



JIANG LI, Baosteel

The challenges facing Chinese Steel Industry

Feb 6th 2013, Turkey

Beijing has suffered the most serious air pollution this winter

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PM2.5



The Great Smog of 1952 led to the Clean Air Act 1956

The Great Smog of 2013.....



Great smog of 1952

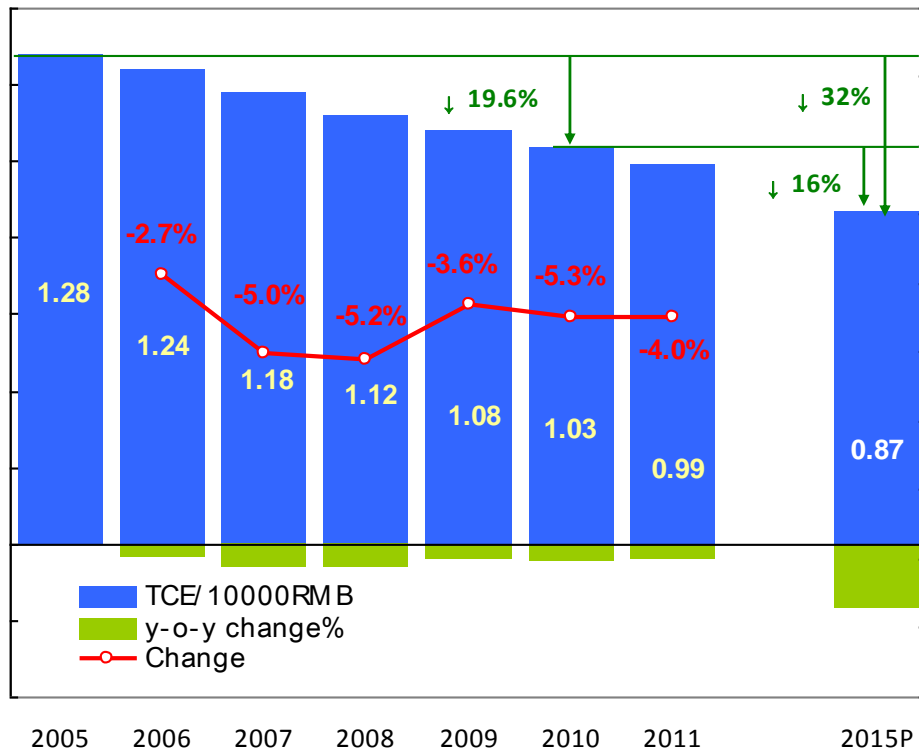


Great smog of 2013?

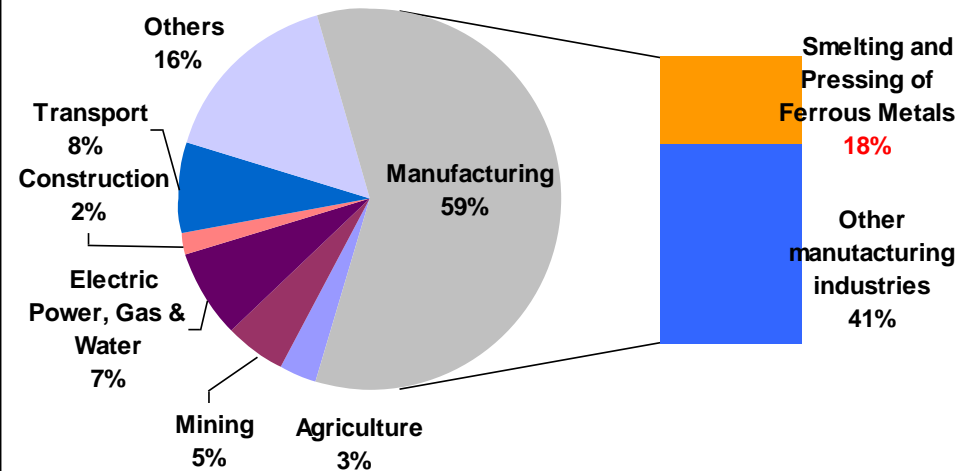
Challenges from environment protection

Steel industry accounts for the biggest share of energy consumption in China

Energy consumption per unit GDP of China



Energy consumption by sector in China 2007



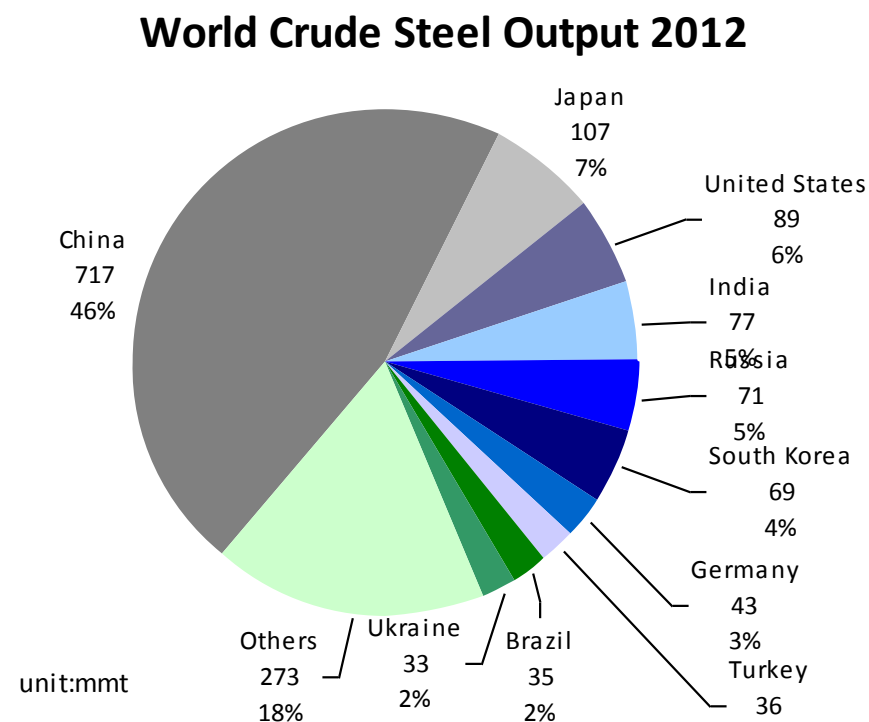
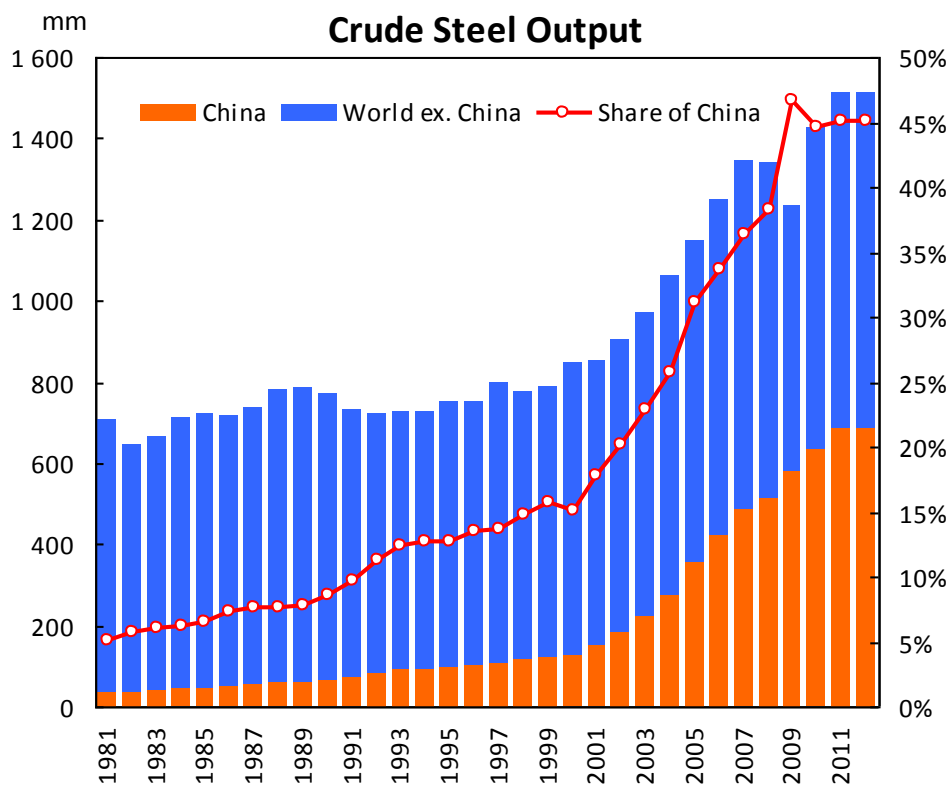
Challenges from environment protection

Environment saving target set for steel industry higher than national level for 12th 5-year-planning period

National energy-saving and environment protection indicators	Target of 12th Five-Year Plan	Energy-saving and environment protection indicators in the steel industry	2010	2015	Goal of 12th Five-Year Plan
Total energy consumption per unit of GDP	↓16%	Energy consumption per unit of industrial added value			↓18%
CO ₂ emission per unit of GDP	↓17%	CO ₂ emission per unit of industrial added value			↓18%
SO ₂ emission	↓8%	SO ₂ emission per ton of steel (kg)	1.63	≤1	↓38.6%
COD	↓8%	COD reduction per ton of steel (kg)	0.07	0.065	↓7.1%
		Comprehensive energy consumption per ton of steel (kg standard coal)	605	≤580	↓4.1%
		New water per ton of steel consumption (m ³)	4.1	≤4.0	↓2.4%
		Comprehensive utilization ratio of solid waste	94	≥97	+3%

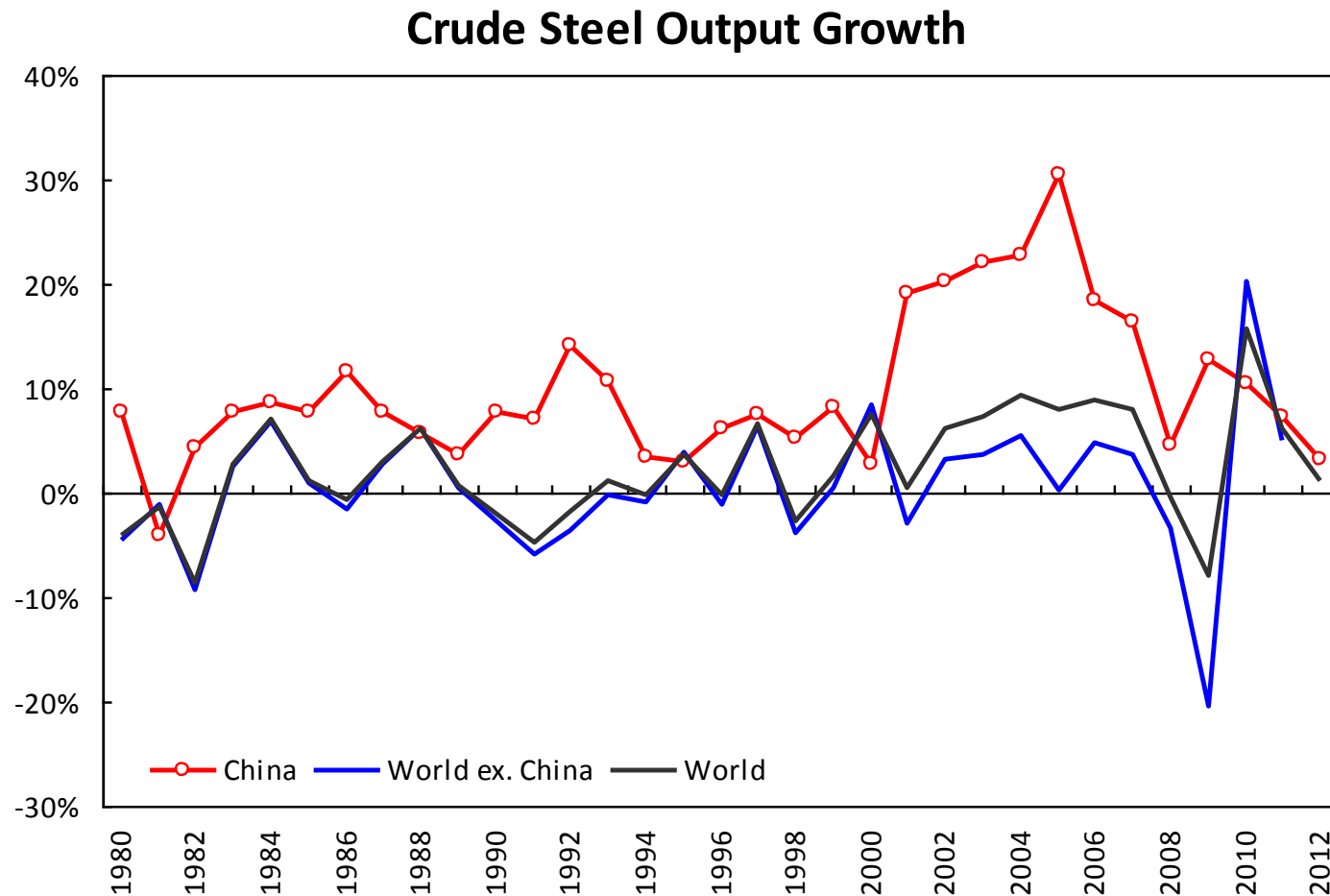
Review of Chinese steel output

In 2012, China's Crude steel output accounted for 45% of world total output, ranking No1 in the world for the 17th straight year



Review of Chinese steel output

China has been the engine for world steel demand growth since 2001 and the rescuer of world steel market in 2009, but the growing momentum of Chinese steel industry has slowed down since 2006

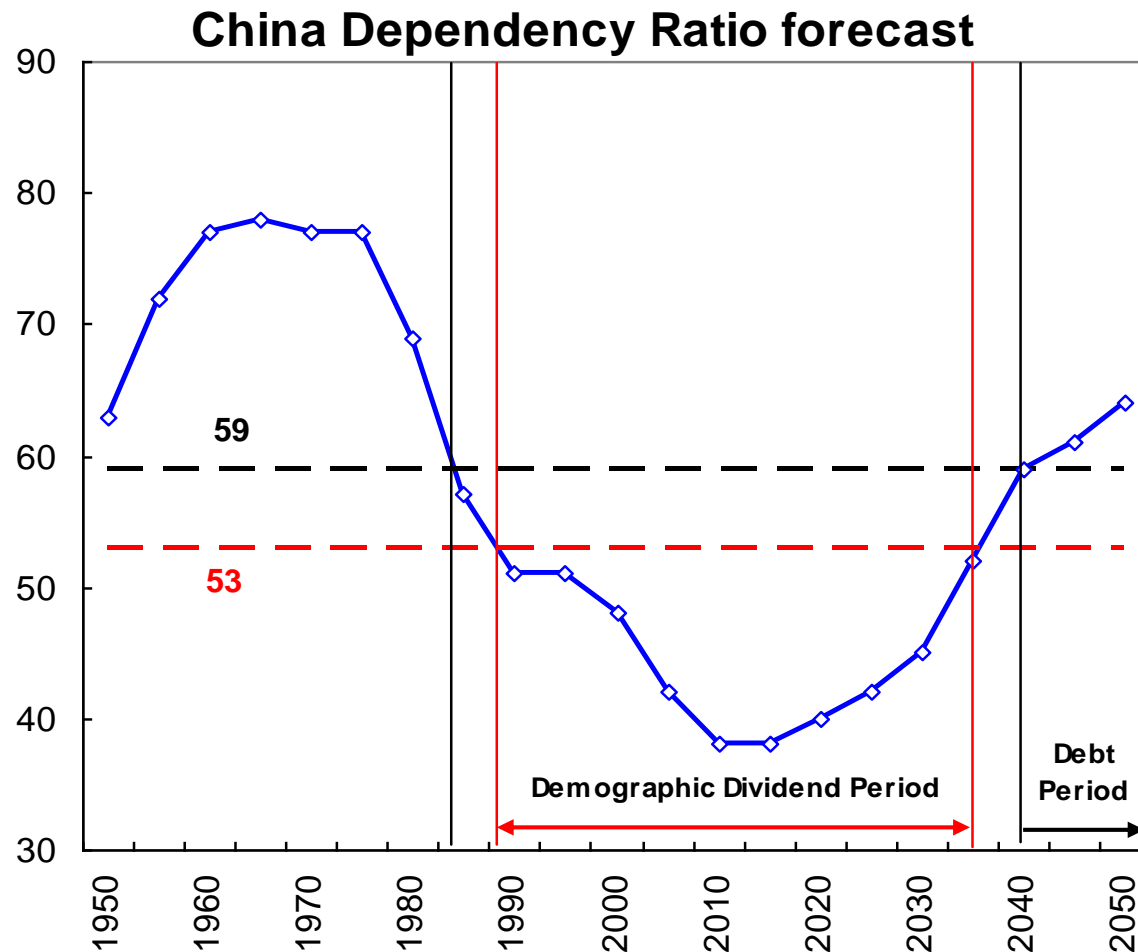


Chinese economy has gone through over three decades of rapid growth thanks to reform, demographic and globalization dividend



Demographic dividend diminishing

China's labor force drops for first time in 2012 by 3.45 million and it is predicted the working age population will "steadily shrink" by 2030



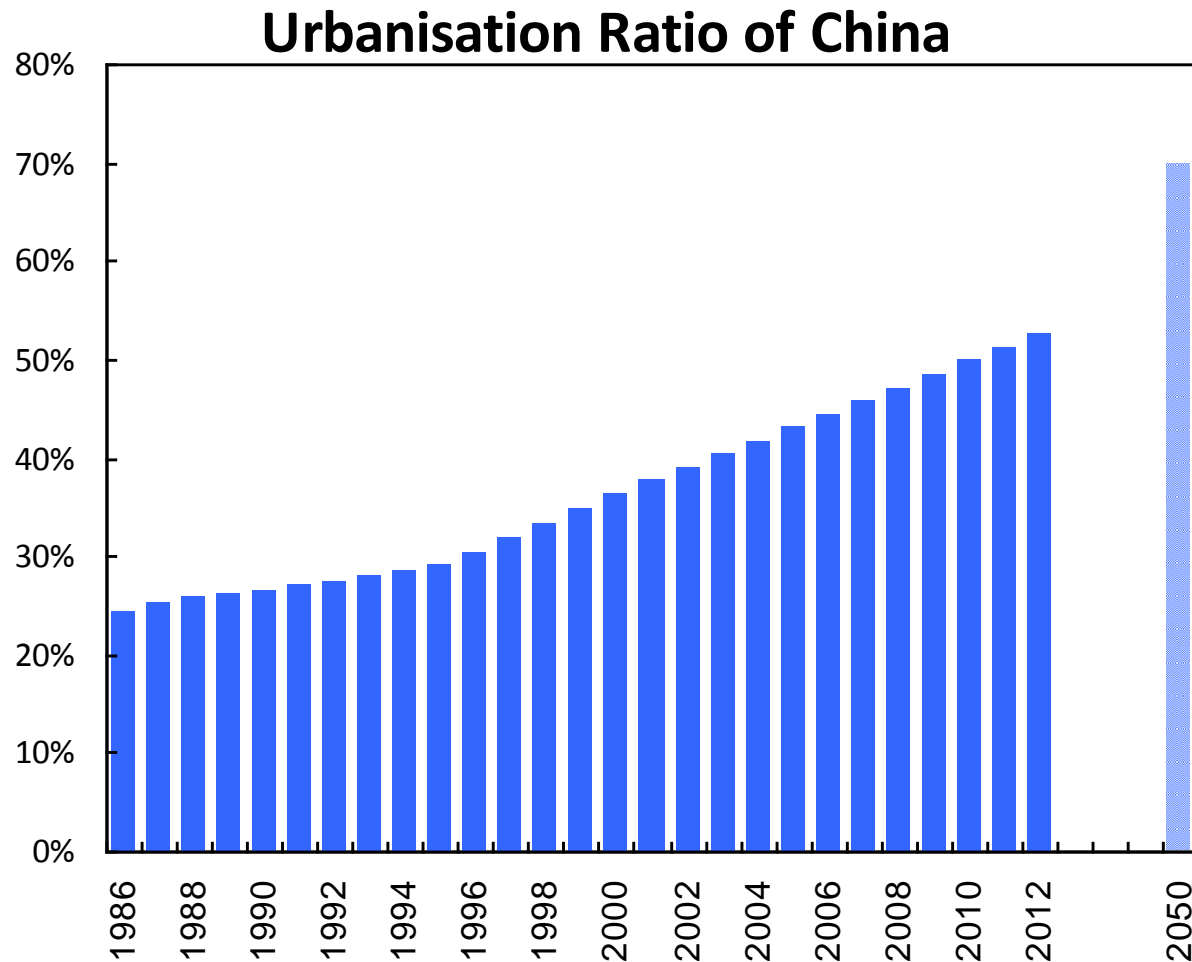
Chinese economic growth pattern shift

If China succeeds in the reform of growth pattern, GDP growth rate will slow down gradually to 7% by 2020, share of consumption will surpass investment

	1995–2010	2011–2015	2016–2020
GDP growth	9.9	8.6	7
Labor growth	0.9	0.3	−0.2
Labor productivity growth	8.9	8.3	7.1
Economic structure (end of period, %)			
Investment/GDP ratio	46.4	42.0	38.0
Consumption/GDP ratio	48.6	56.0	60.0
Industry/GDP ratio	46.9	43.8	41.0
Services/GDP ratio	43.0	47.6	51.6
Share of employment in agriculture	38.1	30.0	23.7
Share of employment in services	34.1	42.0	47.6

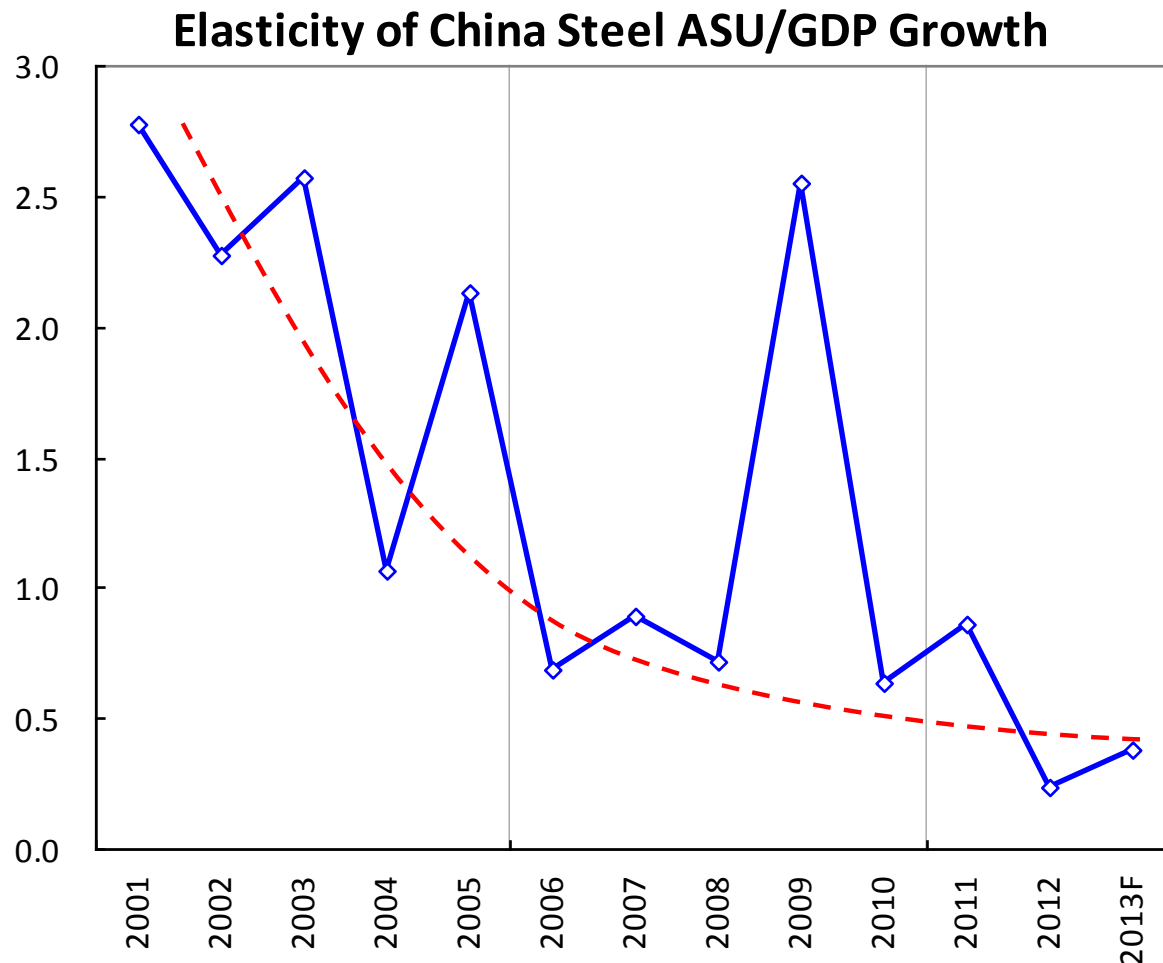
From investment driven to consumption driven

New urbanization will become major engine of economic growth next decade, it will be people-oriented and should improve social welfare of people and boost consumption in the end



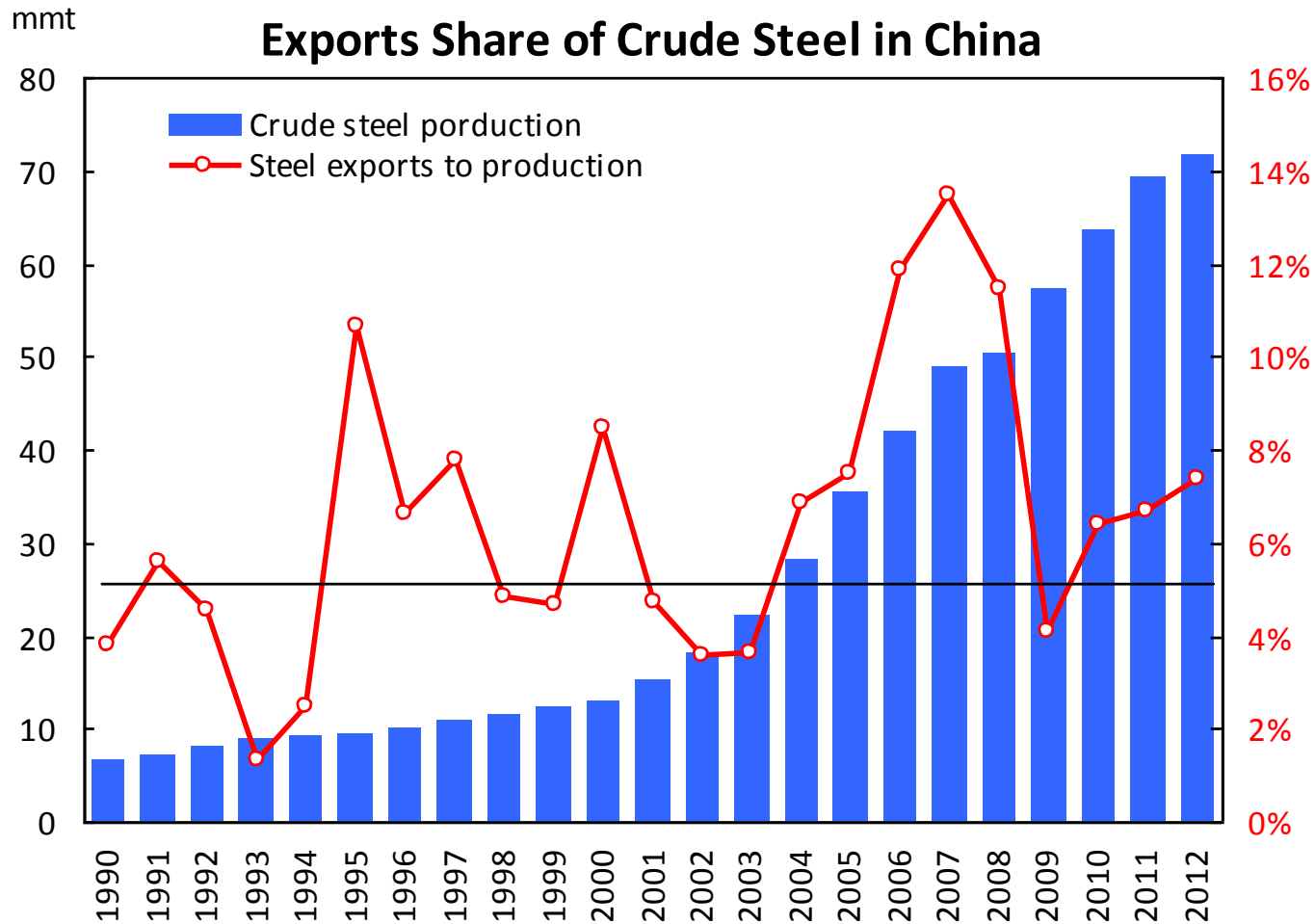
Leading to declining elasticity of ASU to GDP growth

Elasticity of ASU growth to GDP growth in China resumes its downward trend after it rebounded in 2009 driven by 4 trillion RMB stimulus package



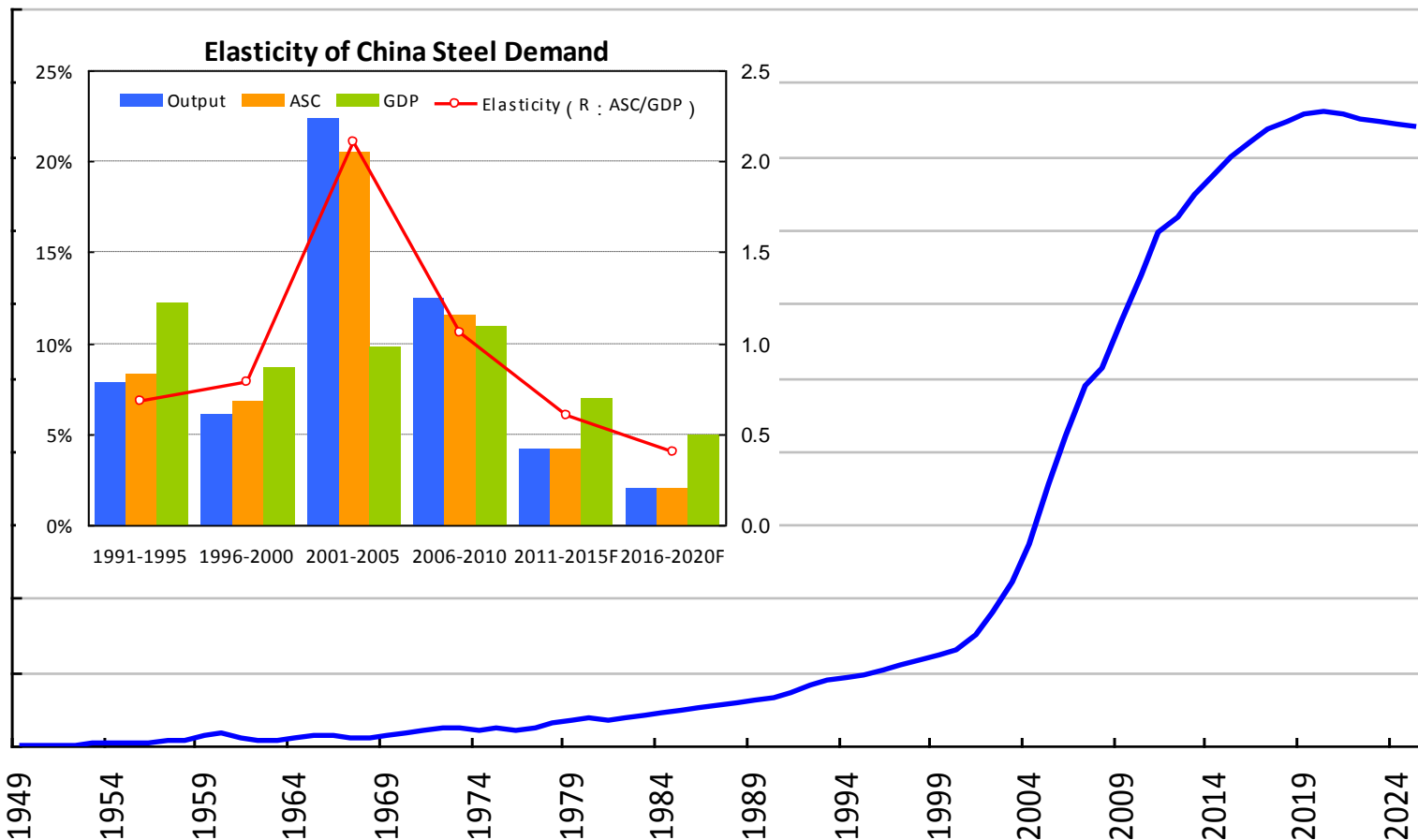
Will China become a larger steel exporter?

No, the reasons are: export constraint policy, lack of cost competitiveness, trade issues, relocation of downstream industries



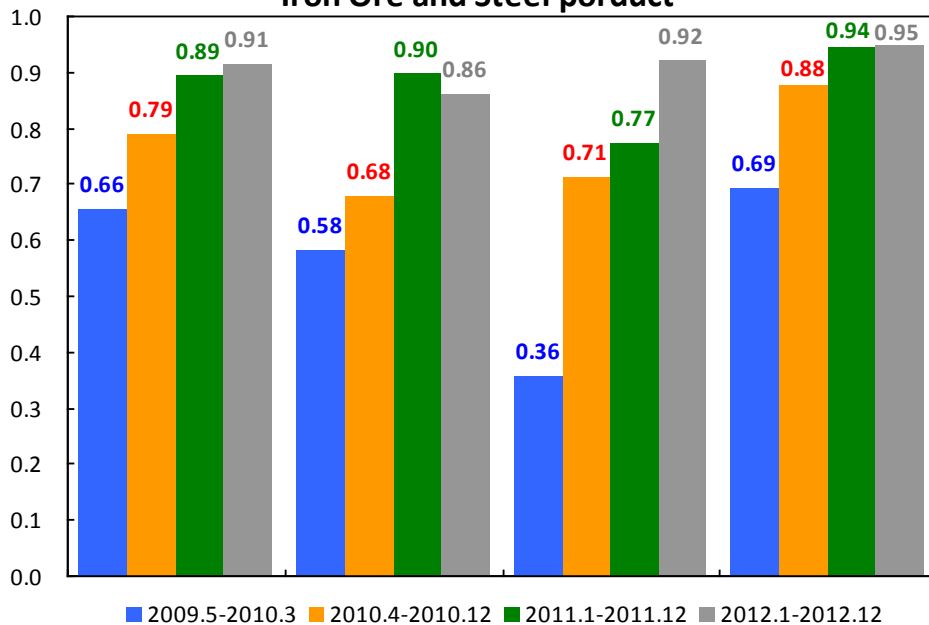
Due to the economic growth pattern shift and environment constraint, Chinese steel demand and output may peak around 2015-2020 and steel trade may regain balance, overcapacity will be a long term problem for Chinese steel industry

China crude steel output

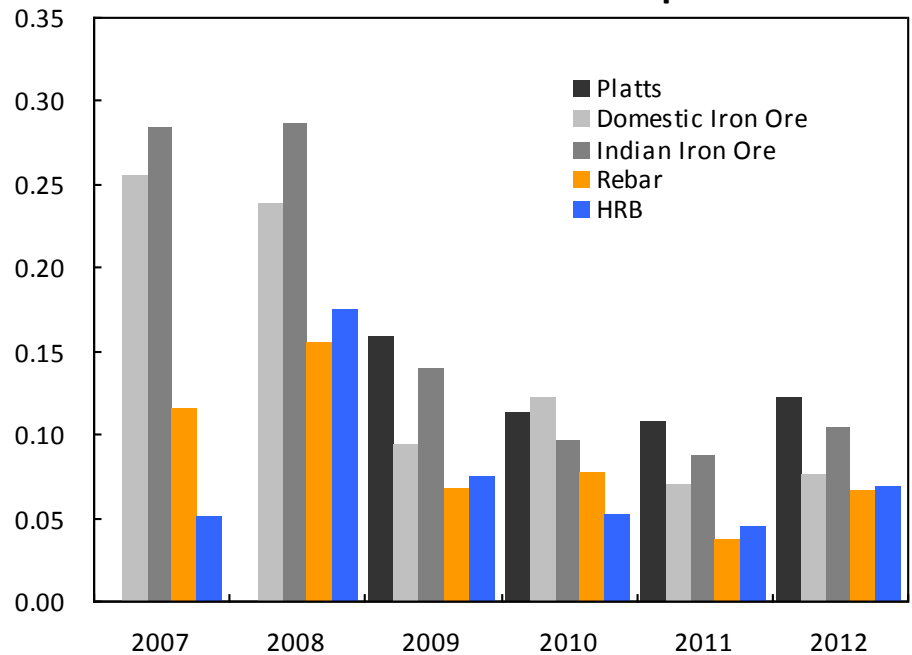


Change in pricing mechanism of raw materials strengthened the correlation between raw material and steel products, volatility of raw material price stay higher than steel prices

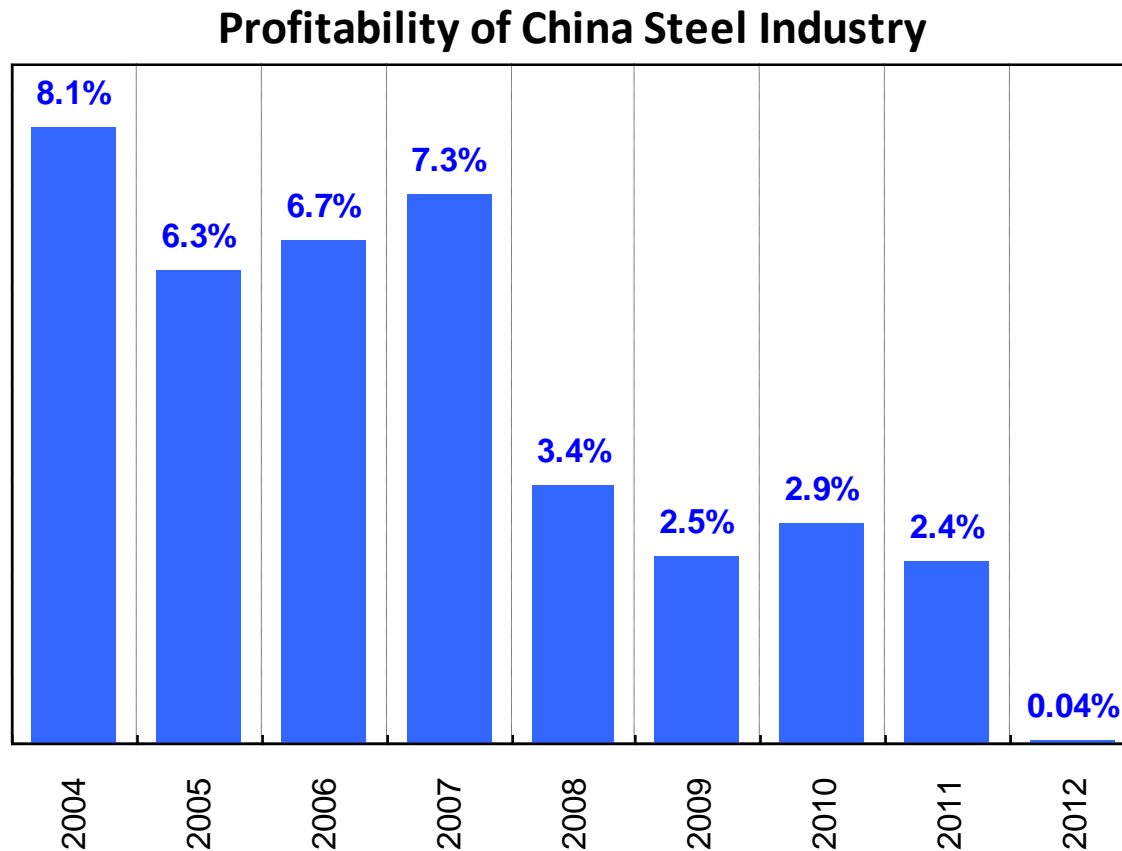
**Correlation coefficient between
Iron Ore and Steel product**



Coefficient of Variation Comparison

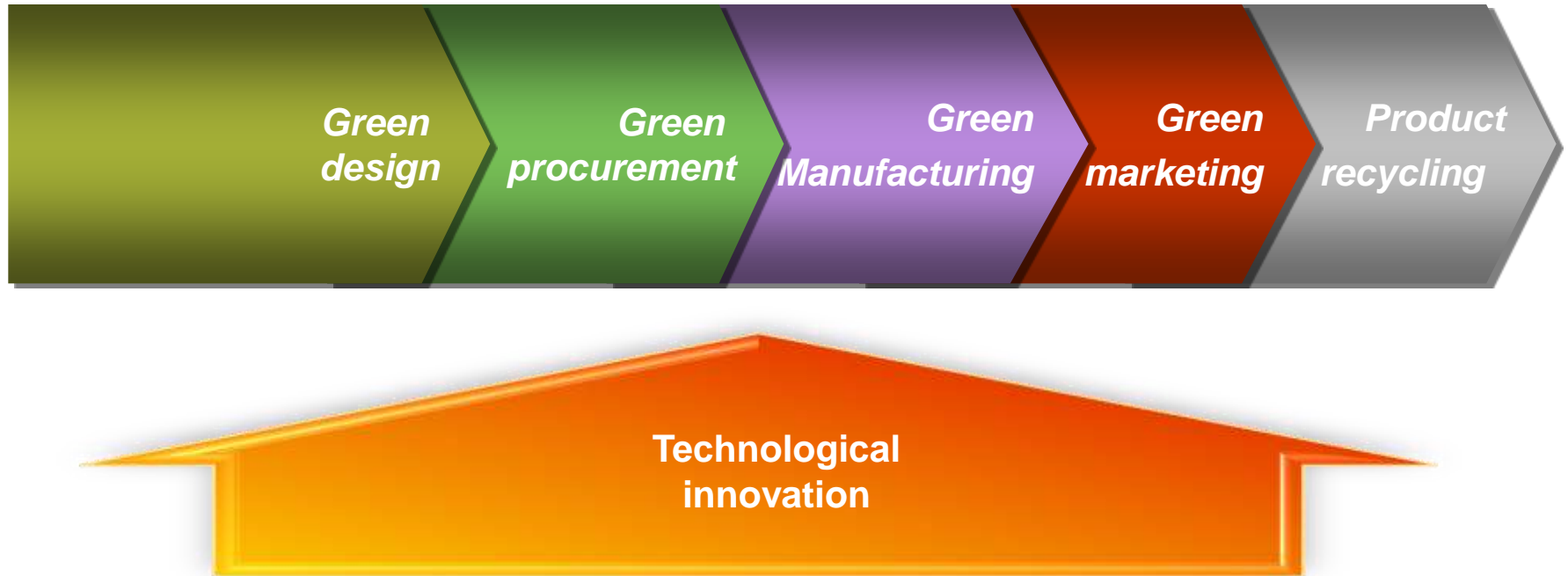


Profitability of Chinese steel industry approached 0% in 2012, about 30% of steel enterprises suffered losses



Way out for environment protection: Technological innovation

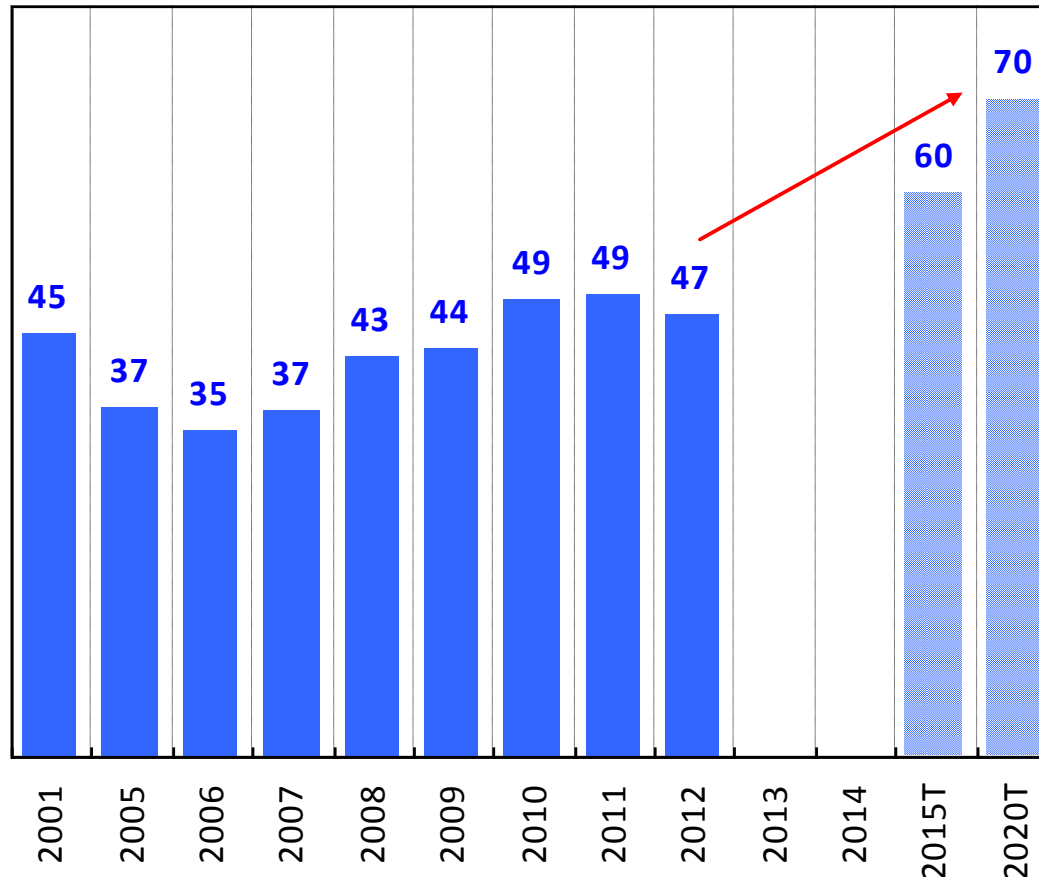
Maintain technological innovation to boost energy saving, emission reduction and to aim to produce environment-friendly products



Way out for overcapacity: Restructuring and consolidation

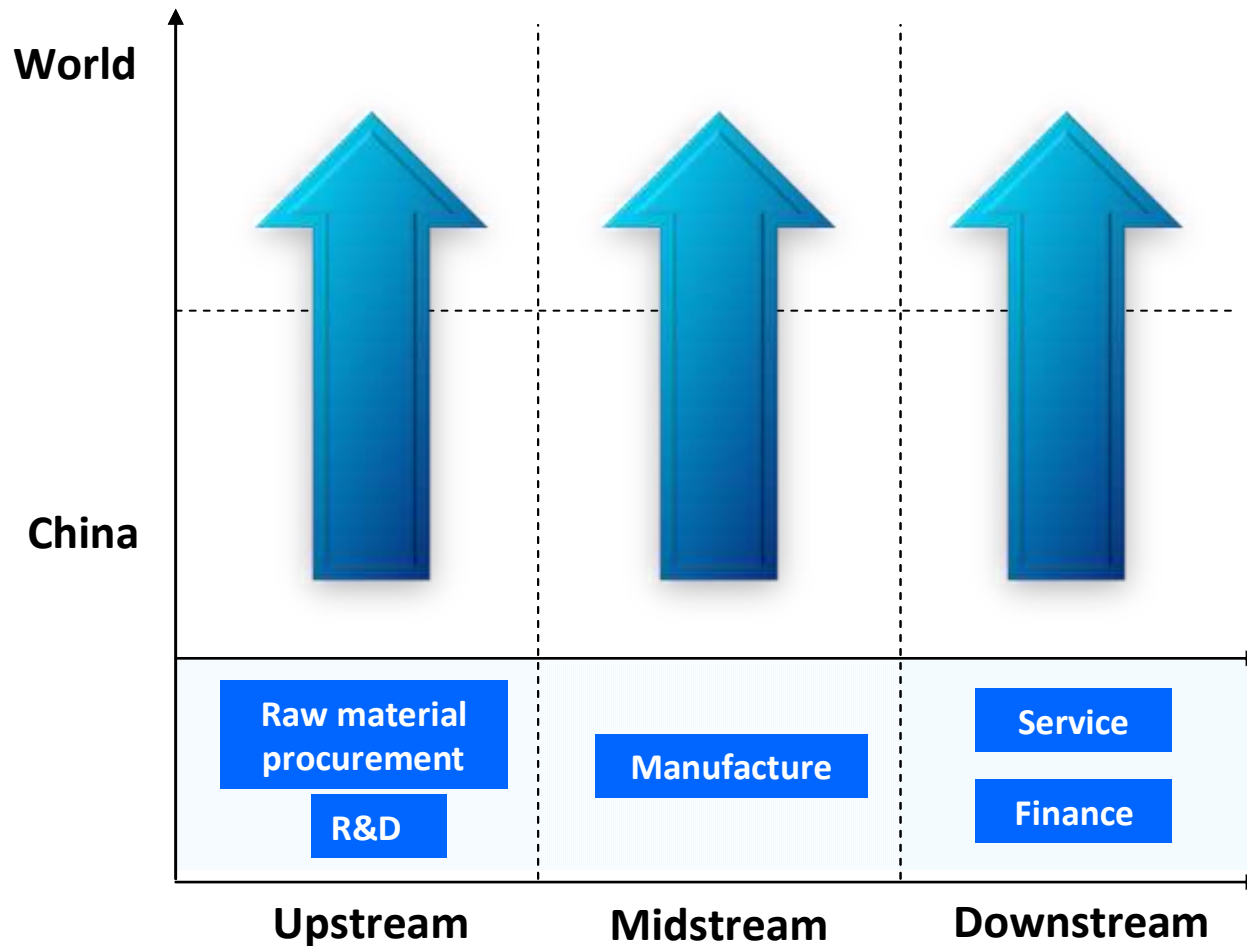
The industry should rely on consolidation driven by market force to raise industry concentration ratio, and industry upgrade pushed by government environment protection law to eliminate outdated capacity

Chinese Steel Industry CR10



Way out for supply chain: Moderate vertical integration

Moderate vertical backward and forward integration timely will help to improve the profitability of steel industry



Thank you

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