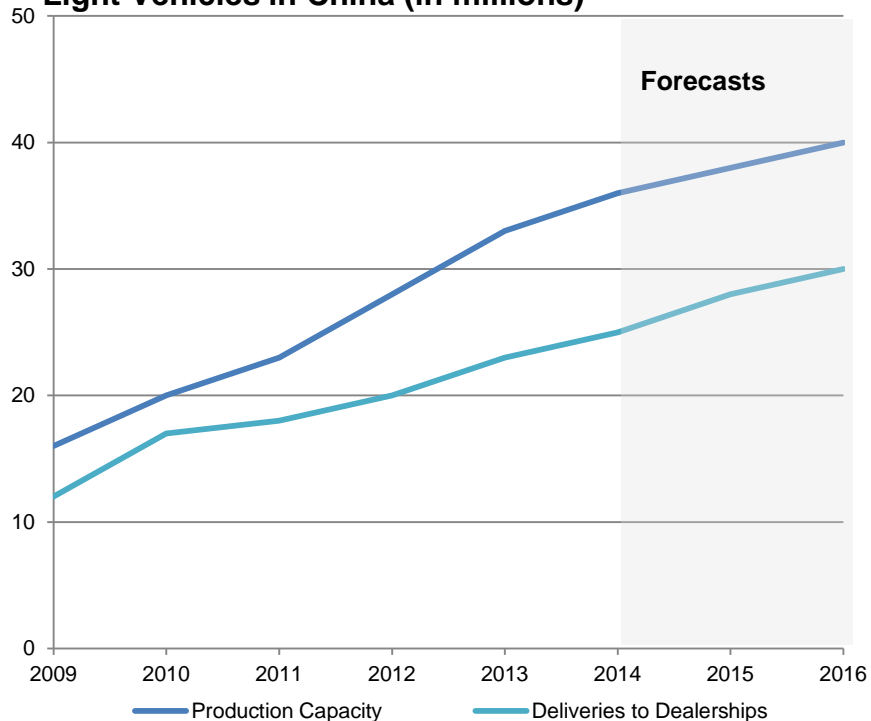
As the economy inevitably slows and banks continue to lend to under-performing companies, China is at risk of creating a hoard of “zombie companies” and “ghost cities”





The China Industrial Complex – Producing More Than It Sells

Light Vehicles in China (in millions)



**Auto factories in China are operating at capacity utilization levels around 75%...
...below the 80% typically needed for profitability**

In October 2013 China's State Council noted five key sectors with serious overcapacity

Sectors with Serious Overcapacity

Cement
Aluminum
Sheet Glass
Shipping
Steel

In November 2013 the National Development and Reform Commission (NDRC) announced that in the first half of the year 21 of 39 sectors had greater than a quarter of total capacity standing idle



The China Industrial Complex – A Partially Reformed Economy

China's Designated 'Strategic' and 'Pillar' Industries are Showing Signs of Weakness

China's "Strategic Industries" include:

- Defense
- Electric Power and Grid
- Petroleum and Petrochemical
- Telecommunications
- Coal
- Civil Aviation
- Shipping

China's "Pillar Industries" include:

- Equipment Manufacturing
- Automotive
- Information Technology
- Construction
- Iron & Steel
- Non-Ferrous Metals
- Chemicals
- Surveying and Design

Top Sectors Showing Signs of Distress*

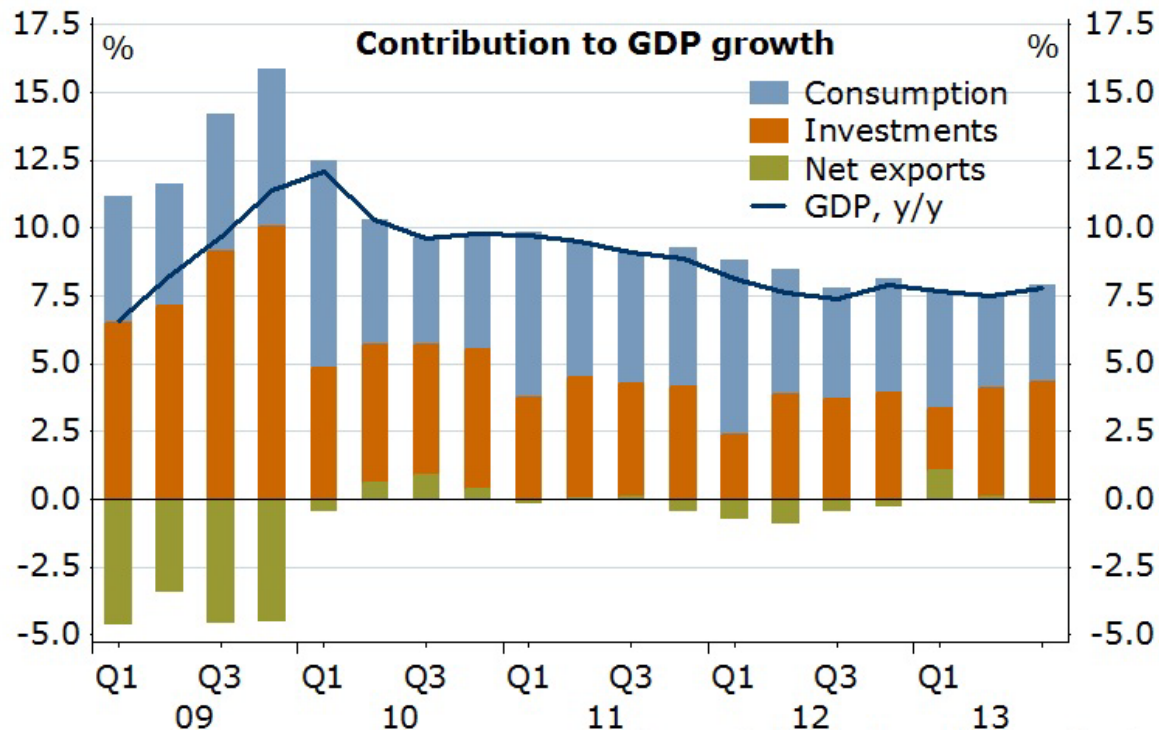
Real Estate
Construction - Machinery, Materials & Engineering
Industrial
Technology, Media, and Telecommunications
Chemicals
Consumer Products & Retail
Shipping & Transportation
Commodities
Steel
Energy
Automotive

*Chinese companies listed in Shanghai, Shenzhen, and Hong Kong with an Altman Z Score Indicating Distress

Chinese company debt equivalent to twice the size of Ireland's economy...a record 2.6 trillion yuan (\$427 billion)... will come due in 2014



The End of the Export-Led Development Model



Export-led growth provided the main platform for development of Asia's major economies including Japan and the Four Tiger Economies.

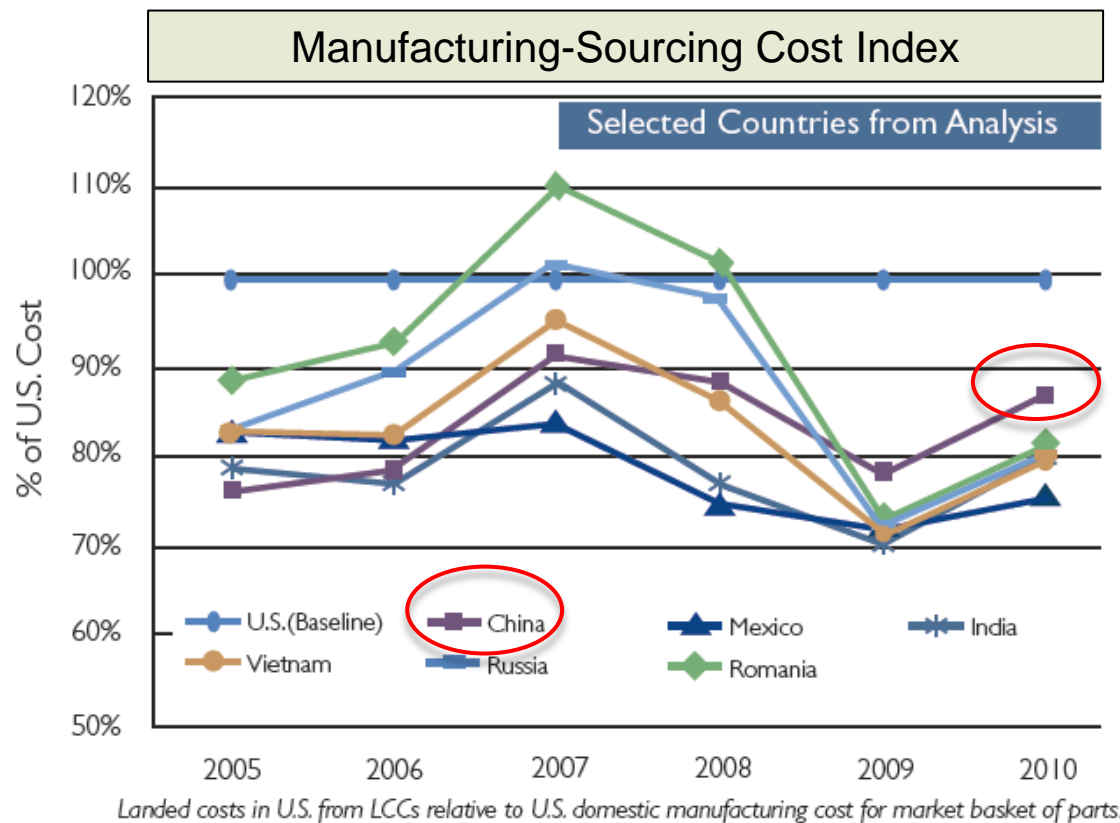
China initially followed this model by opening its economy to foreign investment with the initial principle of “来料加工” (“Bring in materials and add labor”).

Exports no longer provide a main source of growth for China's economy.



The End of Cheap China

Over the past twenty years China has grown to become the “Workshop of the World,” but now structural trends are resulting in a shift away from China as the low-cost country of choice.

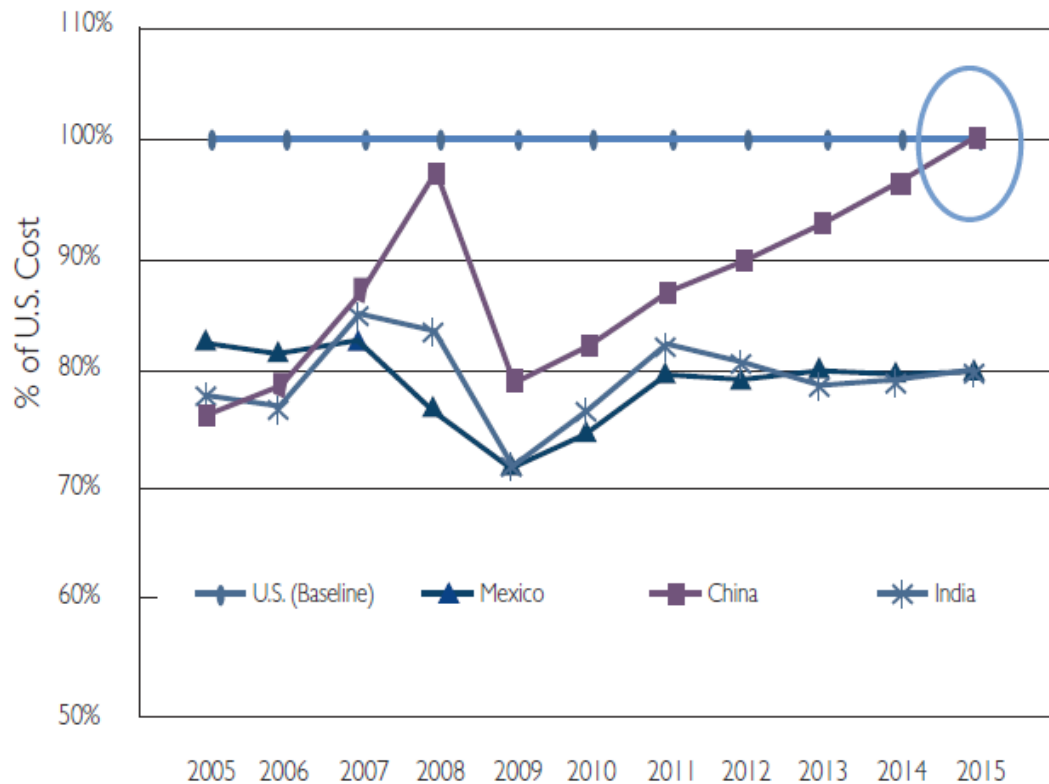


As early as 2010, manufacturing costs in China already were less competitive when compared with other manufacturing locations such as Vietnam and Mexico.



The End of Cheap China

Over the past twenty years China has grown to become the “Workshop of the World,” but now structural trends are resulting in a shift away from China as the low-cost country of choice.



Cost increases in China may result in manufacturing costs rising to meet US landed cost as early as next year.



Productivity: Urbanization Largely Complete?

- China reports that approximately 50-55% of its population has been urbanized
- It is presumed that further urbanization will help sustain GDP growth
- However, an “urban center” in China is defined as 1,500 people per square kilometer
- For comparison: the US Census Bureau identifies an urban area as having a population density of at least 1,000 people per square mile (or 386 people per square kilometer)

By China's definition of an 'urban center', Houston (4th largest city in America with 2.2 million people) does not qualify as a city



Rural America: Houston, Texas

**So, either the US has a great urbanization opportunity...
...or China is much more urbanized than perceived...
and economic benefits from the urbanization process have already largely been realized**



Challenges to Rebalancing – Greater Concentration of Wealth

China's Gini coefficient has been trending in the wrong direction:

China's Gini Coefficient					
Year	2000	2005	2010	2012	2014*
Ratio	0.412	0.425	0.470	0.474	0.550

The Gini Coefficient is a measure of income distribution, ranging between 0 (completely equal) and 1 (completely unequal).

For comparison, Gini ratios for other countries include:

- South Africa: 0.631
- USA: 0.370

Among the OECD countries the Gini coefficient ranges between 0.24 to 0.49

*** According to researchers at the University of Michigan, China's Gini coefficient is now 0.55, indicating a severe gap between rich and poor**



Out of the bottle

Gini coefficients, Maximum income inequality=1
Latest



The Chinese government recognizes the seriousness of the problem



Another Challenge - China's Chronic Corruption Problem

Reiterating comments made by other top leaders, Communist Party Secretary Xi Jinping stated that corruption could "kill the Party and ruin the country".

In 2011 the People's Bank of China released a report – attributed to the Chinese Academy of Social Sciences - which said up to 18,000 public officials have fled China between 1995 and 2008 with stolen assets totaling 800 billion Yuan (or approximately \$100 billion US Dollars).

THE WALL STREET JOURNAL.
WSJ.com

July 26, 2013, 7:45 AM HKT

China's Disappearing Official Problem
官员“失踪”屡发曝干部日常管理疏漏

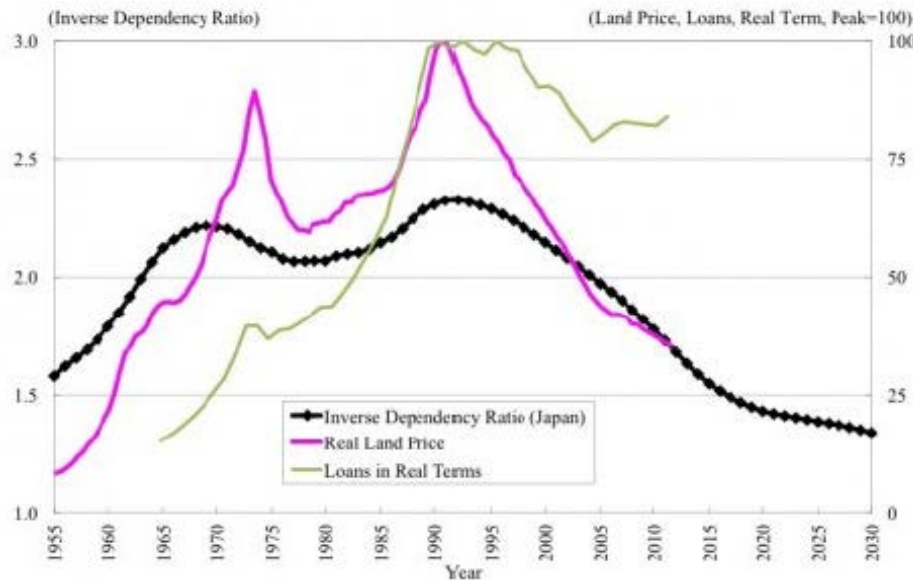


On average, this equates to about 44 million Yuan (or about US\$5.5 million) per official...with 3 to 4 officials fleeing daily.



Further Comparisons – The Bursting of Japan's Bubble

Population Change, Credit Expansion and Asset Price: Japan



The bursting of Japan's bubble economy coincided with three trends:

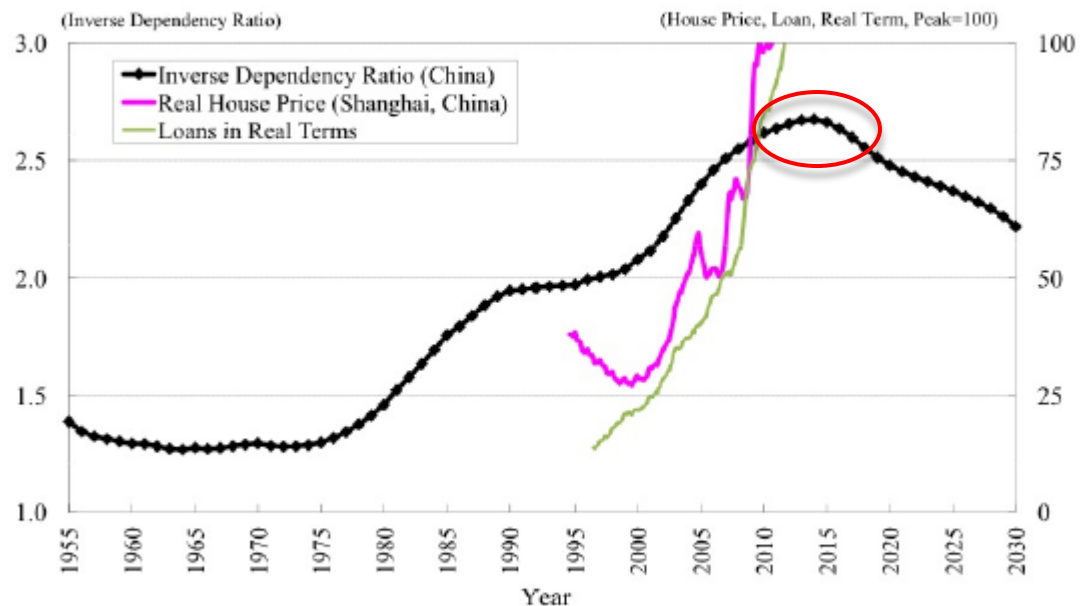
- 1) increase in credit,
- 2) increase in real estate prices, and
- 3) a demographic shift to an aging population.

Source: United Nations; Japan Real Estate Institute; Japan Ministry of Internal Affairs and Communications; Bank of Japan



Further Comparisons – The Bursting of Japan's Bubble

Population Change, Credit Expansion and Asset Price: China



Source: United Nations; Zhongfang Shanghai Real Estate Index Office, National Bureau of Statistics, People's Bank of China

The same trends are occurring in China.

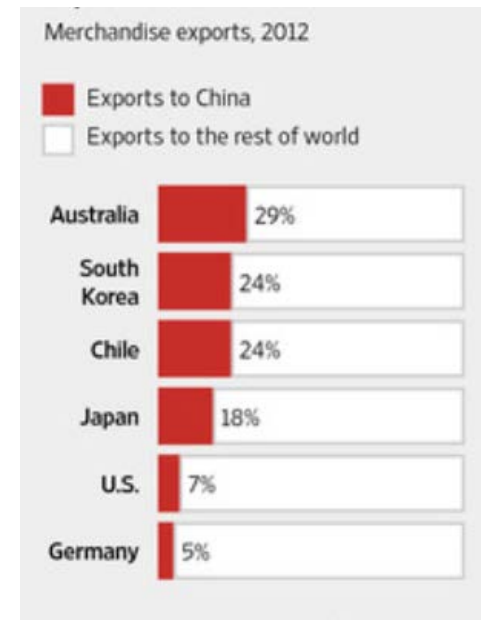
The demographic turning point looks to be just about one year away, in 2015.



The Implications of China's Slowdown – Global Impact

Economic slowdown in China is not a zero-sum game; it carries a significant impact globally and to some economies in particular. China is the biggest or second-biggest trading partner for 78 countries/regions. Some of China's top trading partners include:

Angola	Costa Rica	Philippines
Argentina	Germany	Russia
Australia	India	Saudi Arabia
Brazil	Indonesia	Singapore
Burma	Israel	South Africa
Cameroon	Japan	Taiwan
Chad	South Korea	Thailand
Chile	Malaysia	United States
Congo	New Zealand	Vietnam

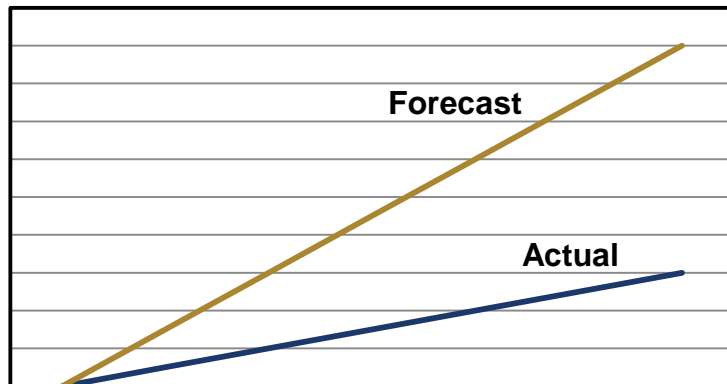




Impact on Foreign Investments in China – A Bridge Too Far



China has grown at break-neck speed over the past decade; however, investment decisions and business plans based on outmoded high-growth projections will be eroded by China's changing economy, resulting in "A Bridge Too Far" syndrome.



Although there will be winners and losers among sectors and individual companies, China's structural economic slowdown will produce under-performing operations as actual results come in below forecasts and expectations.



Key Operational Challenges Facing Companies in China

- **Shortage of Management Talent**

Shortages of managers and employees with the professional and technical skills to fill roles are common. High turnover is the norm across all businesses.

- **Weak Accounting & Finance Function**

This is a common characteristic among emerging growth companies. Combined with a general shortage of management talent, this results in a general lack of transparency and visibility into operations, and tends to result in less-than-robust internal controls.

- **Fierce Competition and Overcapacity**

Multinationals face both domestic competitors and other foreign multinationals ramping up operations. Competition is often greater than anticipated, particularly from the state-owned sectors.

- **Restrictive Regulatory Environment**

Depending upon the business and industry, some foreign companies are required to work with certain state-owned partners, or are completely shut out of the market.



Success requires a flexible, strategic approach



Doing Business in China – Operational Challenges

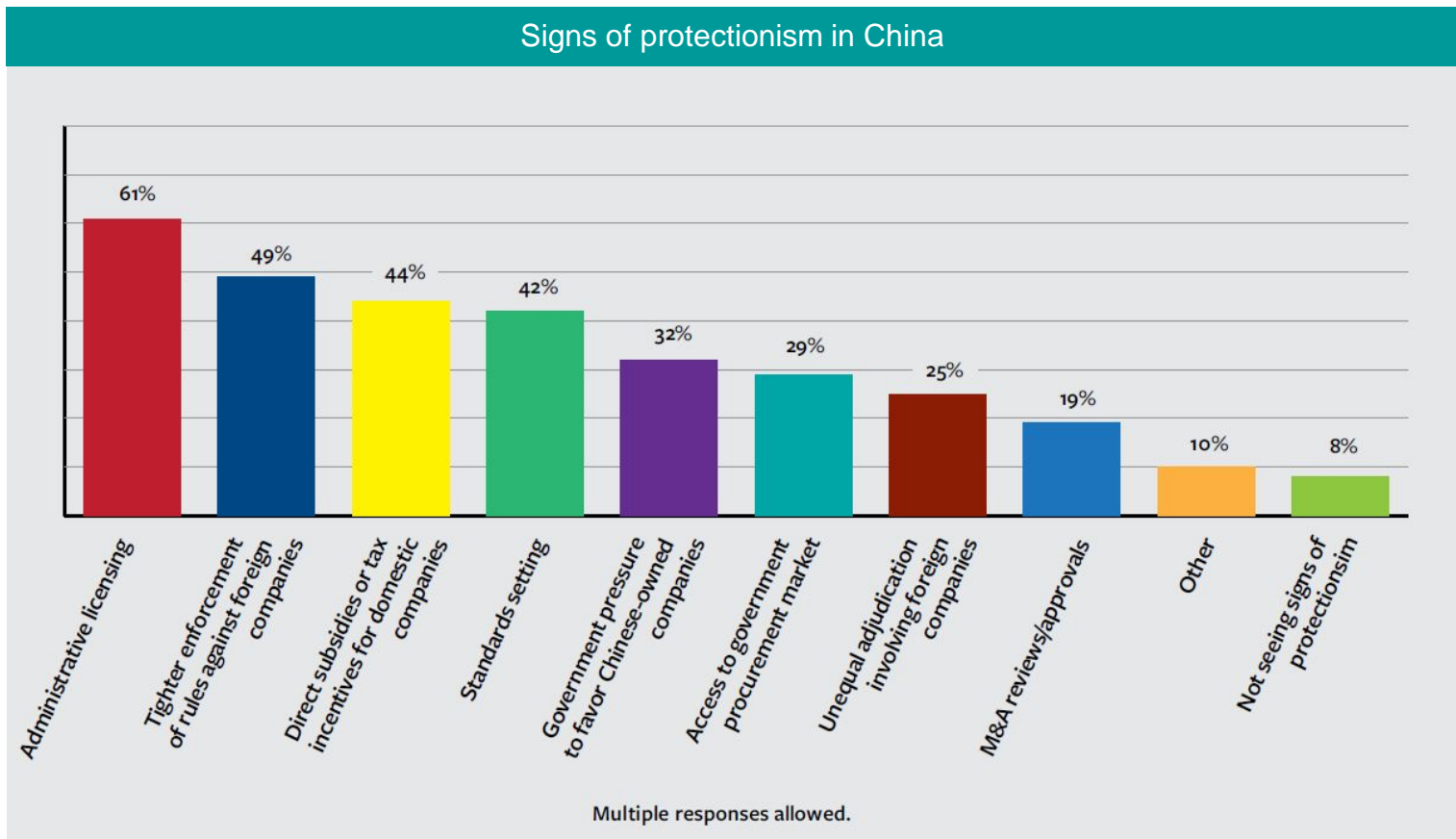
US-China Business Council: Members' Top 10 Issues

2013 Top 10 Challenges	
1.	Cost increases
2.	Competition with Chinese companies in China
3.	[tie] Administrative licensing
3.	[tie] Human resources: Talent recruitment and retention
5.	Intellectual property rights enforcement
6.	Uneven enforcement or implementation of Chinese laws
7.	Nondiscrimination/national treatment
8.	Transparency
9.	Standards and conformity assessment
10.	Foreign investment restrictions

These issues all point to greater downward pressure on margins, upward pressure on costs, and regulatory compliance challenges (especially the FCPA).

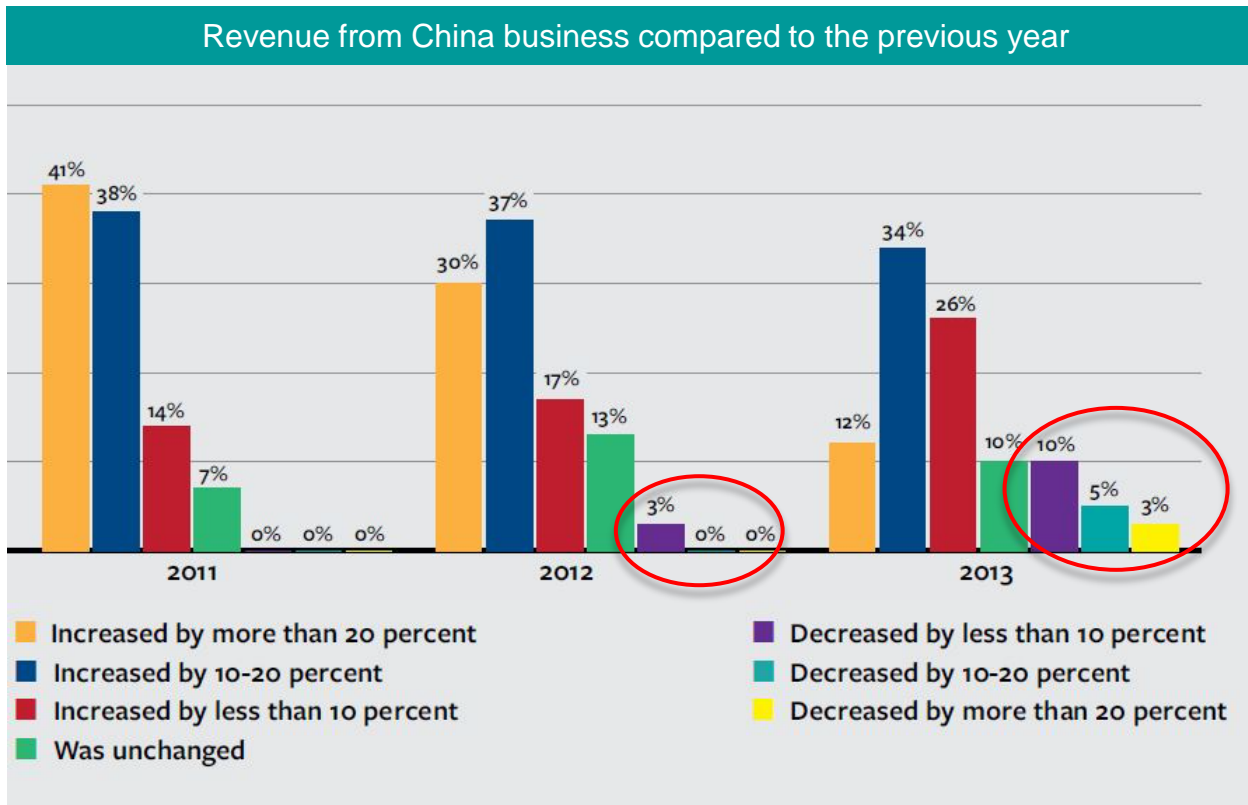


China Has Become a More Challenging Place for Business





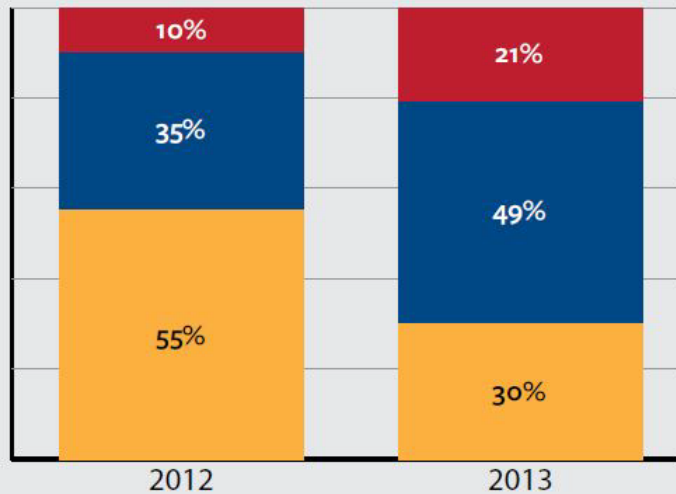
Multinationals Now Starting to See China Revenues Decline





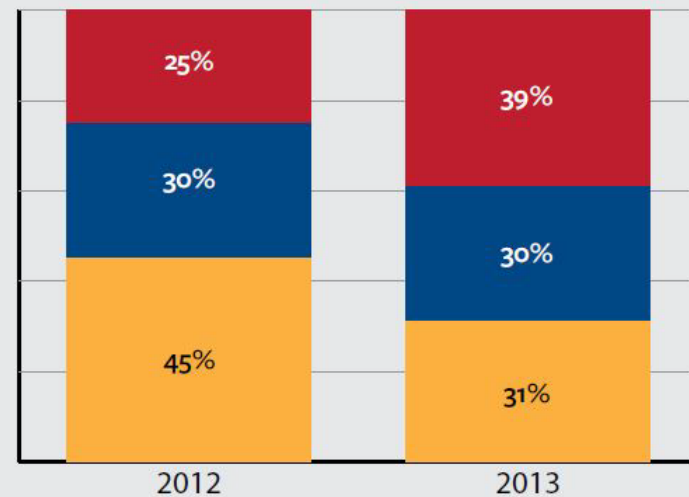
Profitability of China Operations Now Trending Downward

Profitability compared to previous year



■ Increased
■ Remained essentially unchanged
■ Decreased

Profit margin rate of China-based operations in previous year compared to the company overall

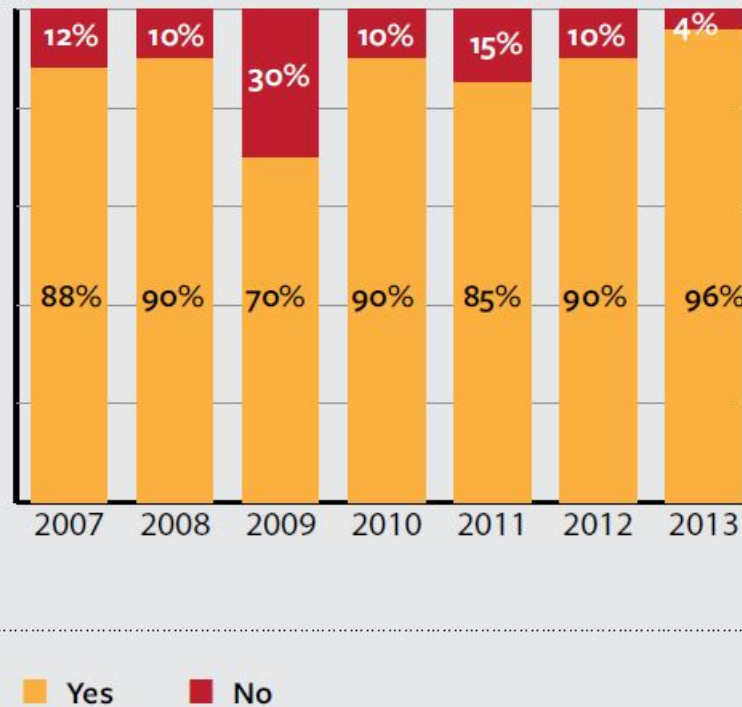


■ Better ■ Same ■ Worse



Costs Continually Increasing...in a Slower Growth Environment

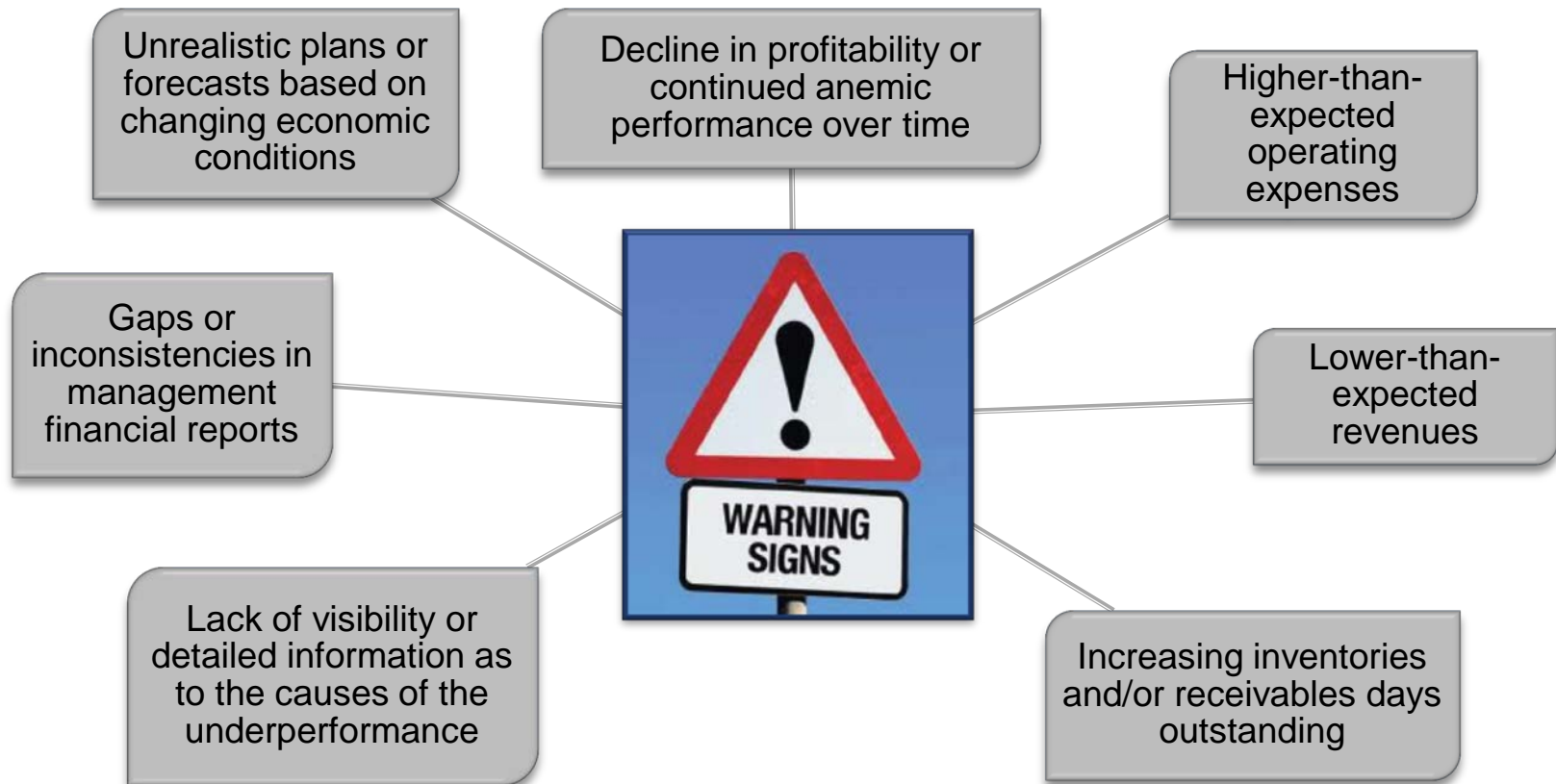
Are rising costs for your company's operations in China a concern?





Doing Business in China – Warning Signs

Warning signs of China's structural slowdown impacting a company may include:





Addressing the Impact – Rationalizing Operations

For many investments, strategic owners and financial sponsors will need to take decisive action in order to unlock or retain value

Examination of the company's financial reporting to verify the true situation

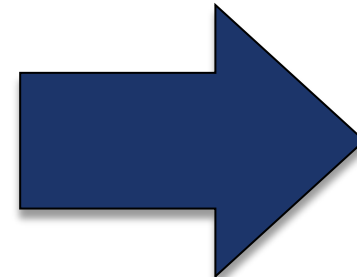
Appropriate cost rationalization measures

Re-evaluation of customers and revenue channels

Supply chain and manufacturing footprint optimization

Assessing merger and acquisition opportunities

Focus on core competencies and potential wind-down of select operations



**Right-sizing
the business
to profitability**

AlixPartners has experienced professionals who can help evaluate the warning signs and assess the true condition of the business, and then assist strategic and financial stake-holders to take the right steps to fix the situation



Recently Stated Reform Agenda – All the Right Moves...But

- Reform Agenda from the recent Third Plenum of the 18th CCP Congress include:
 - **Improving the Investment Environment**
 - Unified investment regime nationwide for domestic and foreign companies (anything not on a 'negative list')
 - Free Trade Zones to expand investment openings in finance, education, health, construction, telecom, auditing/accounting, and manufacturing
 - **SOE Reform**
 - Despite nod to the 'non-public' economy, SOEs remain the primary foundation of China's system (Socialism with Chinese Characteristics)
 - Increase in percentage of profits handed over to the state, from 5-15% to 30%
 - **Financial Sector Reform**
 - Liberalization of interest rates
 - Allowing private (domestic) capital to set up small & medium sized financial institutions
 - Establishment of a national deposit insurance system
 - **Tax Reform**
 - Measures aimed to increase legitimate revenues for local and central governments
 - VAT, high energy consumption, pollution, and property taxes
 - **Social**
 - Land rights, household registration, and the one-child policy

Great intentions, but few details on the speed, nature, and quality of implementation



Despite the Challenges, China's Best Days Lie Ahead

- In any scenario, China remains a top economy, key global economic driver, and a critical market to be in
- In the short-to-medium term there will be winners and losers in each sector, offering attractive investment opportunities
- Underperforming investments based on overly-high expectations will need to be addressed
- Despite challenges in the short and medium term, China's best days lie ahead, as long as reform continues



Turn to AlixPartners When It Really Matters



Enterprise Improvement



Corporate Turnaround
and Restructuring



Financial Advisory
Services



Information Management
Services

We're a global firm of senior business and consulting professionals with:

- An international presence
- More than 1,000 professionals
- 18 global offices

In urgent, high-impact situations - when it really matters - we specialize in:

- Improving corporate financial and operational performance
- Executing corporate turnarounds
- Providing litigation consulting and forensic accounting services



Brent C. Carlson

Director

+1 650.483.5086 (US)

+852.6055.9521 (HK Mobile)

bcarlson@alixpartners.com

Professional Highlights

Brent helps companies and their stakeholders in the areas of mergers & acquisitions, dispute resolution consulting, internal investigations, restructuring & turnarounds, and interim management roles. Brent has 20 years of China business experience which includes senior management positions consisting of Chief Representative, COO/Deputy General Manager, CFO/Treasurer, Director of Business Development, and Chief Compliance Officer.

Brent is a Certified Insolvency and Restructuring Advisor, and he has led comprehensive turnaround programs in China to improve under-performing businesses and to fix financial reporting, liquidity, forecasting, and operational issues. His turnaround experience includes addressing areas such as simplifying organizational structures, consolidating sales & service, assessing product and customer profitability, consolidating technical operations, evaluating suppliers, implementing standardized budgeting & reporting, redesigning support functions, and reducing non-core costs.

As a Certified Fraud Examiner, Brent has provided dispute and forensic consulting services in internal investigations, purchase price and other commercial disputes, as well as criminal prosecution. Brent also has testified in court as an expert witness in fraud-related matters. From his experience in dealing with fraud-related matters, Brent applies a critical sense of skepticism necessary to effectively evaluate the financial data and inputs obtained from operations on the ground.

Brent is fluent in Mandarin Chinese.

Affiliations

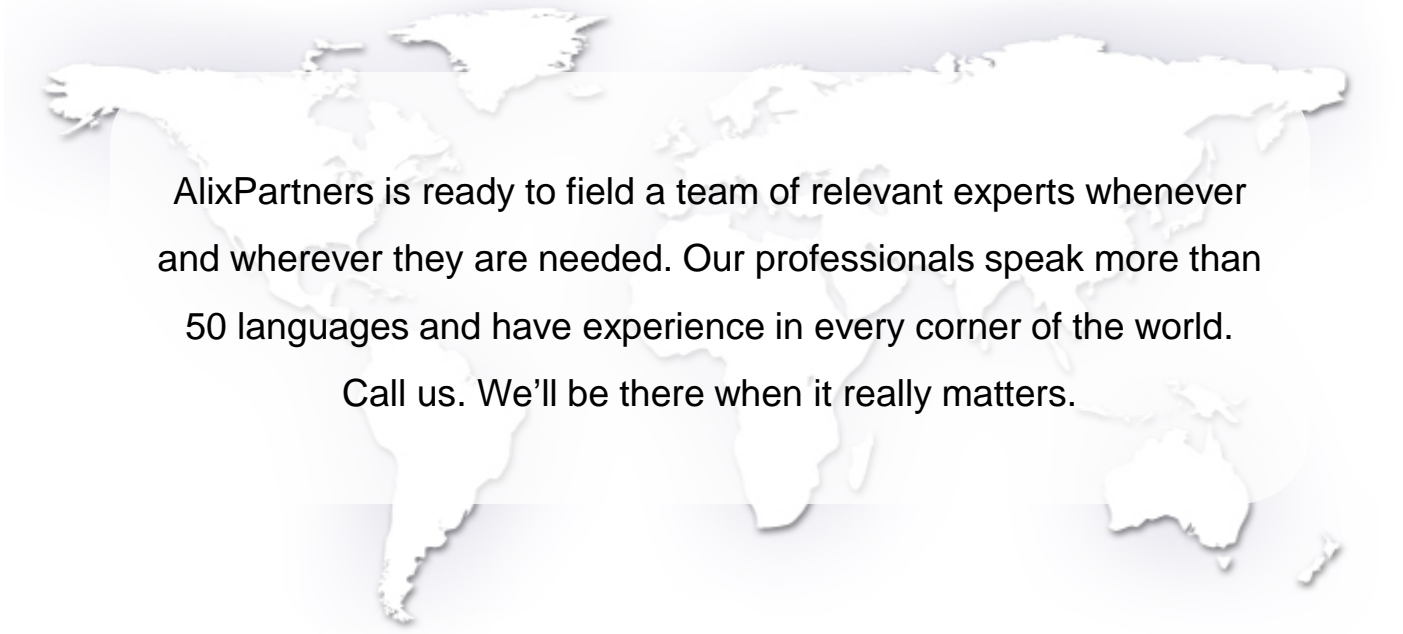
Association of Insolvency and Restructuring Advisors

Association of Certified Fraud Examiners

Turnaround Management Association

Brent holds a masters degree from Yale University and is a *Summa Cum Laude* graduate of the University of Minnesota.

Global Locations



AlixPartners is ready to field a team of relevant experts whenever and wherever they are needed. Our professionals speak more than 50 languages and have experience in every corner of the world.

Call us. We'll be there when it really matters.

Boston One Boston Place Suite 4040 Boston, MA 02108-4407 617.742.4400	Chicago 300 N. LaSalle Street Suite 1900 Chicago, IL 60654 312.346.2500	Dallas 2101 Cedar Springs Road Suite 1100 Dallas, TX 75201 214.647.7500	Detroit 2000 Town Center Suite 2400 Southfield, MI 48075 248.358.4420	Dubai Office 101, Tower 2 Al Fattan Currency House P.O. Box 482093 Dubai / UAE +971.4.401.9246	Düsseldorf Hofgarten Palais Bleichstraße 8 – 10 40211 Düsseldorf Germany +49.211.97.55.10.00	Hong Kong LHT Tower Office 1802, 18/F No. 31 Queen's Road Central Hong Kong +852.2236.3500	London 20 North Audley Street London W1K 6WE United Kingdom +44.20.7098.7400	Los Angeles 515 S. Flower Street Suite 3050 Los Angeles, CA 90071 213.437.7100
Milan Corso Matteotti 9 20121 Milan Italy +39.02.360.12000	Munich Mauerkircherstr. 1 a 81679 München Germany +49.89.20.30.40.00	New York 40 West 57 th Street New York, NY 10019 212.490.2500	Paris 49/51 Avenue George V 75008 Paris France +33.1.76.74.72.00	San Francisco 580 California Street Suite 2050 San Francisco, CA 94104 415.848.0283	Shanghai Suite 4805 Plaza 66 Building II 1266 Nan Jing West Road Shanghai, 200040 China +8621.6171.7555	Seoul 21 F Seoul Finance Center 136 Sejong-daero, Jung-gu, Seoul, 100-768, Korea 82 2 3782 4540	Tokyo Marunouchi Building 33F 2-4-1 Marunouchi Chiyoda-ku Tokyo 100-6333 Japan +81.3.5533.4800	Washington, DC 1999 K Street, NW Suite 750 Washington, DC 20006 202.756.9000



Ningbo Global Sourcing
宁波博嘉亚进出口有限公司

China Operational Challenges – Beyond Macroeconomics

Chairman – Gary Riley Sr.



Ningbo Global Sourcing
宁波博嘉亚进出口有限公司

- CEO/COO of six global companies over past 25 years
- Involved in 19 and counting Chinese JV's
- Relocated or opened 12 operations in Asia
- Global change leader who transforms under performing companies – in Asia, Europe and USA
- Created significant value for PE investors

Manufacturing Realities Today

- ❑ - GDP growth is down 25%, but still high
- ❑ - Manufacturing share of GDP growth is down nearly 40%
- ❑ - Exports of are down YOY
- ❑ - Labor is no longer the lowest in world
- ❑ - More difficult to keep good people

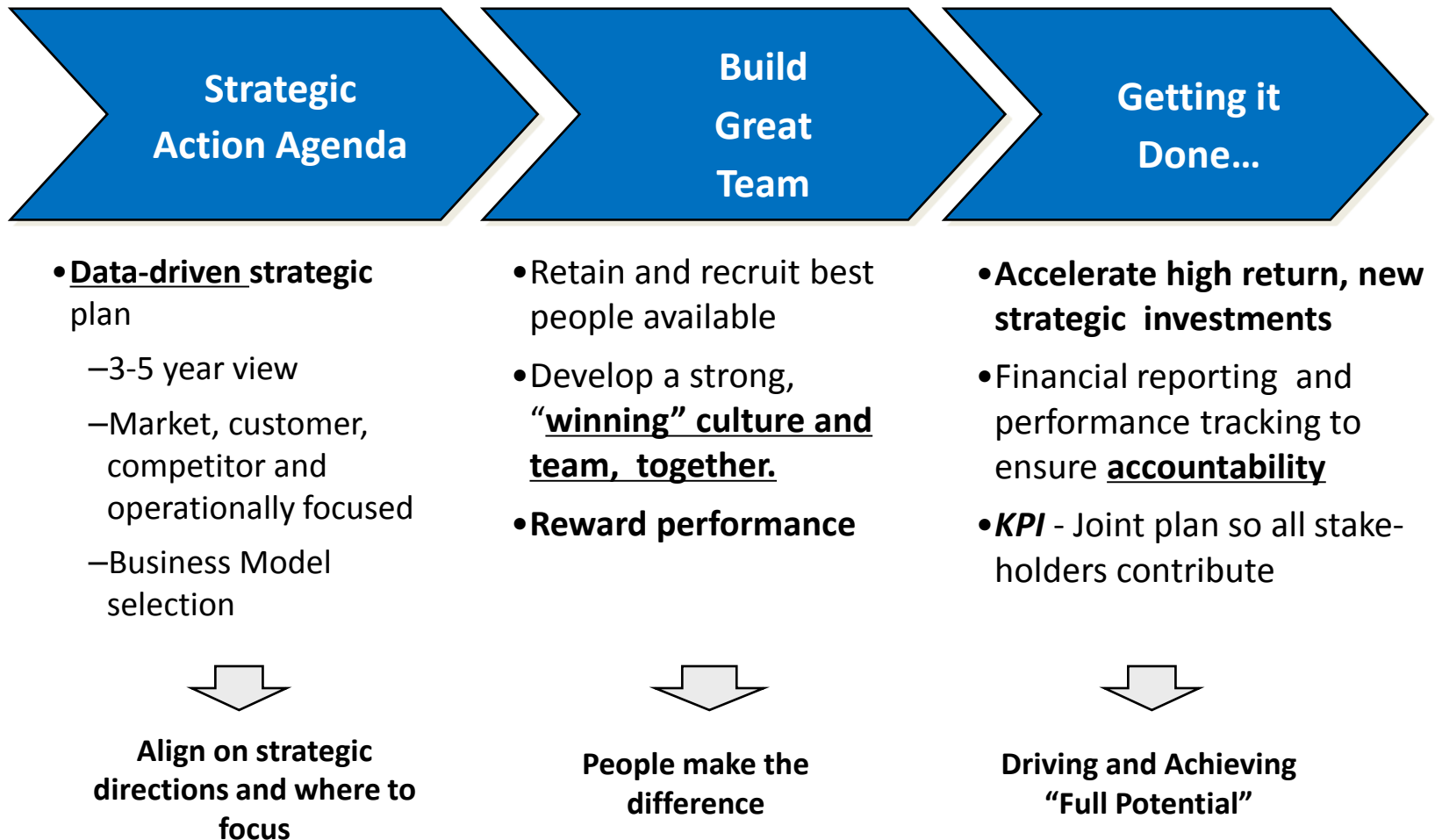
Manufacturing Realities Today

- ❑ - Input costs like raw material and energy are generally higher than the USA or Mexico today
- ❑ - Yuan has strengthen 30% over last 7 years
- ❑ - Too much capacity in almost every industry – but not the right kind of capacity in most cases
- ❑ - Not enough value add in the manufacturing segment

What Companies should do?

- ❑ - Right Strategy to Create Value
- ❑ - World Class Manufacturing – average company is a generation behind
- ❑ - Innovation and Product Development – how do local companies and Sino-Western JV's innovate to capture more of the value chain
- ❑ - Rethink Supply Chains – equally applicable to western and local companies, today the wrong metrics drive wrong behavior

Approach – Value Creation Points



- Strategic Direction – Solutions Strategy
- Intimate local market knowledge
- Customer relationships drive understanding of true needs – they look to ASIMCO for Global trends
- People development – right senior leadership team
- Product design philosophy focuses Group efforts
- Program/project management
- Operational excellence through ASIMCO Operating System (AOS)
- Financial control
- Supportive local partners

Two Examples of Success

- ❑ - Multiple product supplier to Chinese CV's
 - Increases sales by 30% in three years
 - Reduced headcount by 25%
 - Increased EBITDA from 5% to 19%
- ❑ - Launched alternative fuel engine management and fuel system to Chinese CV's
 - Grew sales from zero to \$100 million in 5 years
 - Became market leader of carbon reduction of CV's

World Class Manufacturing

- ☐ - Some Chinese manufacturers are world class, but 80% are not, especially SME's
- ☐ - Chinese manufacturers can no longer rely on low cost, low skill labor
- ☐ - Must embrace global quality practices
- ☐ - Must develop and Deploy management and Operating Systems that start with people

Must Measure and Improve

- ☐ Health and Safety
- ☐ People Development
- ☐ QCD – Quality, Cost and Delivery – Service
- ☐ Productivity
- ☐ Supply Chain – control and improve
- ☐ Continuous Improvement
- ☐ Growth and Product Development

Management Training in Ningbo



ASIMCO Operating System

Driven by Value Chains



Productivity Value Chain

Supplier
Cost

Manufacturing
Efficiency

Customer
QCD

Growth Value Chain

Product
Development

Program
Management

Capability Development Value Chain

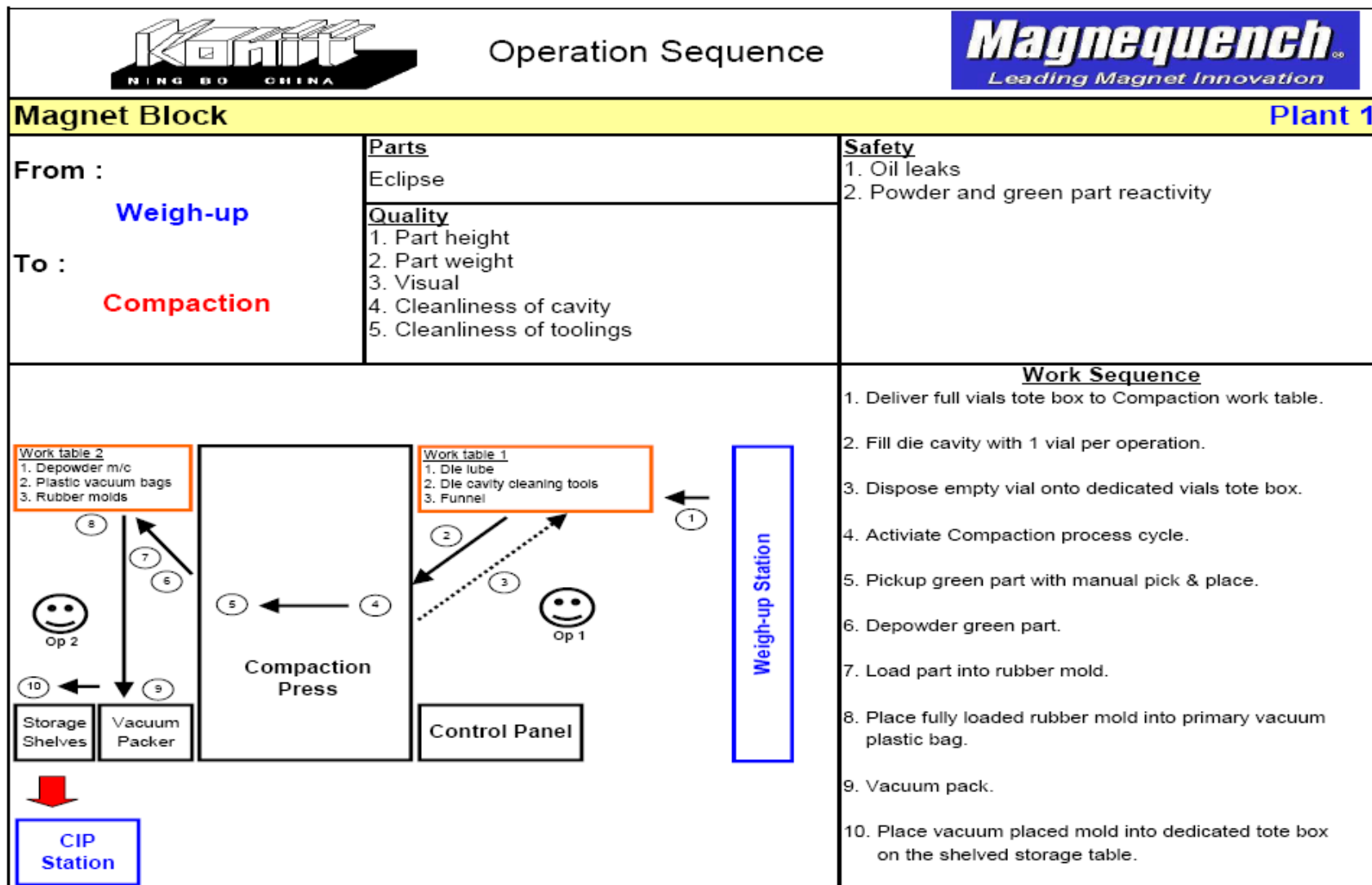
EHS Regulatory

Management
Development

Tulsa 2012 - Line of Sight

	Delivery		Quality		Productivity	Safety	CI			Sales & Marketing		New Product Development	
	50%	50%	35%	65%	100%	100%	40%	20%	40%	100%		90%	10%
	PTSL MTS	PTSL ATO	Maxim 2	Customer PPM P/M Dispo	Productivity– Labor & Mfg Overhead as a % of Revenue	TCIR	Cost Savings	Process Documentation & Knowledge Transfer	Inventory as a % of Revenue	Revenue	Gross Margin %	Gate 3 Targets (Cost, Dev Cost, Timing & Reuse)	Phase 4 FPY
125%	94.0%	92.0%	11	800	19.0%	0.0	\$13,661	8	17.6%	51.1	To be introduced in Qtr 2, will be 25% of total	100%	To be introduced in Qtr 2, will be 10% of total
100%	90.0%	90.0%	9	900	19.5%	1.0	\$10,929	6	18.5%	48.6		90%	
75%	89.5%	89.5%	---	1200	20.0%	2.0	\$8,743	---	19.2%	46.8		80%	
50%	89.0%	89.0%	5	1500	20.5%	---	\$6,557	4	19.9%	45.0		70%	
25%	88.5%	88.5%	---	1800	21.5%	---	\$4,590	---	20.6%	43.2		65%	
									21.3%				
-25%	88%	85%	2	2100	22.5%	2.5	\$1,193	1	22.2%	38.9		50%	

Lean Manufacturing Process/Quality Document



Process Control



Slicing & Surface Grinding
KPIV / KPOV

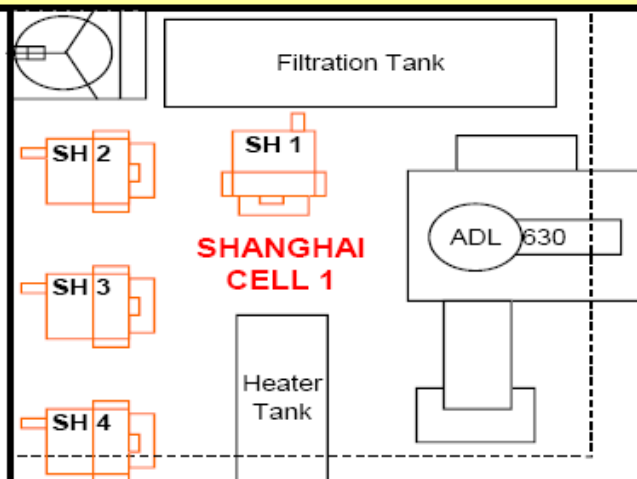
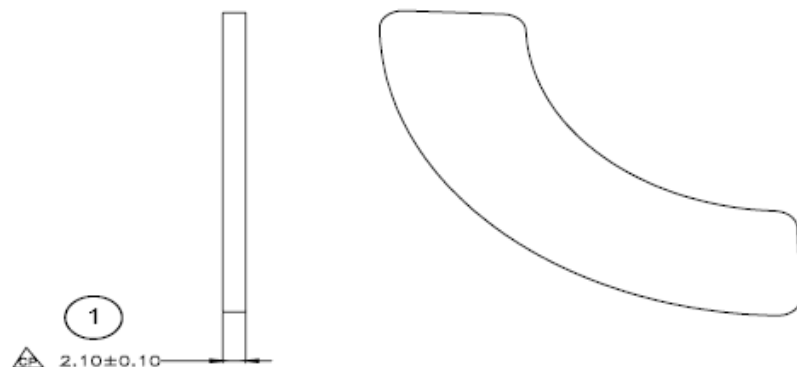


Eclipse VCM Magnet (**SHANGHAI CELL 1**)

MQ Part No. : MSM001751

Sliced Magnet Controls

切片控制



Shanghai Operating Parameters

		SH 1	SH 2	SH 3	SH 4
1	Speed Rate 速度比例				
2	Feed Rate 进料比例				
3	Coolant Flow Rate 冷却液速度				
4	Units per hour (UPH) 每小时数量				
5	Cycle Time 周期				

Shanghai Process Controls

	Trigger Limits 报警限	Equipment / Gages	SPC
--	--------------------	-------------------	-----

1	2.10 ± 0.10	Micrometer	Xbar - R chart
---	-------------	------------	----------------

Visual Controls

	Trigger Limits 报警限	Equipment / Gages	SPC
1	No Chipped 无缺角	Unaided light source	p-chart
2	No Cracks 无裂纹	Unaided light source	p-chart
3	No Porosity 无气孔	Unaided light source	p-chart
4	No Scratches 无刮痕	Unaided light source	p-chart
5	No Drag Marks 无拖痕	Unaided light source	p-chart

Innovation and Product Development

- ☐ Track mega trends
- ☐ Change the mindset
- ☐ Increased Reliability Demands – sell better, not more
- ☐ Sell Value, not cost
- ☐ Help customers solve problems and provide solutions, not the same as others
- ☐ Design for market you serve

Growth Opportunity

New Products




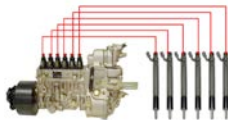



- | | |
|-----------------------------|--|
| ■ Improved emissions | Higher technology |
| ■ Fuel Price Policy Reform | Higher technology |
| ■ Safety Concerns | Higher technology |
| ■ Improved fleet management | Lifetime cost of ownership considerations |
| ■ Vehicle exports markets | Higher technology, tailored for the specific markets |

Component value growth –20% CAGR >

Next Generation Product Portfolio





Current Product Portfolio

Product	Price (RMB)
	80
	1,750
	7
	330
	200



Next Generation Product Portfolio

Product	Price (RMB)	Development Phase
	650	Prototype Testing
	4,500	In Production
	17	In Production
	650	In Production
	700	In Development

OVERDRIVE – New Prod. Dev.

Metric: Percentage of Goals Hit

3 Goals Per Project:

- Product Cost
- Development Cost
- Production Date

Must have at least
Three projects (9 goals)
to be eligible.

Payout Percentage	New Product Dev.
	Goals Hit
125%	100%
100%	90%
75%	80%
50%	70%
25%	65%
0%	
-25%	50%

Accomplishments / Misses

1. **A** – PV450 Pressure Governor released on-time and meeting all three targets.
2. **M** – EICS is in production but all Genesis requirements are still not yet complete. Only the user manual remains undone...push to finish the manual.

Performance:

8 of 9 Goals
achieved in
the last
three
months

		Product Cost	Development Cost	Production Date	Re-Use
Dec	NACCO/Kubota Translator	✓	✓	✓	-
	PV480	✓	✓	✗	-
Jan		-	-	-	-
Feb	PV450 Pressure Governor	✓	✓	✓	-
Mar	EICS	?	?	✗	-
Apr		-	-	-	-
May		-	-	-	-
Jun	HV300 - BRP	?	?	?	-
	PV300	?	?	?	-
Jul	HPR	?	?	?	?
Aug		-	-	-	-
Sep	PowerPro - Godwin	?	?	?	-
	Fusion PLC R1.0	?	?	?	-

What can we do?

1. Get the past due projects (EICS) completed and released so that they will no longer impact new overdrive goals.
2. Focus on the HPR, HV300, and PV300 projects releasing in June and July. This is our next chance to achieve a production launch date goal.
3. Inform Program Managers of any conflicts or delays to new product development activities.
4. Be proactive with NPD efforts wherever you can. Don't wait for a Program Manager to push you along. Get ahead of the PMs wherever you can.

Dinner with DongFeng GM

- ❑ - In 2009, I had dinner with the GM of DFAC Truck and we discussed Chinese and USA 50 MT trucks
- ❑ - A 390 HP DFAC truck costs \$40,000 while its USA counterpart cost \$120,000 – why
- ❑ - Design Parameters - B50 Life



Rethink Supply Chains

- ☐ Fewer, better suppliers
- ☐ Think of suppliers as partners
- ☐ Assess the total cost of a product or system purchased, rather than purchase price – total lifetime cost of ownership
- ☐ Apply APQP or your Operating System to supplier selection and management

Critical Elements

- ☐ Develop relationships
- ☐ Must have Win/Win Philosophy
- ☐ Senior level involvement
- ☐ Clear roles, responsibilities and requirements
- ☐ Establish Quality Gate
- ☐ Continual Improvement

How We Qualify the New Factory

(1) MPE Manufacturing Process Evaluation

To conduct an objective evaluation of the Manufacturing Process to assess the ability in producing Quality Product with established process after site setup.

Elements to Assess are :

- (1) Documentation***
- (2) Operator Training & Certification***
- (3) Equipment Calibration & Maintenance***
- (4) Process Control & SPC Usage***
- (5) Material identification & Control***
- (6) General Housekeeping***

(2) MPR Manufacturing Process Review

To review manufacturing Process & Quality Control Plan to assure Key Process Input & Output Variable meeting the desired Specification.

Elements to Assess are :

- (1) Process SPEC.***
- (2) Process STEP.***
- (3) Process Management Plan***
- (4) Quality Control Plan***

Supplier Sourcing/Survey Report--- Example



SUPPLIER : NingBo BeiLun ZhengDa Spring Factory

Product : ECS Spring

Date : 2007-3-14

AUDITOR : 02'07

PROCESS AUDIT SUMMARY

Site : NingBo

By : Bert Jenkins, Angie Lucas, Grace

Auditee(s) : Weir Zhang/Zheng Yu Ding

RESULTS:

	Answers	Non applicable	Non-existent	Insufficient	Acceptable	Good	Corrective actions
CHAP 1: Documentation	7	1	0	0	1	5	
CHAP 2: Purchasing - Incoming product - Storage	32	3	0	1	12	16	
CHAP 3: Manufacturing workstations	28	2	5	0	13	8	
CHAP 4: Packaging - Storage of finished product - Shipping	15	0	1	0	13	1	
CHAP 5: Inspection - Testing - Metrology - Laboratory	7	0	0	0	7	0	
CHAP 6: Personnel - Environment - Safety	7	1	0	0	6	0	
TOTAL :	96	7	6	1	52	30	0
			7%	1%	92%		

CORRECTIVE PLAN:

S/N	Corrective action	PLAN		DO		CHECK		ACT	
		Who ?	When ?	Who ?	When ?	Who ?	When ?	Who ?	When ?
1	Work Instruction on site								
2	Traceability shall go through all workshops								
3	Calibration need reflect on all testing machine, Maintenance need reflect on all machine.								

COMMENTS:

Manufacturing equipment is a combination of the oldest and newest , the older equipment and newer equipment are in separate areas, the newer equipment is generally Taiwanese & new condition. This new equipment is highly capable with much servo & electronic system that continuously measures the free length of each spring produced. This system performs two functions.

- 1) It sorts out under/over length springs
- 2) It continuously adjusts the machine pitch setting t minimize length variances. Making the ECS brush springs require this type system. You cannot hold our spring load requirements without using an automated system to control the spring length. This Ningbo Spring had one machine of the correct size for our springs that was fitted with this system. This machine was running & the gage system was operating. No doubt, this machine is capable of producing springs that meet our requirements. The owner told us he has ordered 10 new electronic gage systems to add to other machines. This electronic gage system is usually an add-on & generally not from the machine builder. We told him this system was required for our tolerances. Testing equipment was good. Housekeeping, machines& lighting was good. Can assess the people's skills from jobs they were running - complex spring shapes & forms using multi-axis CNC controlled machines.

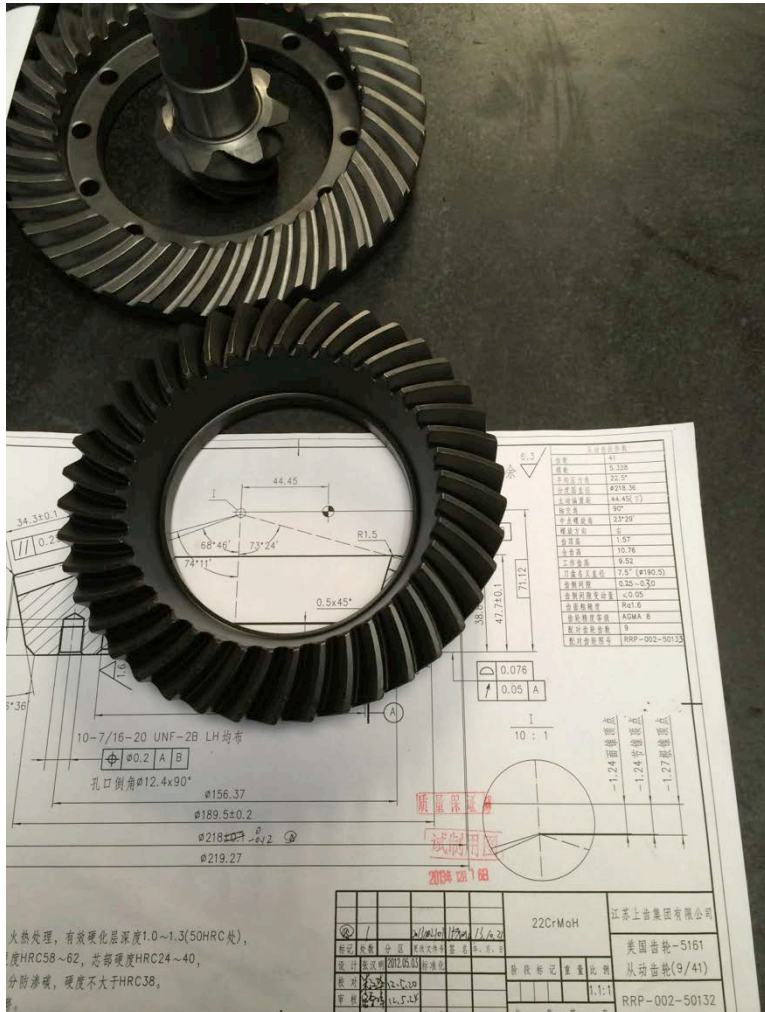
SIGNATURE OF THE AUDITOR:

Bert Jenkins, Angie Lucas, Grace Wang, Angie LoH

SIGNATURE OF THE AUDITEE:

Zhen Zheng Qiu

Gears – A Case Study



- USA customer
- Chinese supplier
- Neither side was happy and no sales or products
- Quality Gate implemented
- NGS manages today

Summary

- ❑ Western SME's need to be in or thinking of entering the Chinese market
- ❑ I see great potential for Chinese manufacturing in the years to come, but management of these companies must evolve
- ❑ Strategy drives Structure – world class manufacturing cannot fix a bad strategy

NGS Benefits to the Customers

Make Life Easier for Our Customers

NGS has personnel on the ground in Asia to deal with detailed daily tasks so our customers can focus on what is truly important – **Growing Their Business**

Save Time

NGS has an **Established Network** of contacts and suppliers in multiple LCC locations and will leverage them to achieve the goals of our customers as quickly as possible

Reduce Operating Costs

NGS will work to get you the **Best Price** on all products sourced and can utilize its internal resources to develop **Innovative Solutions** to improve total cost

Increase Revenue

NGS can find **Additional Production Capacity and Develop Alternate Products** to improve customer service and expand your product offering

Lower Risk

The Experienced NGS Team can manage the quality, service and cost risks of LCC sourcing so you do not have to worry

Helping
you win
the game.

A global
network
at your call.



Ningbo Global Sourcing
宁波博嘉亚进出口有限公司



No 10 Chuang Ye Road 3
Ningbo Free Trade West Zone
Beilun
Ningbo Zhejiang
315800
China

Phone : +86 574 8615 0883

Fax : +86 574 8617 3533

Email : general@NingboGlobalS.com

Website : www.Ningboglobalsourcing.com



Brent C. Carlson

Director

+1 650.483.5086 (US)

+852.6055.9521 (HK Mobile)

bcarlson@alixpartners.com

Professional Highlights

Brent helps companies and their stakeholders in the areas of mergers & acquisitions, dispute resolution consulting, internal investigations, restructuring & turnarounds, and interim management roles. Brent has 20 years of China business experience which includes senior management positions consisting of Chief Representative, COO/Deputy General Manager, CFO/Treasurer, Director of Business Development, and Chief Compliance Officer.

Brent is a Certified Insolvency and Restructuring Advisor, and he has led comprehensive turnaround programs in China to improve under-performing businesses and to fix financial reporting, liquidity, forecasting, and operational issues. His turnaround experience includes addressing areas such as simplifying organizational structures, consolidating sales & service, assessing product and customer profitability, consolidating technical operations, evaluating suppliers, implementing standardized budgeting & reporting, redesigning support functions, and reducing non-core costs.

As a Certified Fraud Examiner, Brent has provided dispute and forensic consulting services in internal investigations, purchase price and other commercial disputes, as well as criminal prosecution. Brent also has testified in court as an expert witness in fraud-related matters. From his experience in dealing with fraud-related matters, Brent applies a critical sense of skepticism necessary to effectively evaluate the financial data and inputs obtained from operations on the ground.

Brent is fluent in Mandarin Chinese.

Affiliations

Association of Insolvency and Restructuring Advisors

Association of Certified Fraud Examiners

Turnaround Management Association

Brent holds a masters degree from Yale University and is a *Summa Cum Laude* graduate of the University of Minnesota.

NGS CHAIRMAN – Gary Riley Sr.

Gary Riley is a decisive, shrewd global executive and strategy architect. He has over 20 years of experience as a C-Level executive across many middle-market organizations and private equity owned companies. Gary has a proven track record of creating and growing shareholder value and leading global companies through financial crisis to profitability by managing strategic realignment and team building within the automotive, computer hardware, and consumer and business electronics sectors worldwide.

During his career he has successfully relocated five manufacturing plants to Asia, launched seven new production plants in China and Malaysia, and formed, managed or liquidated 19 JVs (China and Germany). He is recognized as expert in Asian and Chinese business, specifically in the commercial vehicle space, working with JVs and SOE partners in China. Key experience includes:

- Presently, Chairman and owner of Ningbo Global Sourcing and Chairman and partial owner of Plastival, Inc.
- Ending March 2013, Gary was the CEO of Enovation Controls LLC, a global supplier of natural gas vehicle fuel systems and gas compression technology operating in Asia, NA and EU.
- CEO of ASIMCO Technologies, an organization consisting of 10 JVs and 4 WOFEs with 11,000 employees. ASIMCO is one of the largest foreign-owned Chinese automotive suppliers of commercial vehicle components. Over a two (2) year period, he increased EBITDA by 3 times and net profit by 15 times from 2008 to 2010 and completed a sale of the Company to Bain Capital.
- Served as President and CEO of Energy Conversion Systems, an organization with 11 plants in 8 countries (North America, Europe and Asia).
- Previously was COO of Magnequench, Inc., a global leader in rare earth magnets and magnetic assemblies
- Was President and CEO of Xolox, a global privately owned manufacturer of OEM components for hard disk drives (data storage)
- CEO of Zollner Pistons for five (5) years, a global, privately owned OEM supplier of heavy-duty pistons and automotive components.
- Prior to this, was a Partner at Price Waterhouse in their M&A division.