

# A new growth cycle



Rio de Janeiro  
January 27, 2011

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# Agenda



- The past
- The future

# The past





# The past

## Cauê mine





# The past

## EFVM

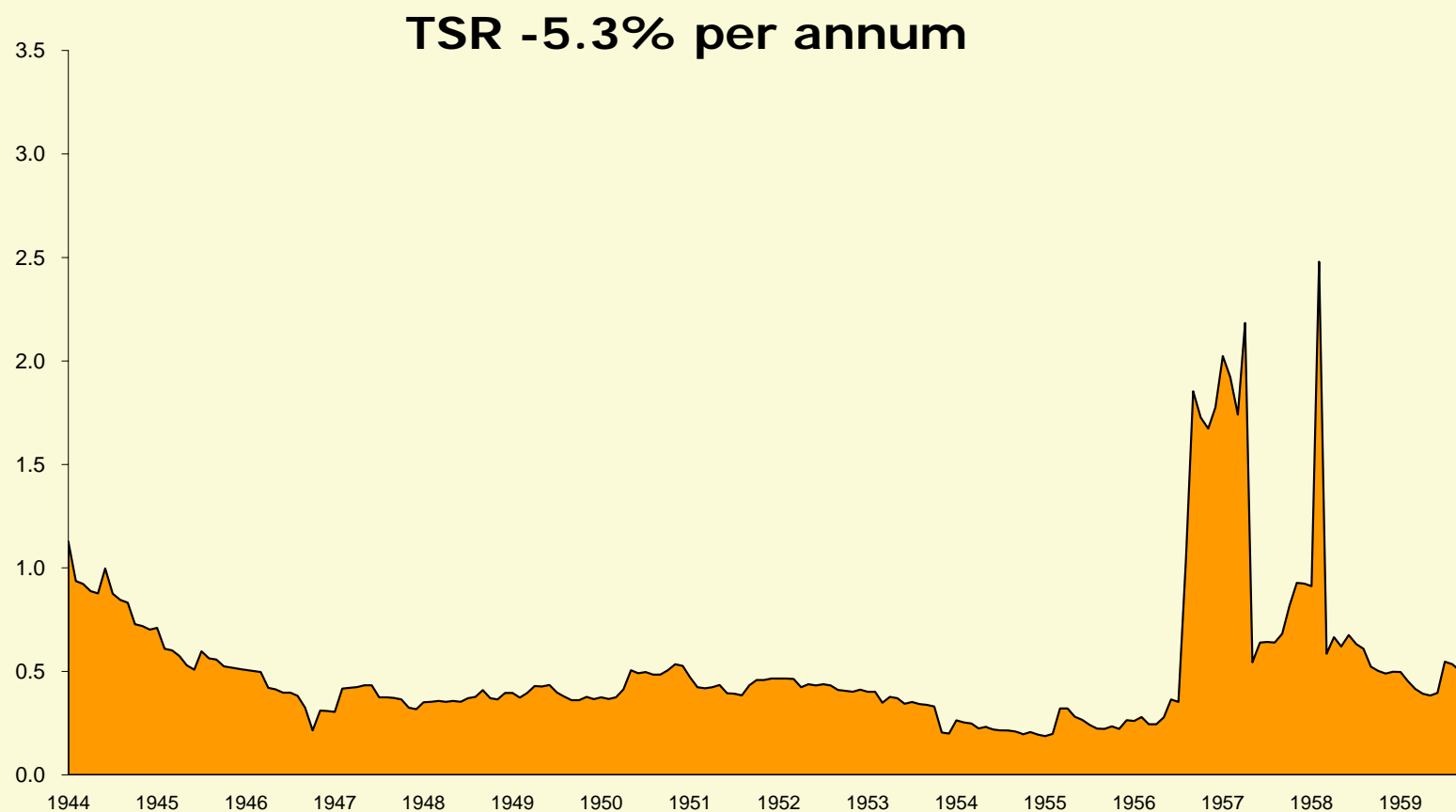


# The past

## Vitória's Port



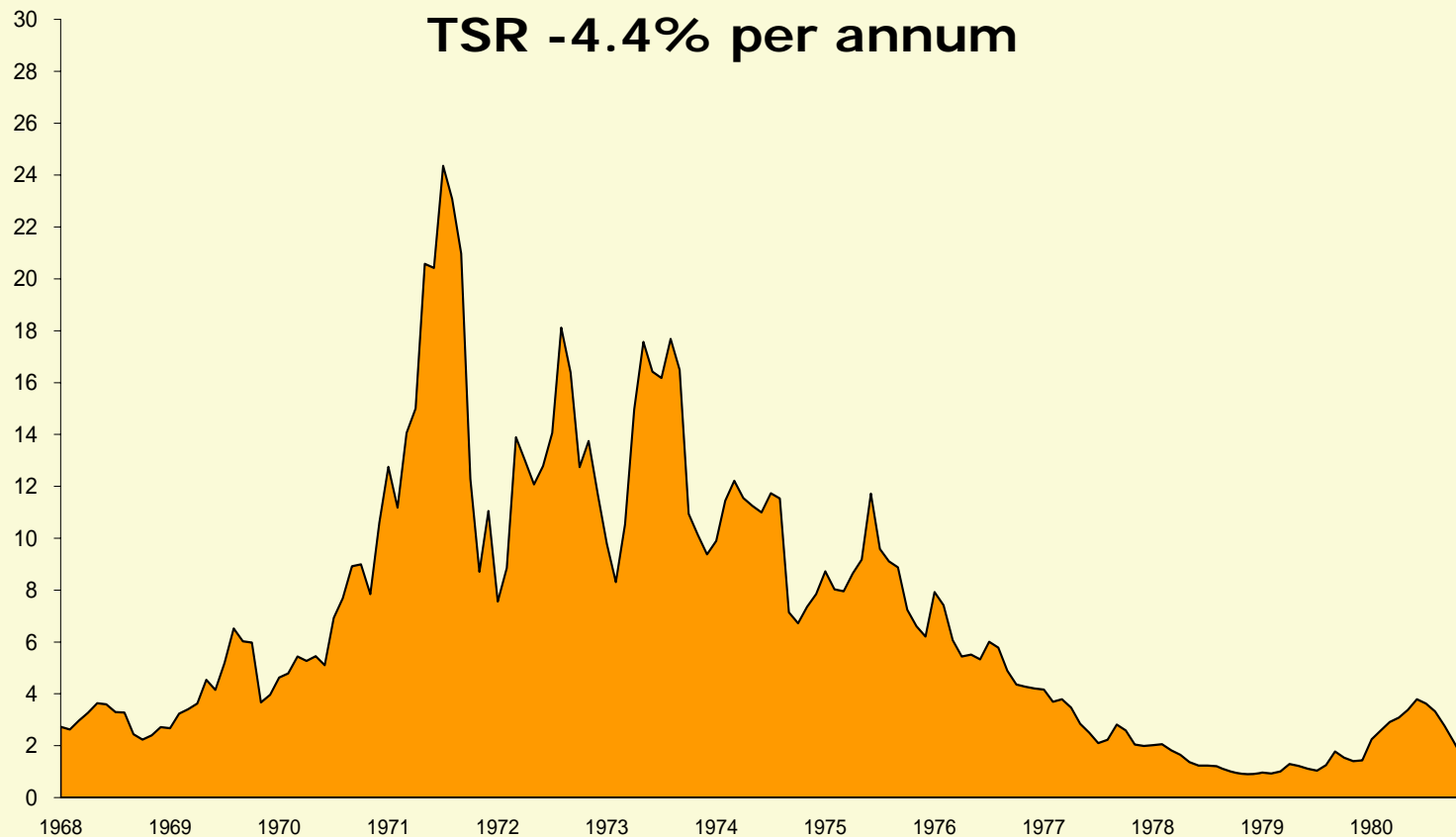
# The beginning: difficult times 1944/1959



Vale preferred shares in Brazilian reais, deflated by IGP-DI, base November 2009.  
Source: Vale, Jornal do Commercio and BM&F Bovespa.



# The bubble of 1971: Vale share prices 1968/1980

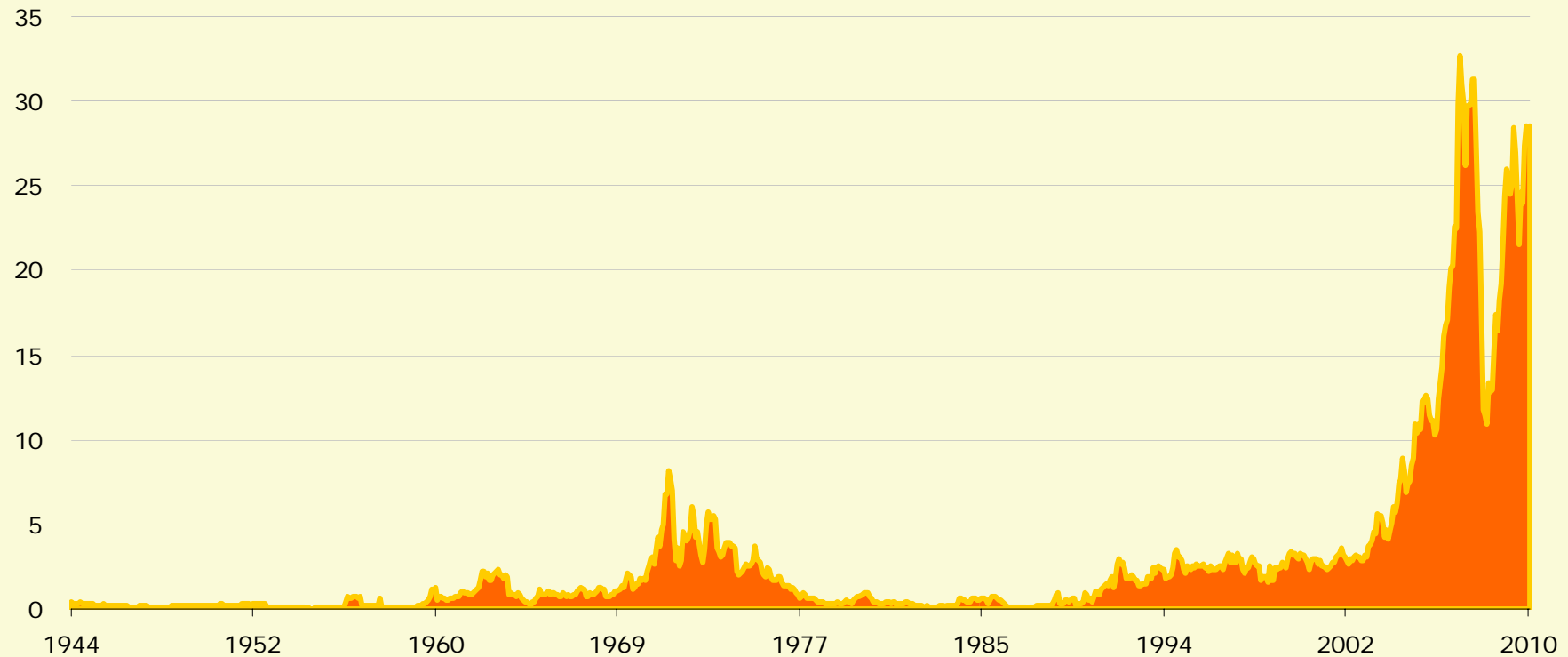


Vale preferred shares in Brazilian reais, deflated by IGP-DI, base November 2009.  
Source: Vale, Jornal do Commercio and BM&F Bovespa.

# The performance of Vale shares prices: 1944/2010



2010 US\$ per share



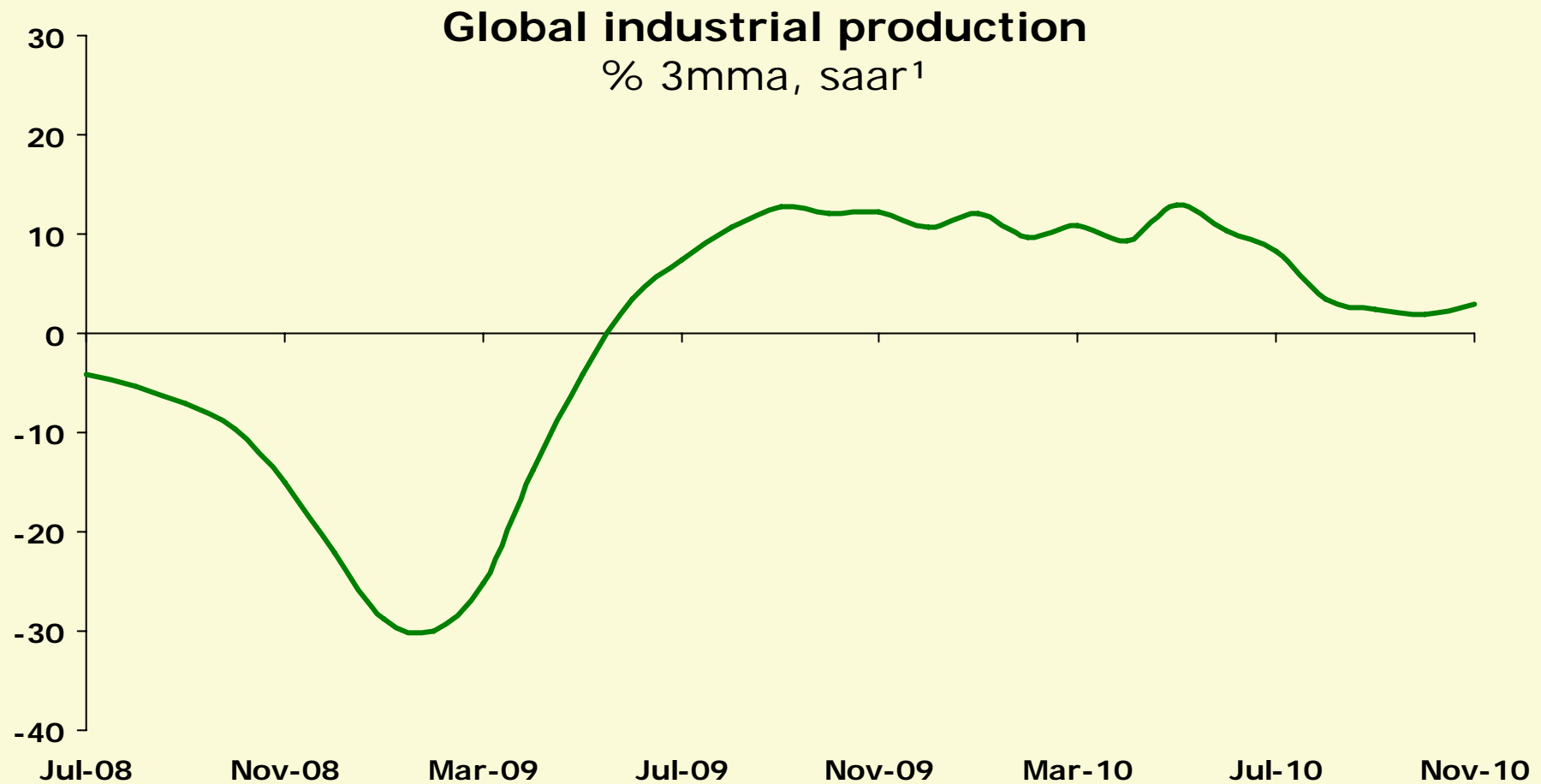
Vale preferred share prices in real terms, in U.S. dollars of December 2010.  
Source: Vale, Jornal do Comercio and BM&F Bovespa.

The future





# Global IP growth is transitioning to a slower sustainable pace



<sup>1</sup> Seasonally adjusted annualized rate

Source: Vale and J.P. Morgan

# The history of business cycles shows that strong recoveries are followed by deceleration towards moderation



## IP: global recessions and recoveries

	$\Delta$ peak to trough	$\Delta$ 1st year	$\Delta$ 2nd year
May/1975	-14.0%	11.0%	5.8%
Jul/1980	-5.0%	3.3%	-3.7%
Dec/1982	-5.9%	9.7%	4.6%
Mar/1998	-2.1%	2.0%	5.8%
Nov/2001	-5.5%	3.7%	2.6%
Mar/2009	-16.5%	11.0%	3.8% <sup>1</sup>
<b>Average:</b>	<b>-8.2%</b>	<b>6.7%</b>	<b>3.0%</b>

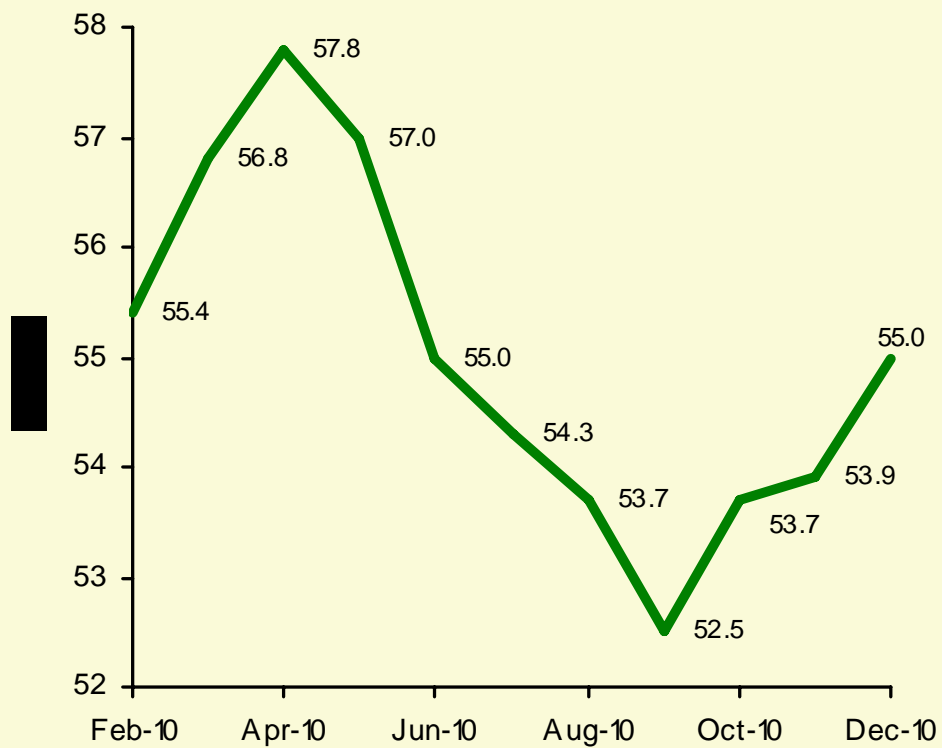
<sup>1</sup> Recovery from Mar/2010 to Oct/2010, annualized rate.

Sources: Vale, BEA and NBER

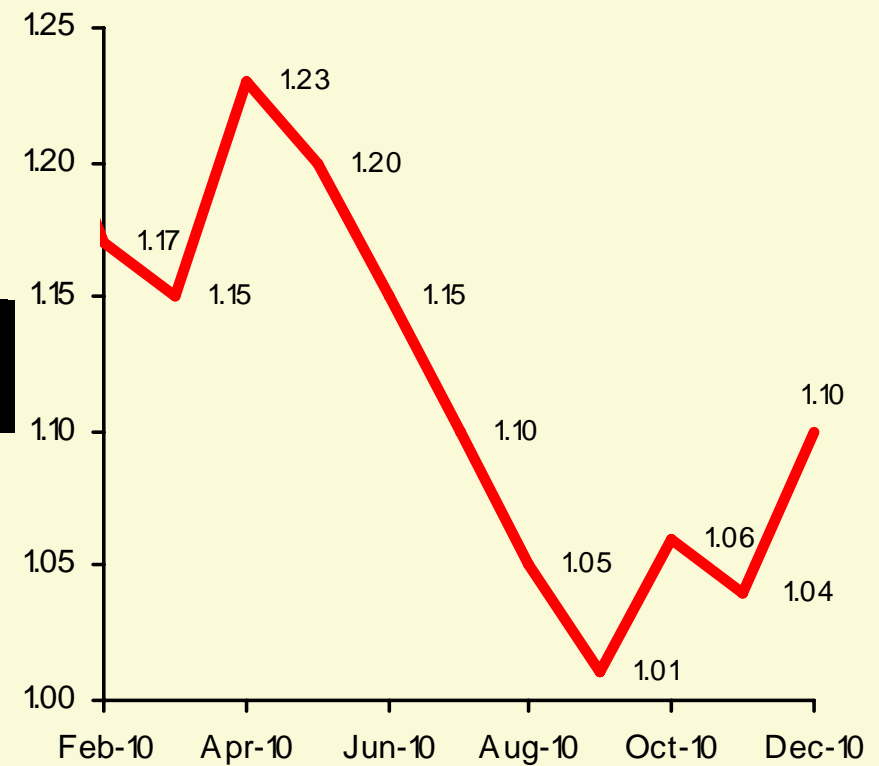
# Global IP is already issuing signals of a trend reversal



Global PMI, sa<sup>1</sup>



New orders/Inventories ratio, sa<sup>1</sup>



<sup>1</sup> Seasonally adjusted

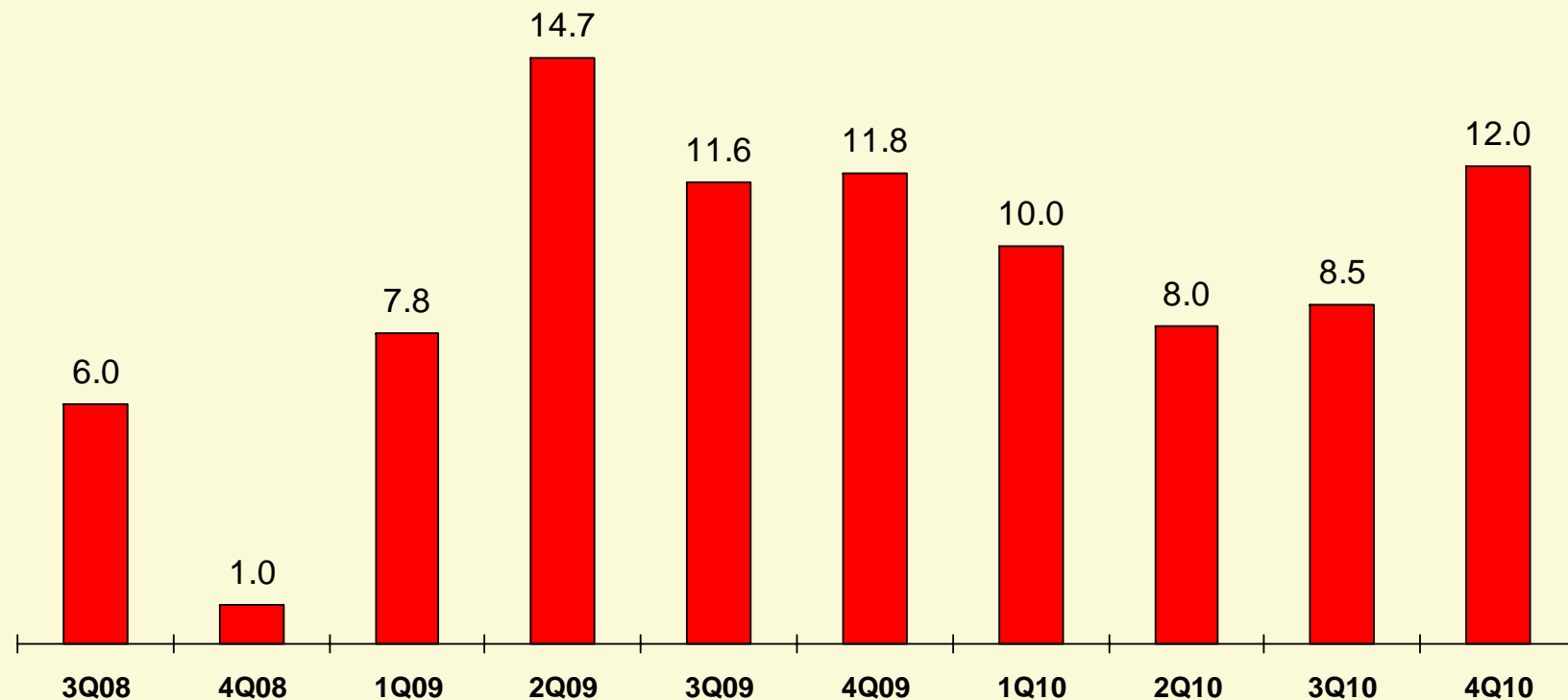
Sources: Vale and JP Morgan



# China's GDP growth has reaccelerated after bottoming in 2Q10



Chinese GDP growth<sup>1</sup>  
%



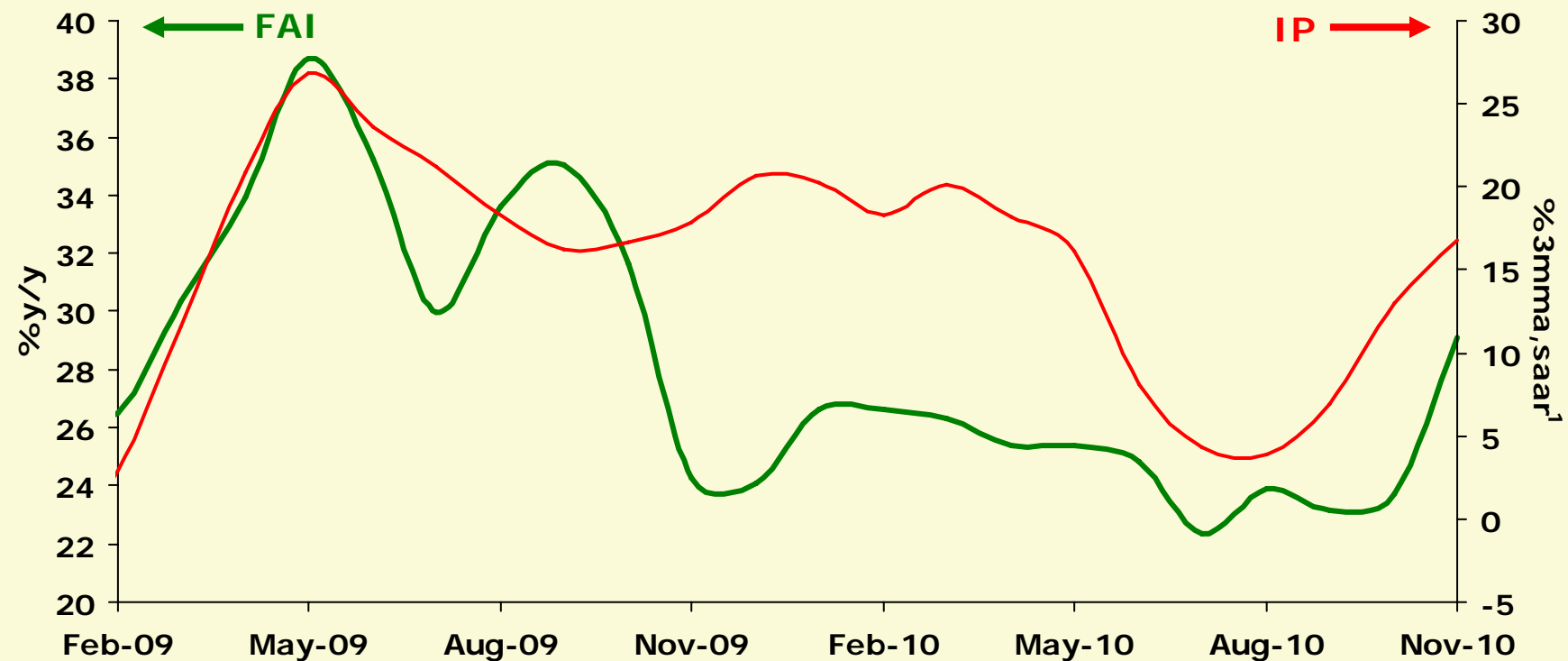
<sup>1</sup> Saar

Source: CEIC and Vale estimates

# Both fixed asset investment and industrial production are showing signs of reacceleration in China



## FAI and IP growth



<sup>1</sup> Seasonally adjusted annualized rate

Source: Haver Analytics

# **We expect global industrial production to reaccelerate in 1H11**



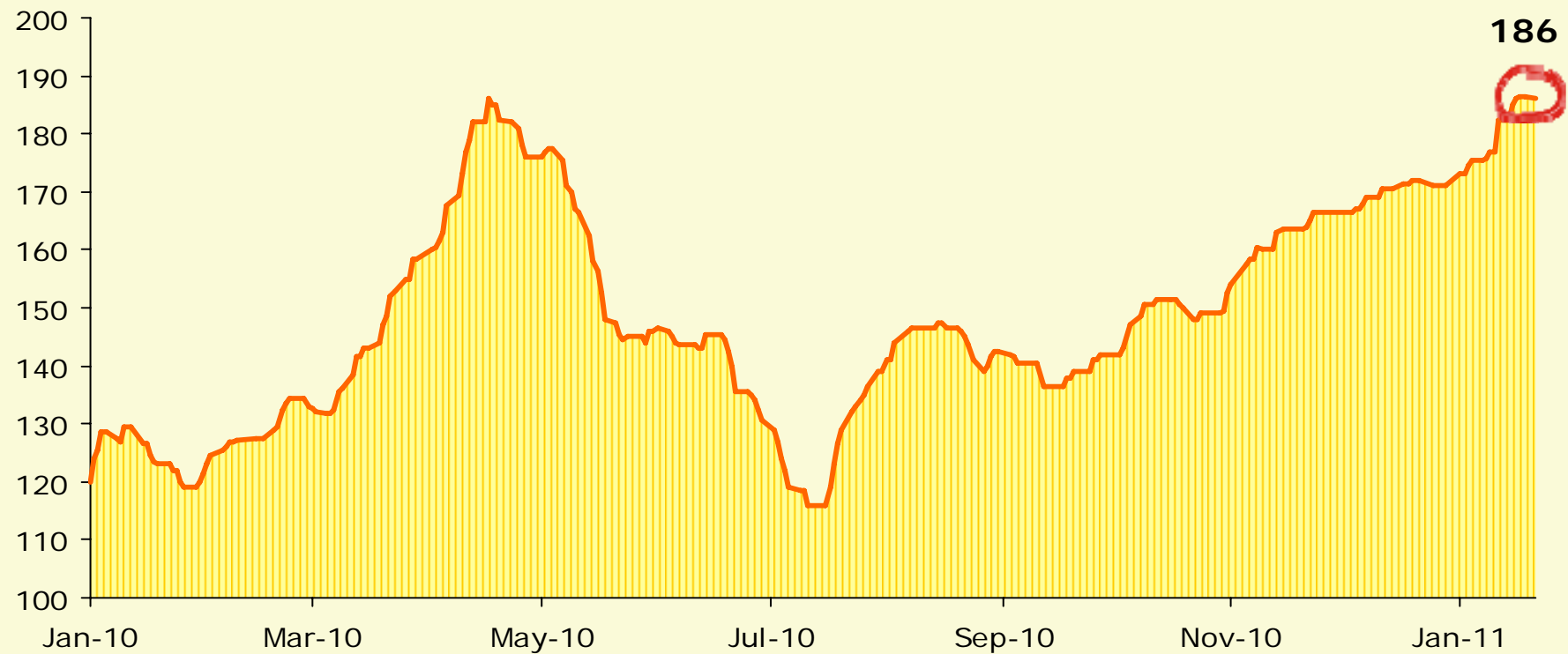
- Global accommodative monetary policy.
- Fast growing consumption expenditures in emerging economies.
- Recovery of corporate investment.



# The iron ore market remains tight



**Platts IODEX<sup>1</sup>**  
US\$/metric ton



<sup>1</sup> Platts Iron Ore Index, 62% Fe content  
Fonte: Platts

## La Niña: rains in Brazil and Australia

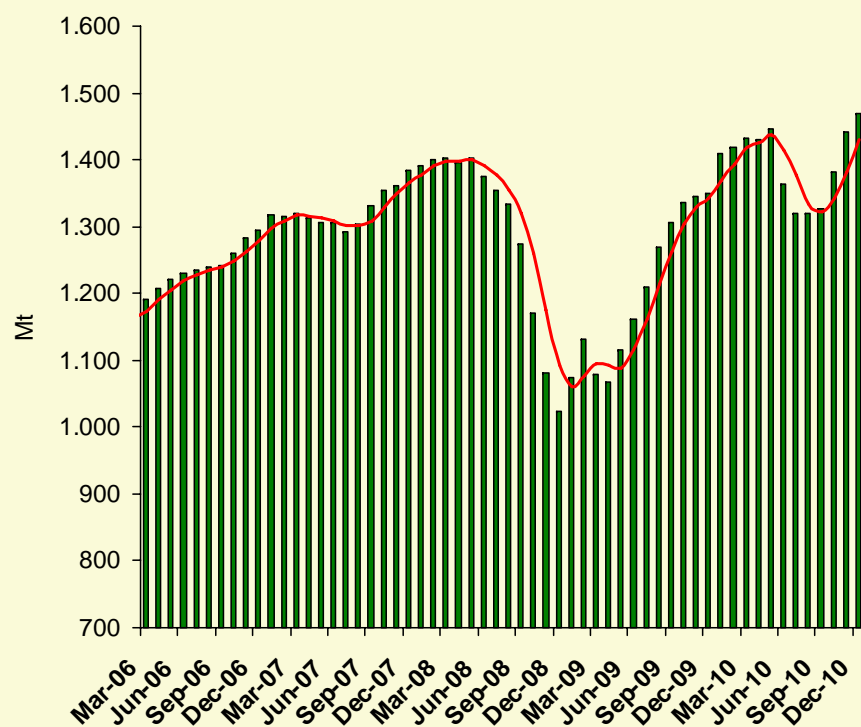


- **Iron ore:** limited impact, 600,000 metric tons.
- **Coal:** more significant impact on our output.
- Events in Queensland are likely to generate effects in iron ore and nickel prices.

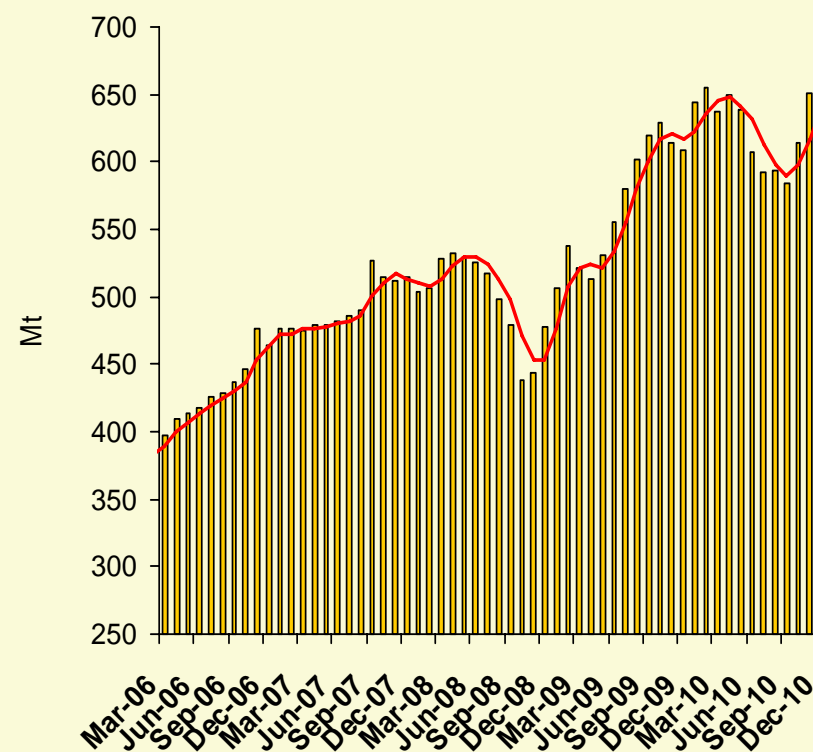
# Global carbon output growth is regaining momentum



## Global



## China

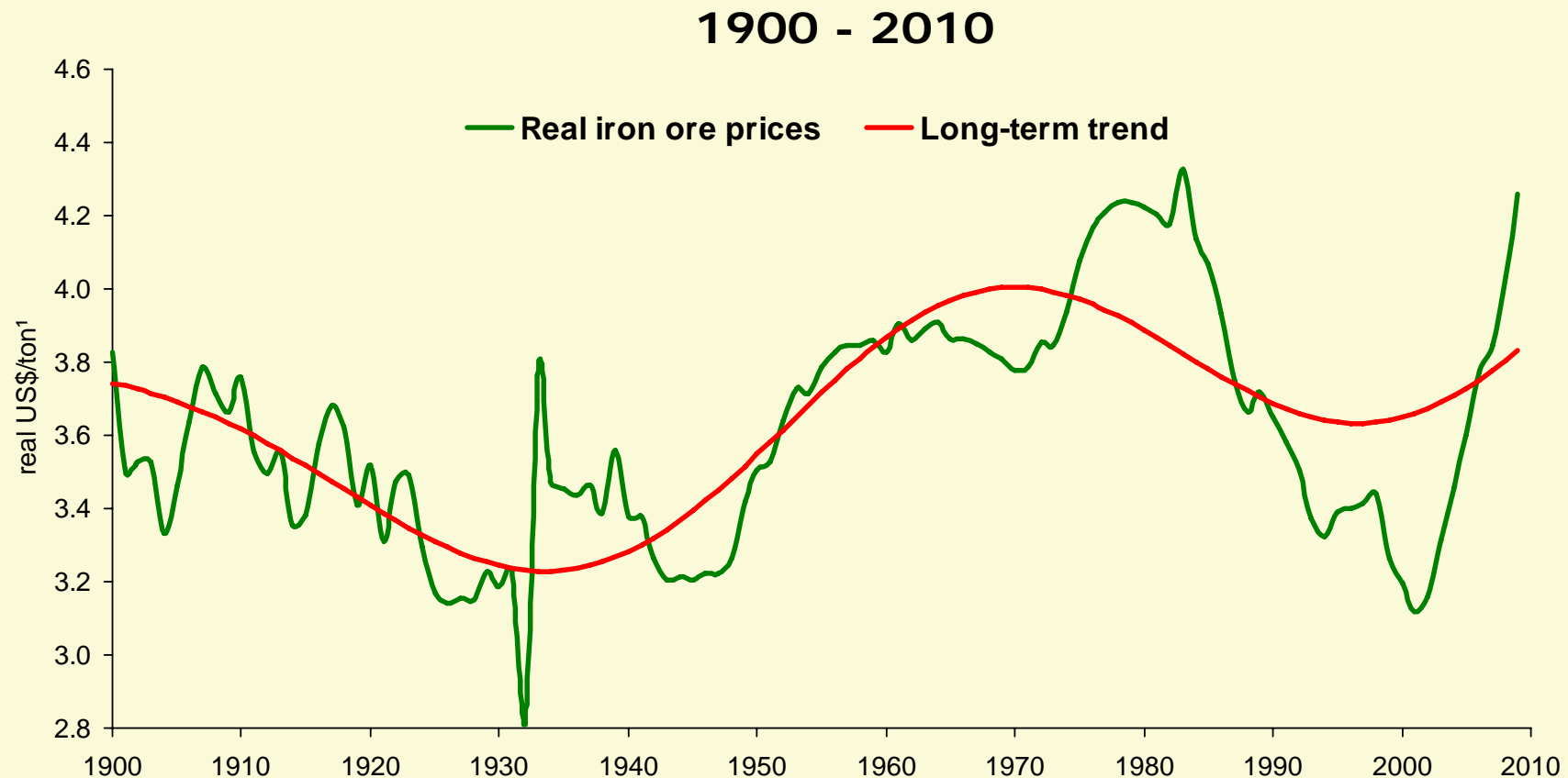


Obs: annualized monthly data, seasonally adjusted.

Sources: Vale and World Steel Association

— 3 month moving average

# The increase in relative scarcity is driving an upward long-term trend for iron ore prices

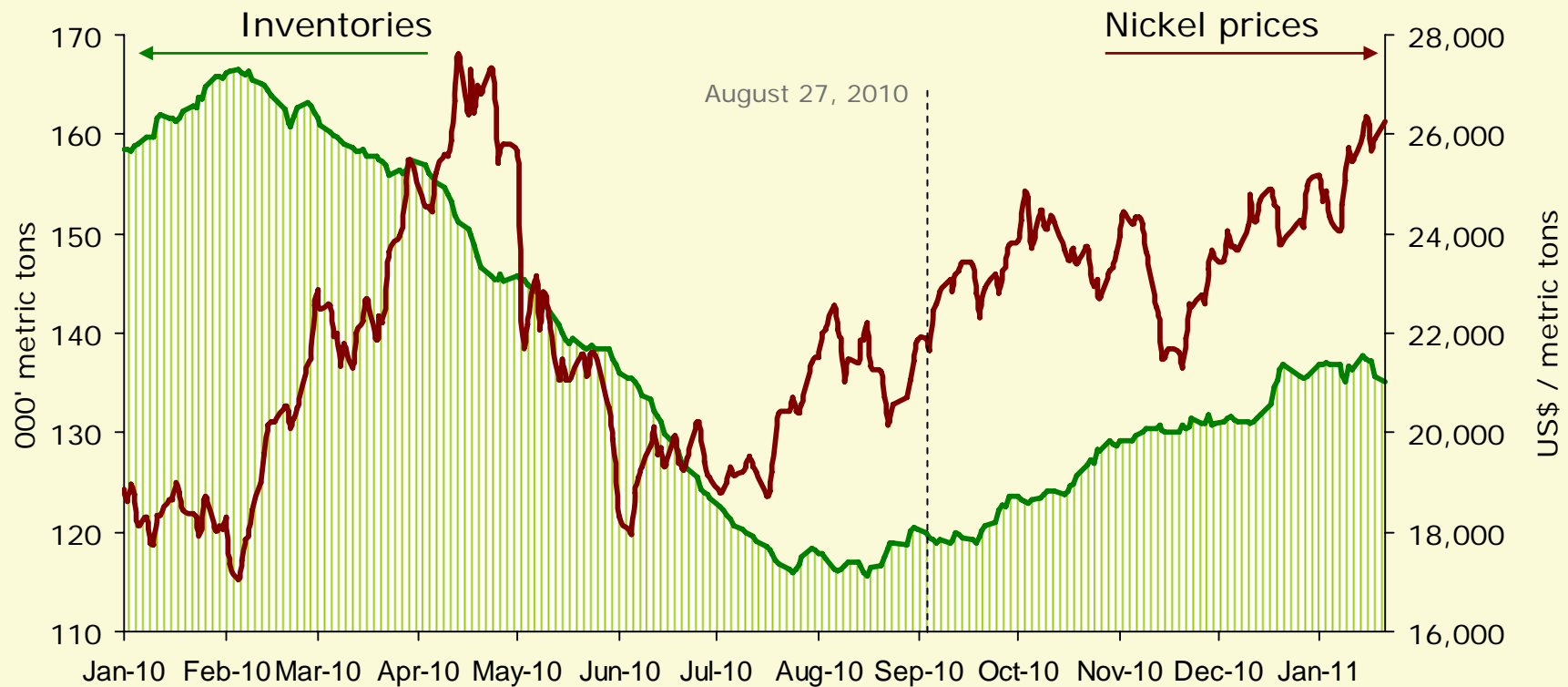


<sup>1</sup> prices in 1998 US\$/ton, deflated by the CPI, in logs.

Sources: USGS and Vale



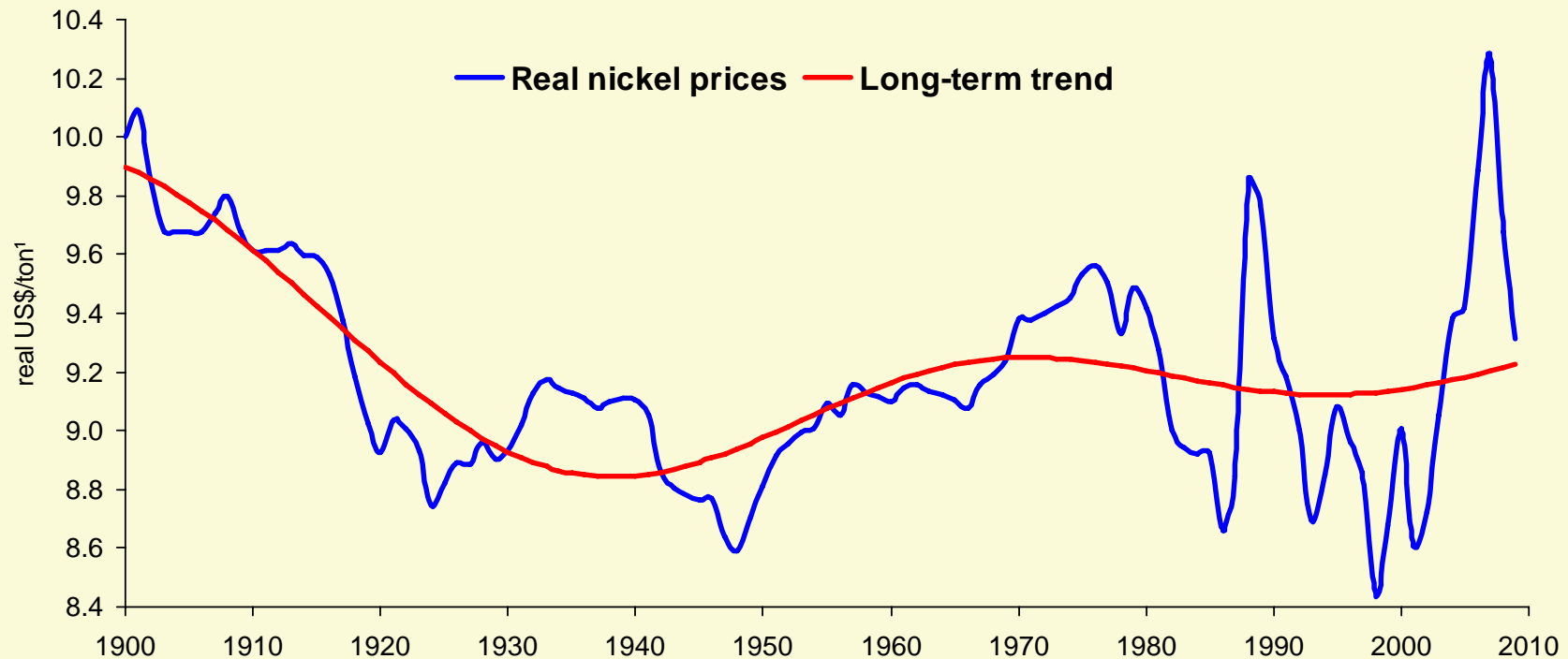
# Nickel prices have been resilient to supply growth given a strong demand and the effects of QE2



# The increase in relative scarcity is driving an upward long-term trend for nickel prices



1900 - 2010



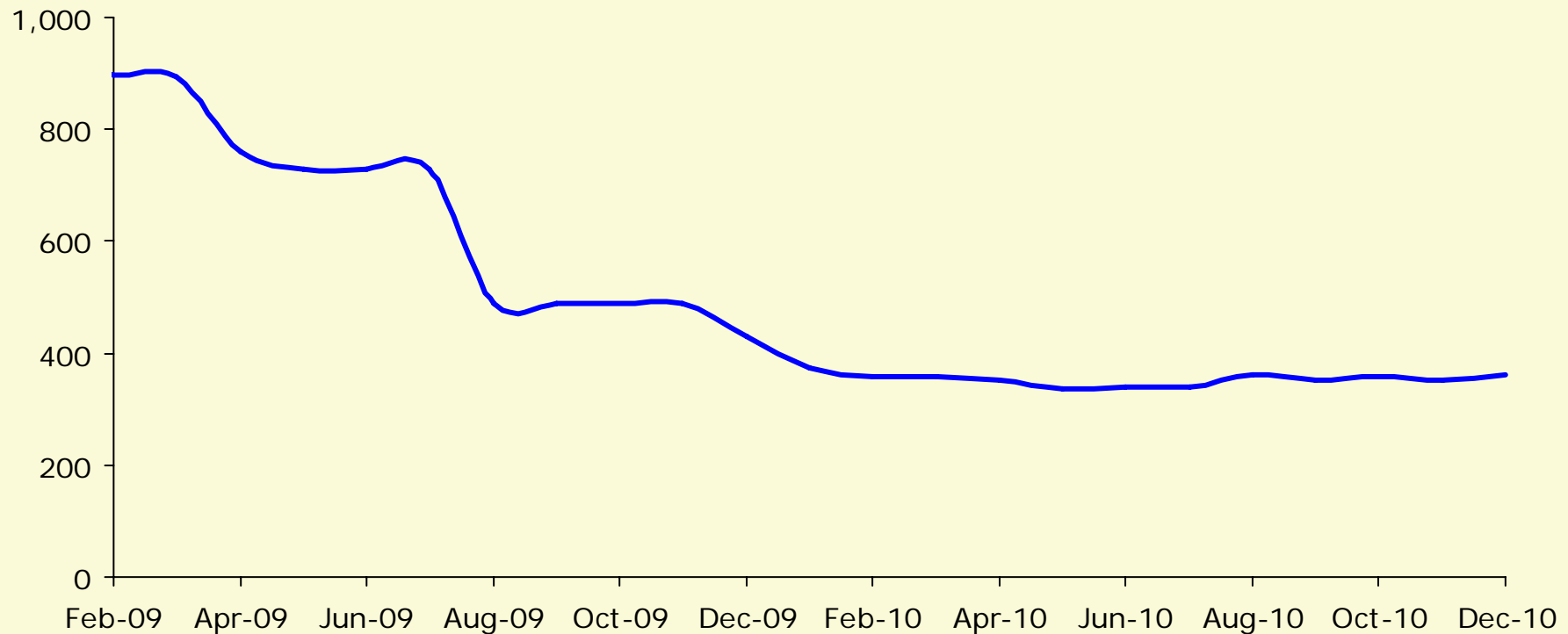
<sup>1</sup> prices in 1998 US\$/ton, deflated by the CPI, in logs.

Sources: USGS and Vale

# As destocking is ending, prices of fertilizers are beginning to reverse the downward trend



**Monthly average potash prices<sup>1</sup>**  
US\$/metric ton



<sup>1</sup> Fob Vancouver

Source: Vale and Fertilizer Week

# Grain prices have increased sharply, raising profitability and stimulating the recovery in fertilizer demand



**Corn**  
US\$/bushel



**Soybeans**  
US\$/bushel



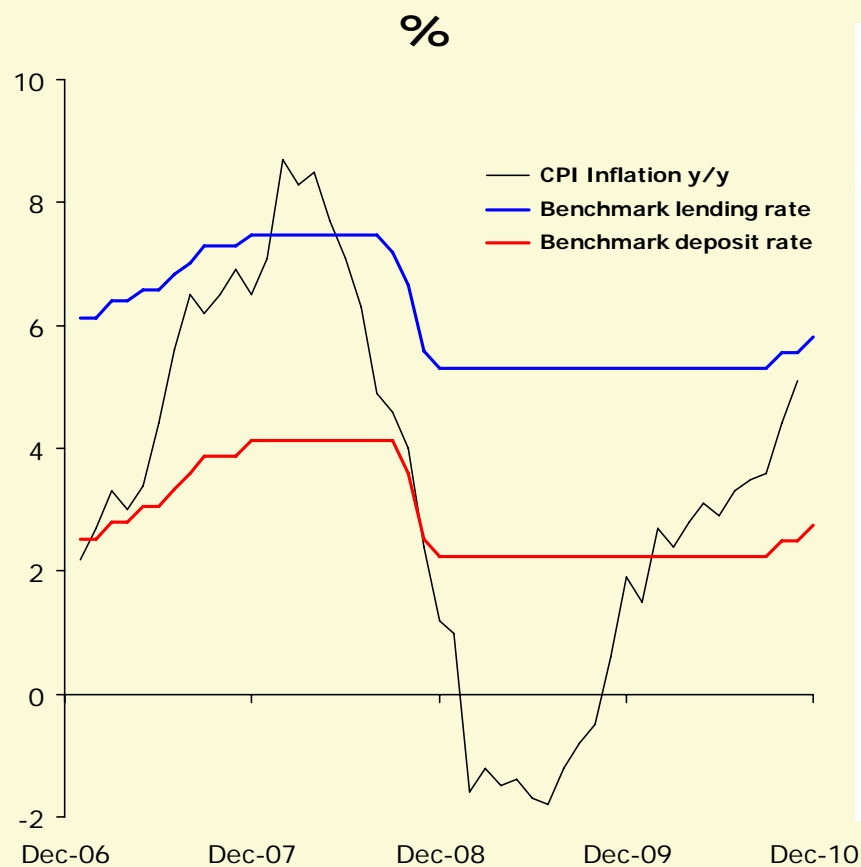
Source: Bloomberg



# Real deposit rates are increasingly negative in China, and RMB lending growth is re-accelerating recently

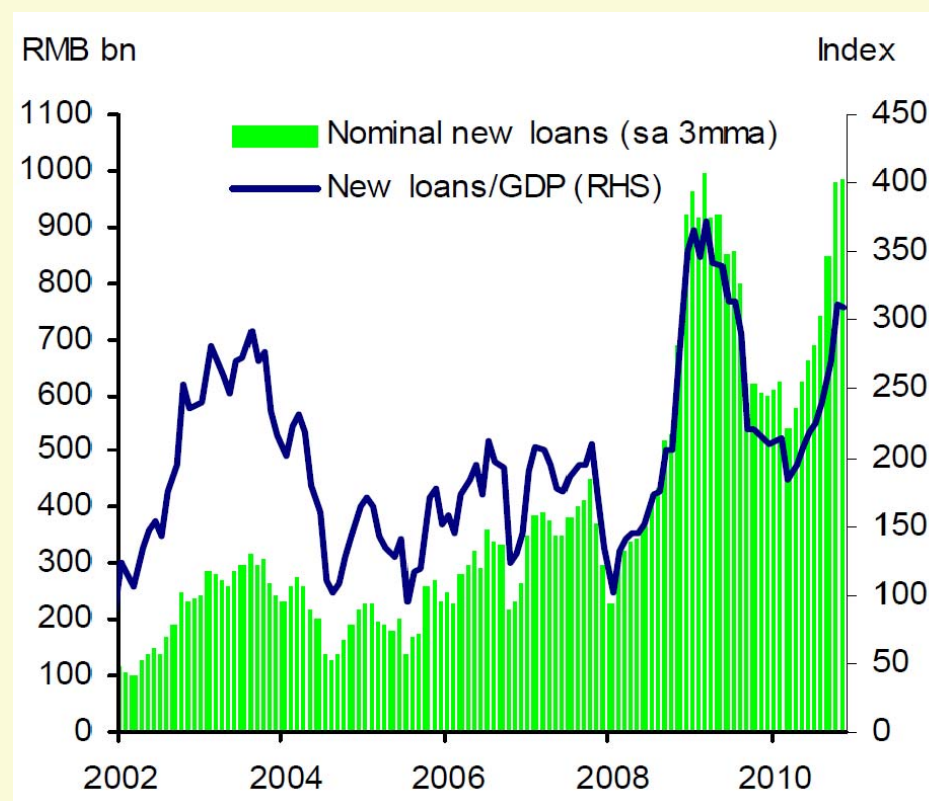


## Benchmark rates and CPI

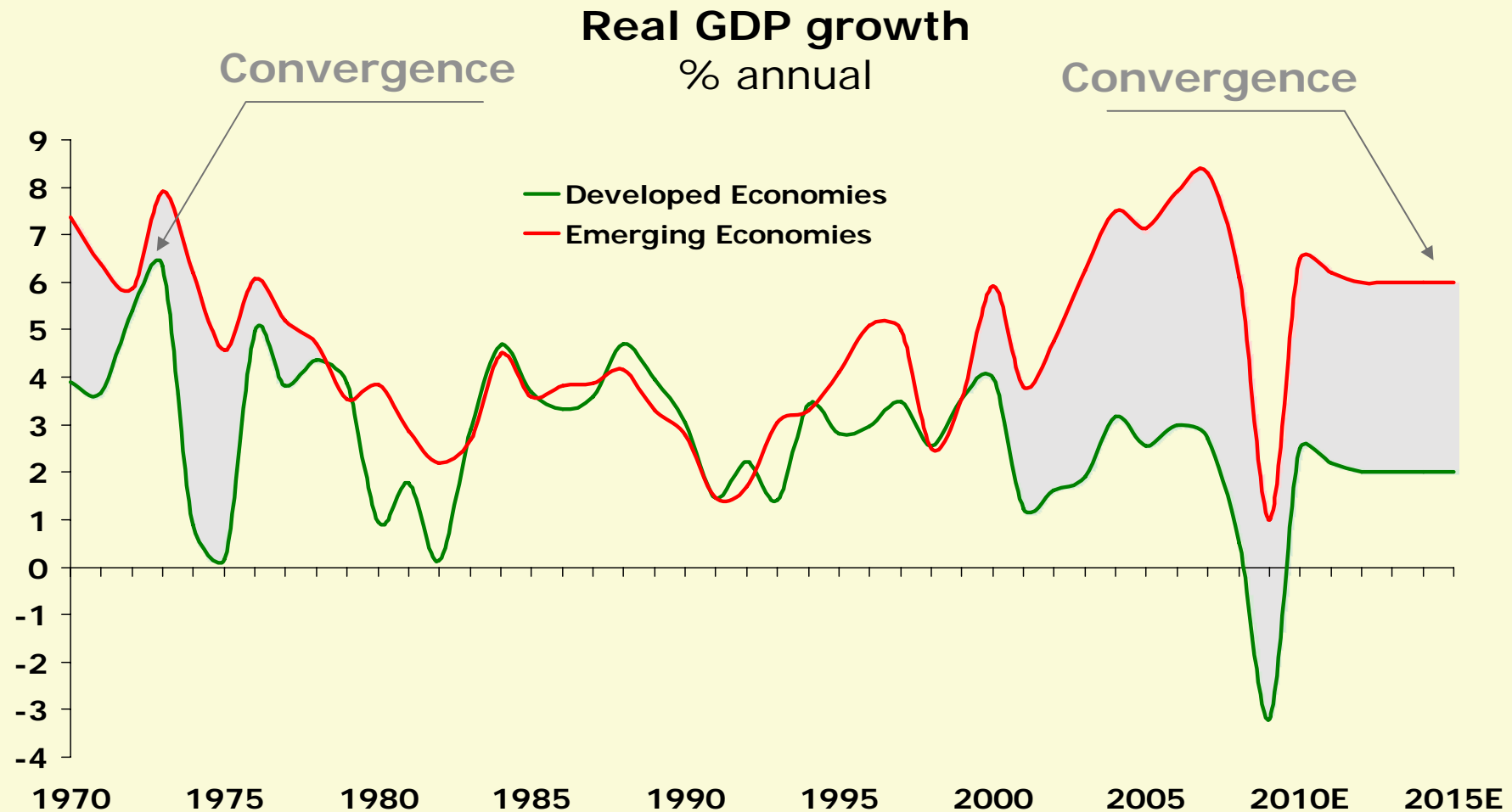


Source: CEIC and Vale

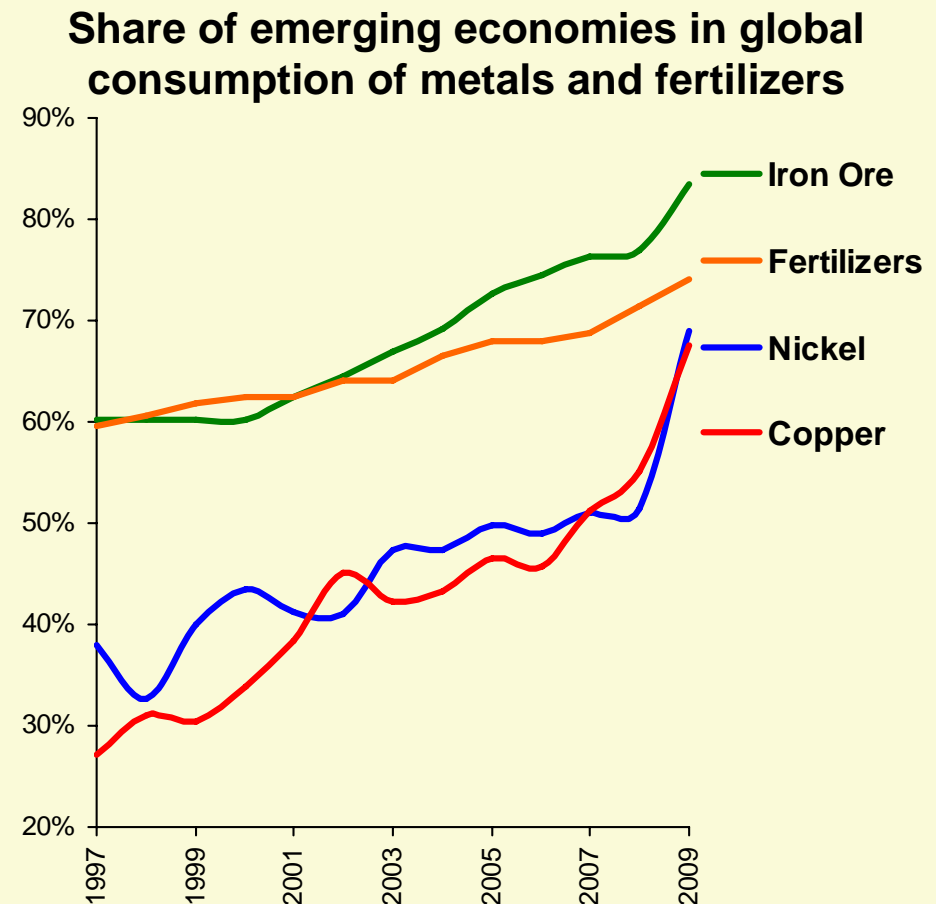
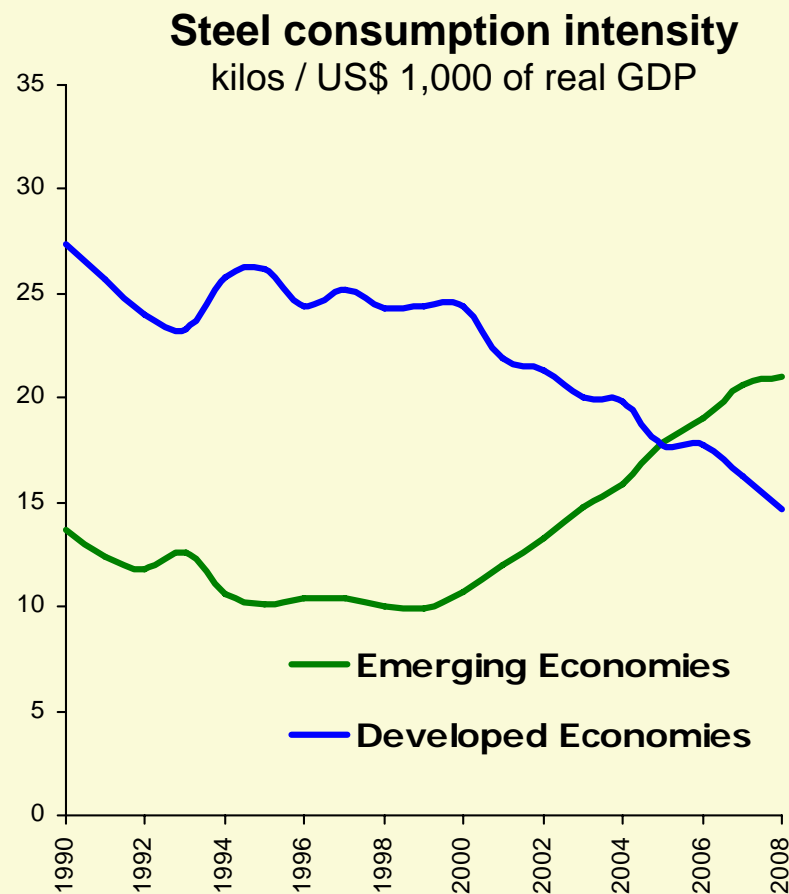
## Nominal new loans



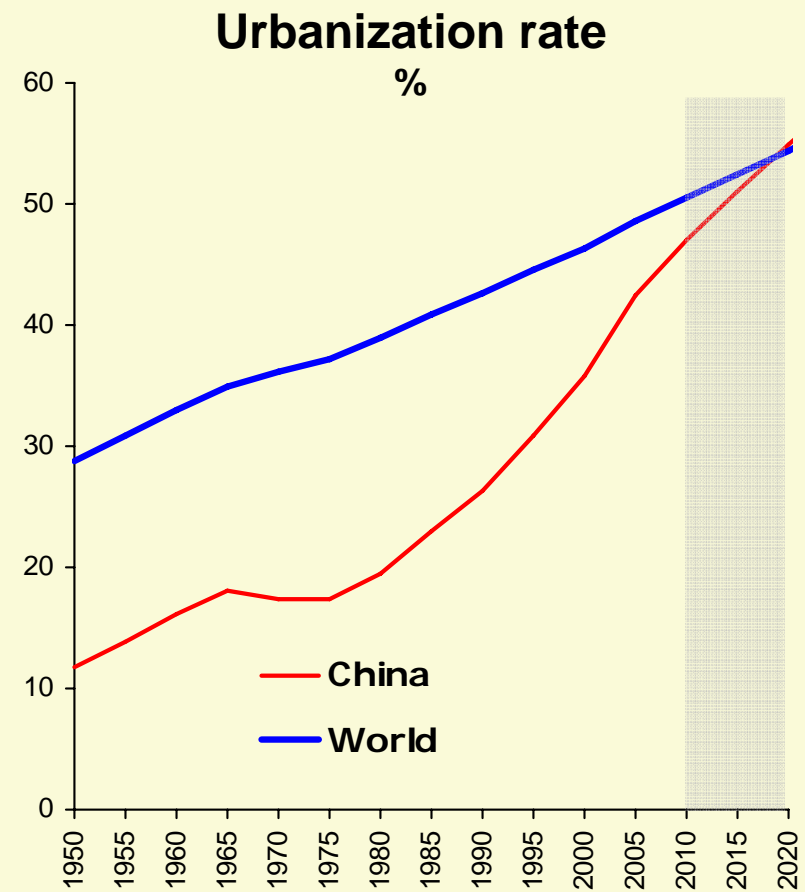
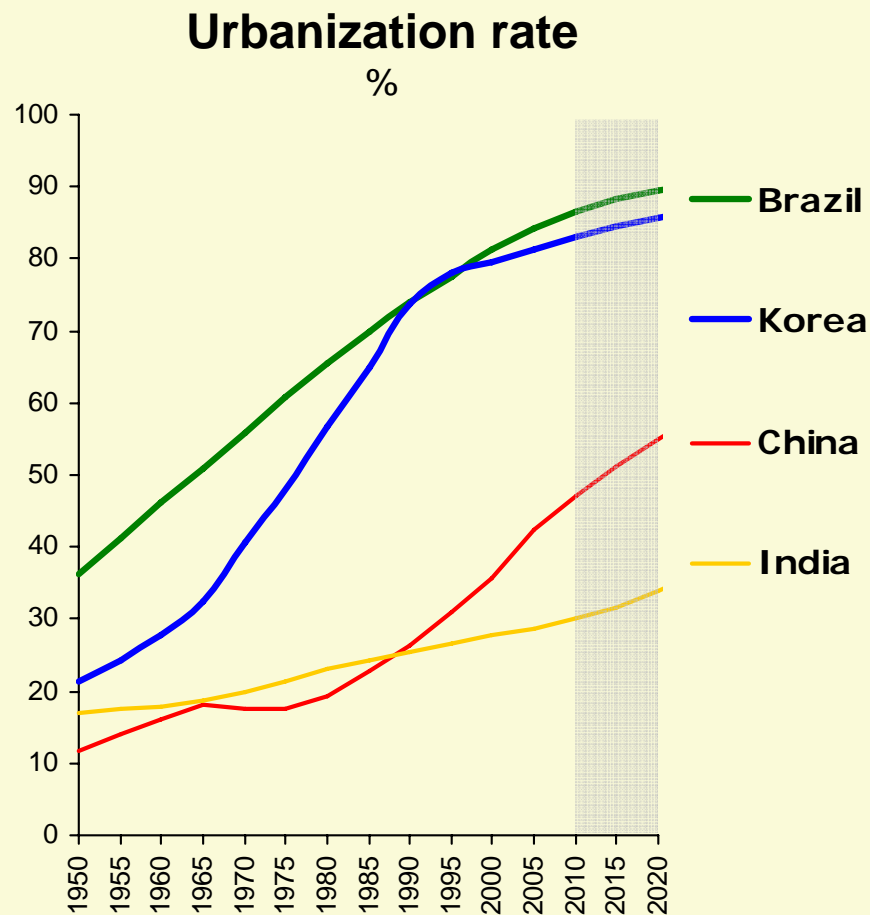
# Emerging economies will continue to be the key engine of global growth, with positive implications for the demand of minerals, metals and fertilizers



# Real income growth and structural changes are responsible for the key role played by emerging economies in the consumption of minerals, metals and fertilizers



# China's urbanization rate in 2010 is equal to Brazil's position in the mid 50's and Korea in the early 70's



## In spite of the substantial expansion, there is still room for large flows of infrastructure spending in China



	2005	2009	2020F
Expressways (km)	41,000	65,000	100,000
Railways (km)	75,437	86,000	120,000
Airports (number)	140	166	244
Power generation (GW)	N.A.	800	1,500

F = Target

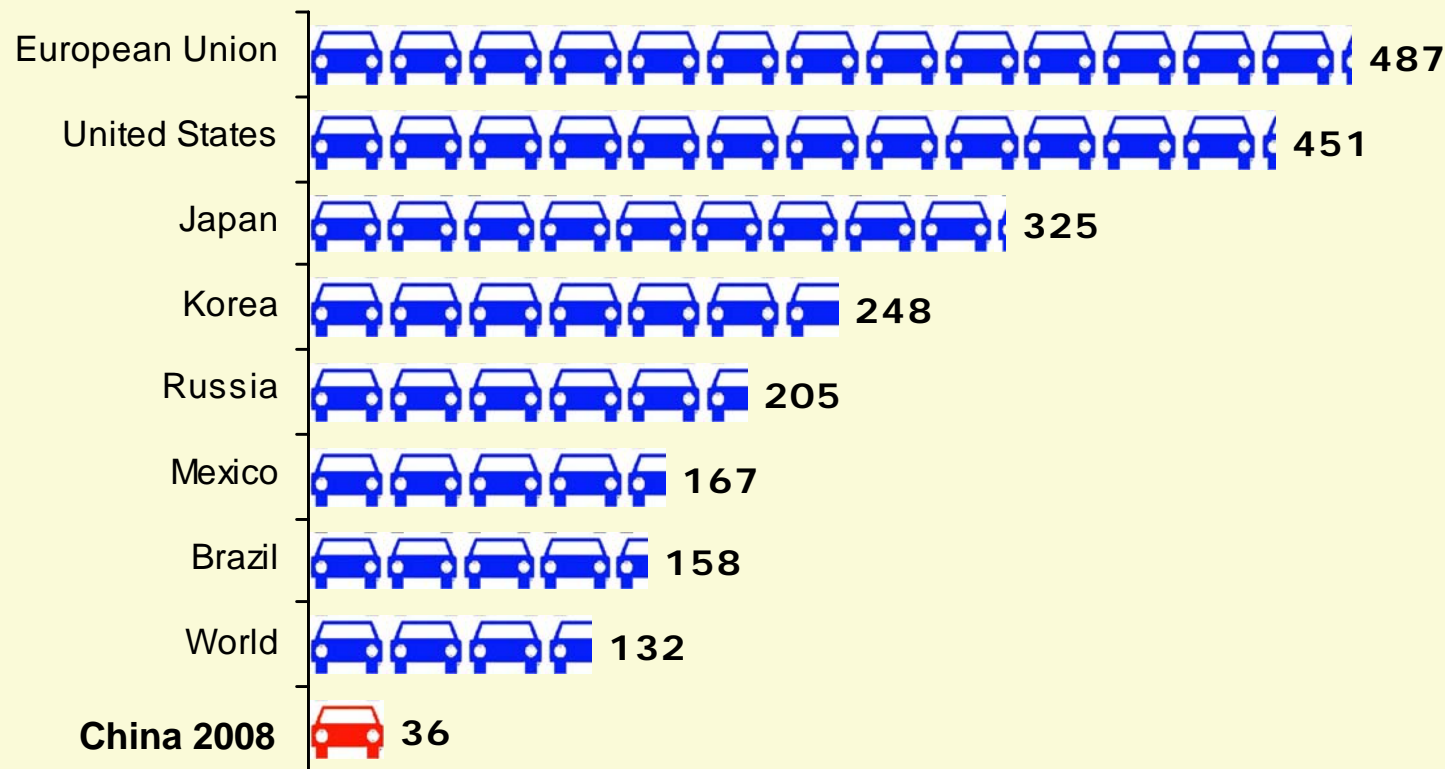
Sources: NBS, NDRC, CAAC and Ministry of Transport of China



**China's car industry is already bigger than the US industry. However, the penetration is still low, indicating a huge growth potential**



### **Passenger cars per 1,000 people 2007**

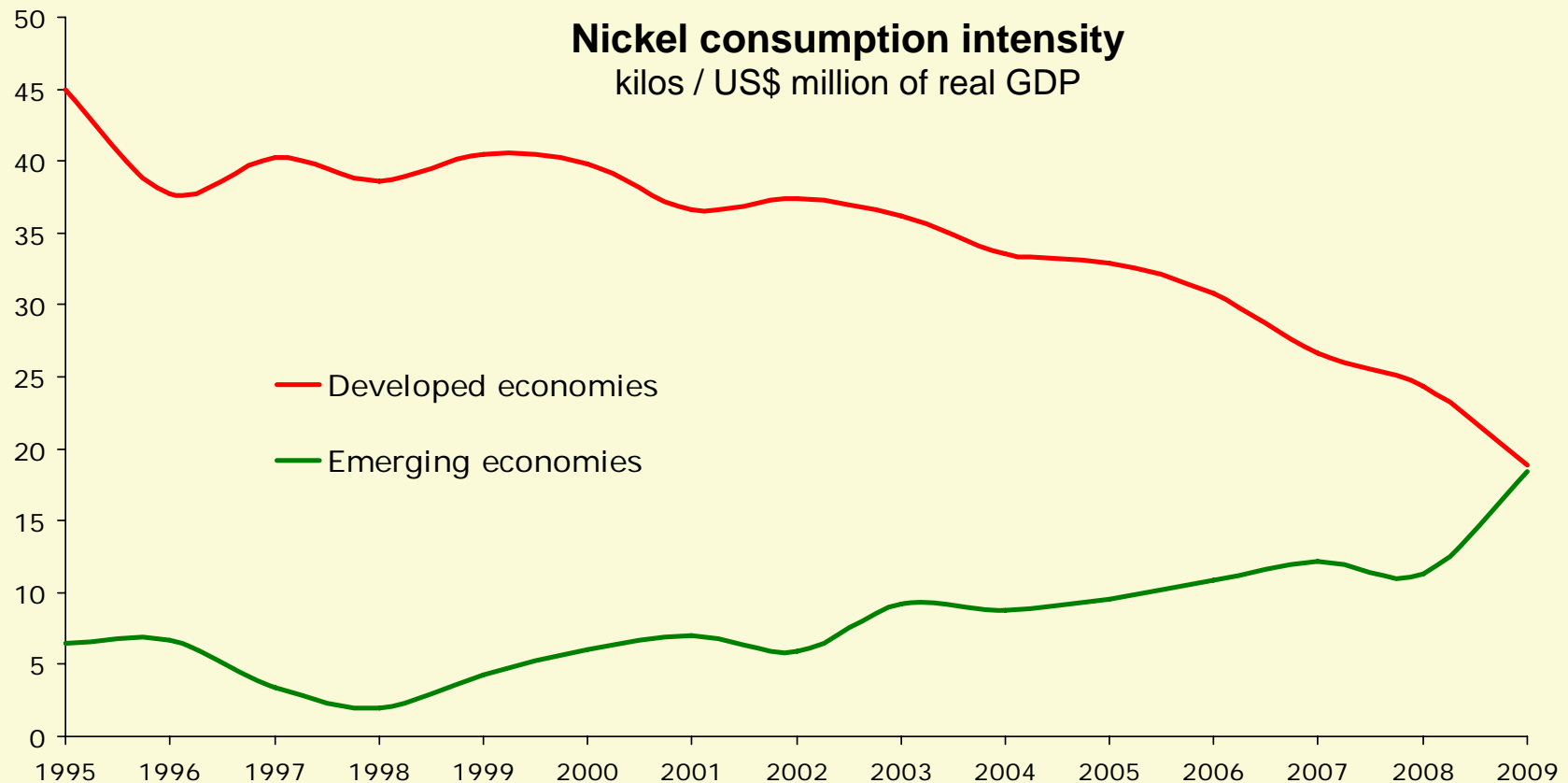


# India is expected to contribute to additional market tightness



- Still a rural country, with an urbanization rate of 30%.
- Industry is still too small, only 21% of GDP.
- Government intends to double infrastructure investments to US\$ 1 trillion in 2012-2017.
- Exports of iron ore have been slowing, reducing continuously their share in Chinese imports since 2005.

**Differently from steel and copper, nickel intensity of EM is still converging to the level of advanced economies, indicating a high growth potential**



# The consumption of fertilizers in Brazil has a large growth potential



- World agricultural powerhouse.
- Consumption of fertilizers grew by 6% p.a. from 1990 to 2008.
- 2nd largest importer of potash and phosphates nutrients.
- Availability of water and arable land.
- Soil poor in nutrients, requiring relative high nutrients/ha ratios.
- Brazil's agricultural output is predicted to grow by 40% during this decade<sup>1</sup>.

<sup>1</sup> Source: OECD-FAO Agricultural Outlook 2010-2019.

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