Mn Ore:
China the Dominant Factor

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Gaungxi Wharton Int'l Hotel - Nanning

Presentation Overview:

- **Effects of Global Crisis**
  - Steel Production
  - Mn Alloy Production
  - Mn Ore Production & IMnI Members' Inventories
- **Mn Ore Supply & Demand**
  - Ore Production Capacity by Region
  - Global Imports 2009
  - China Imports & Port Inventories
- **Summary**
- **IMnI Market Research Service**

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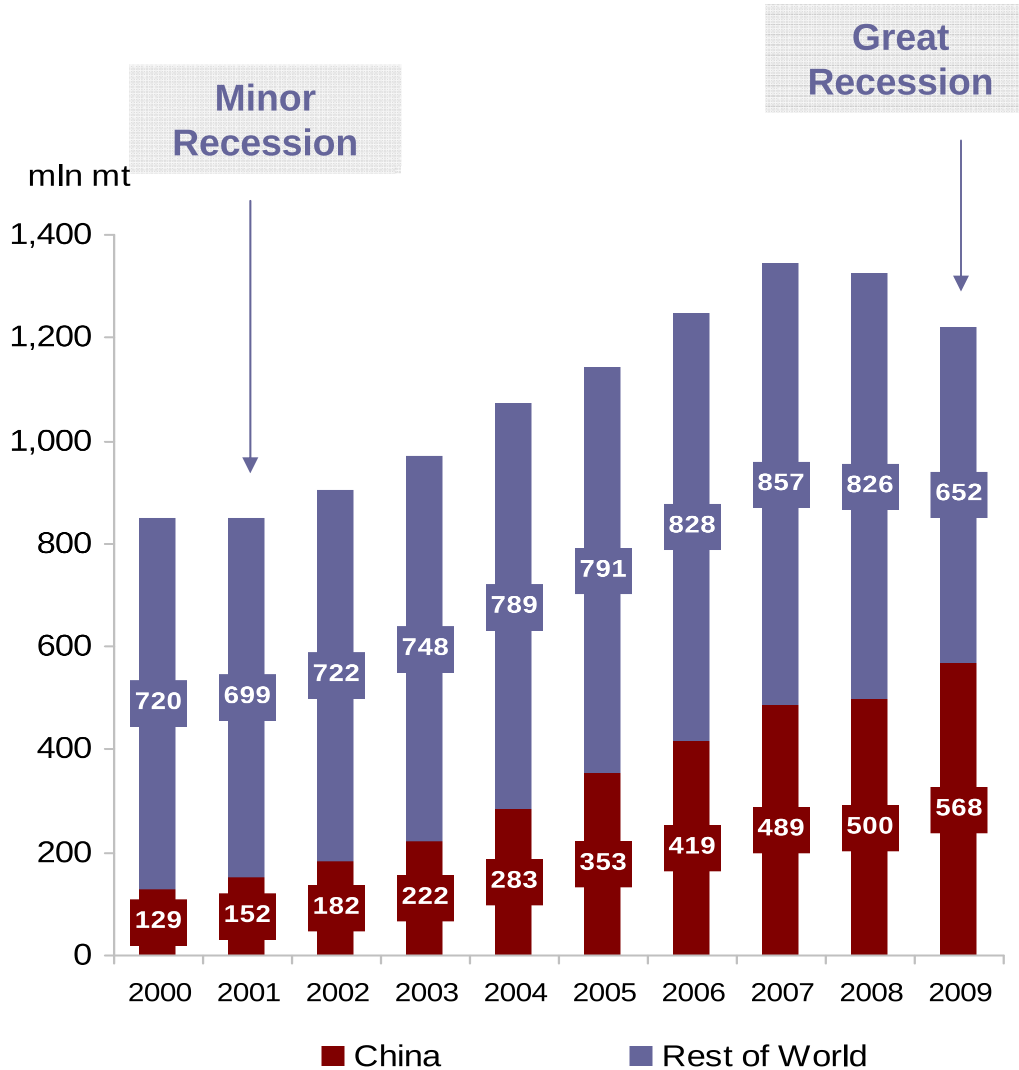
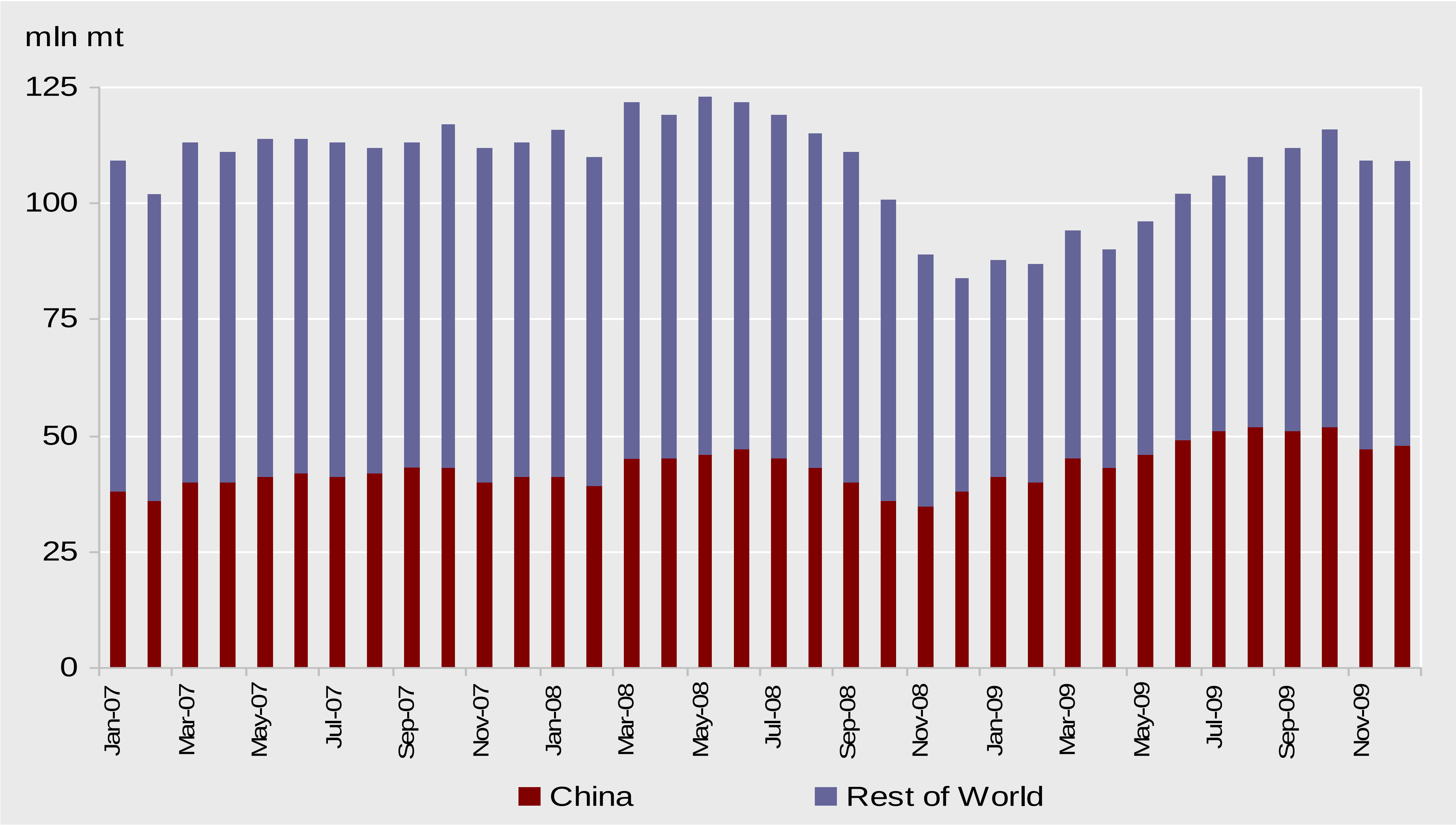
Global Steel from 2000

- 90% of Mn is consumed as alloys in the steel production process – steel is directly effected by the macro economy
- Global crude output declined 8% year on year in 2009 to 1.22 billion mt (global GDP fell by 2.2%)
- ***China softens the steel freefall in 2009!!***
- China Production up 13% in 2009 to a record high 568 million mt (in 2001 it's output grew by 18%)
- Rest of World (ROW) declined a staggering 21% in 2009 (in 2001 output declined by 3%)



Source: WorldSteel Org, The World Bank

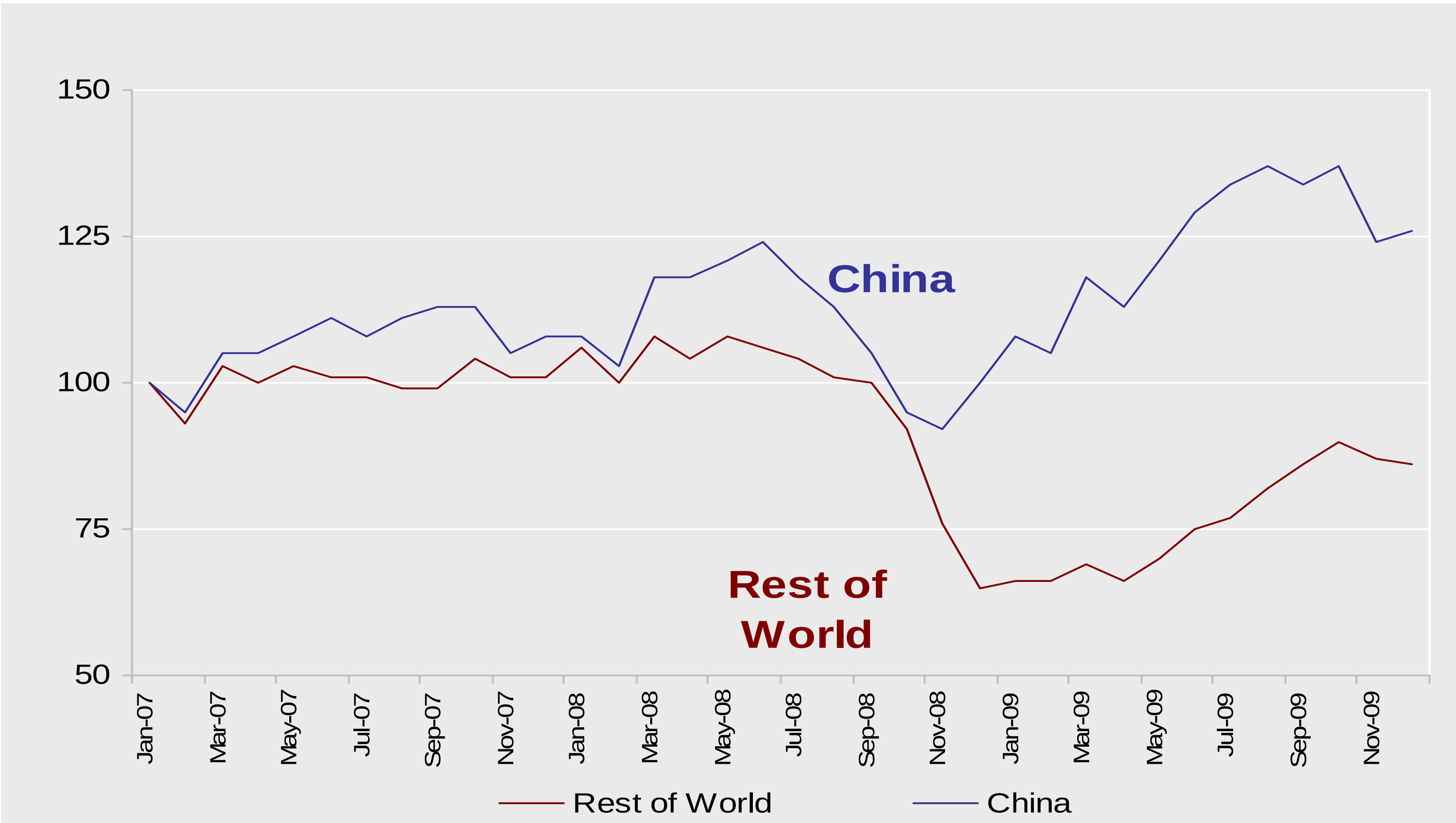
Steel in 2009 – Production rates in ROW slowly increasing...



Source: WorldSteel Org

Steel Output Monthly Changes

Base Period = Jan. 2007 = 100



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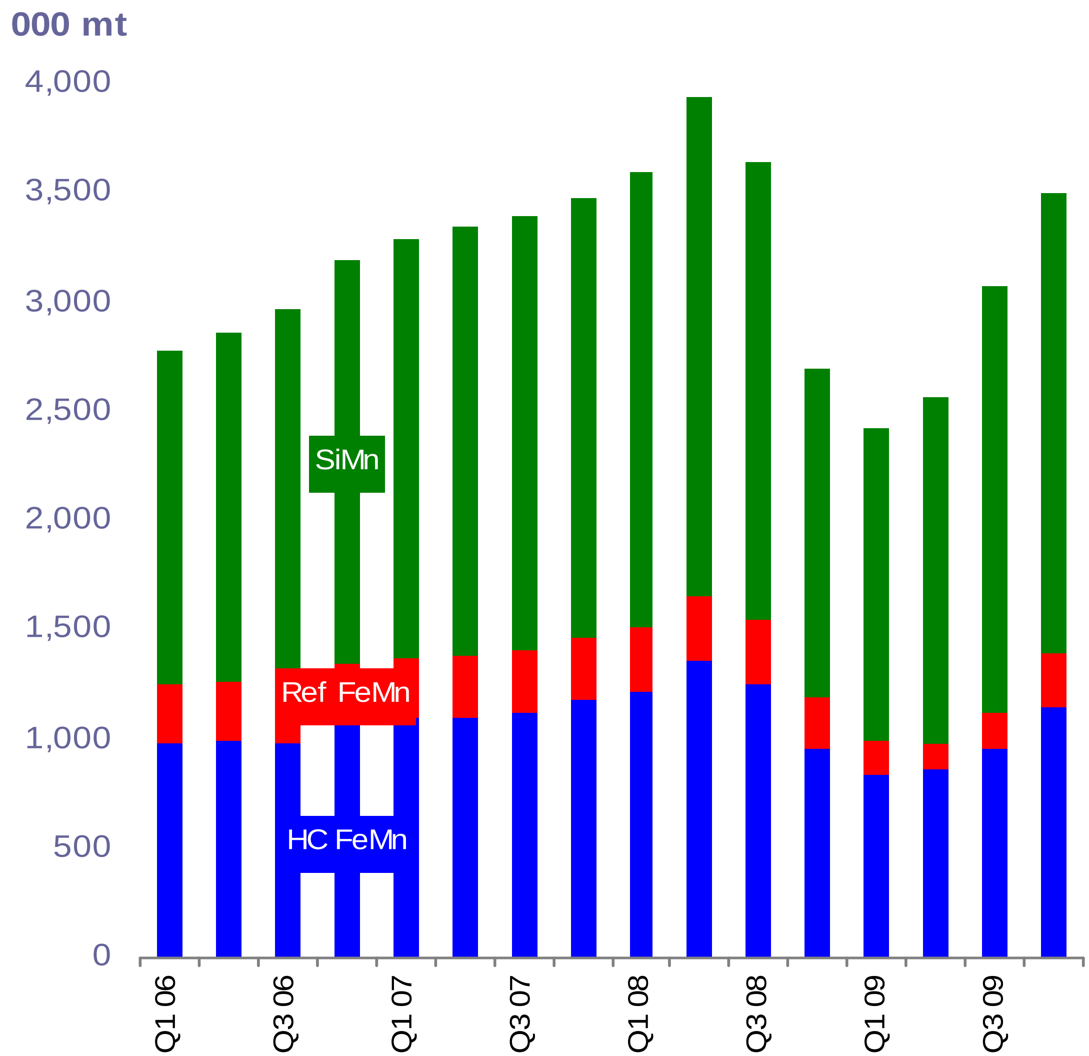
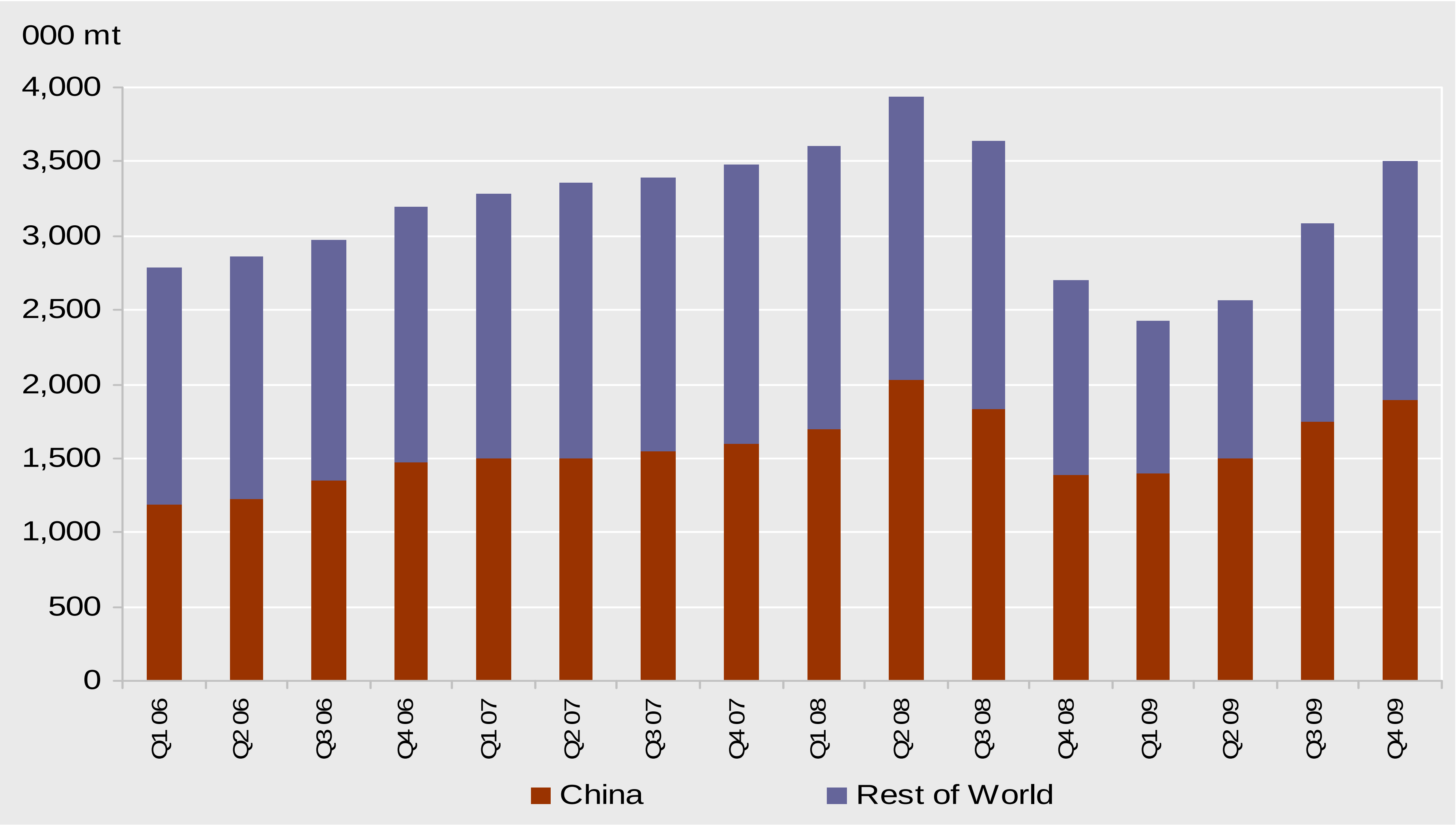
Mn Alloy Production

- Mn alloy production declined by 17% in 2009 to 11.6 million mt
- Mn alloy production declined in all quarters except Q4 09, which was up 30% - mostly due to the steep decline in Q4 08 as the global crisis hit the steel sector
- Producer discipline and destocking by traders and end-users has led to tight supplies of Mn alloys



Mn Alloy Production:

China's production growing to meet its own demand – accounted for 57% of Mn alloy production in 2009

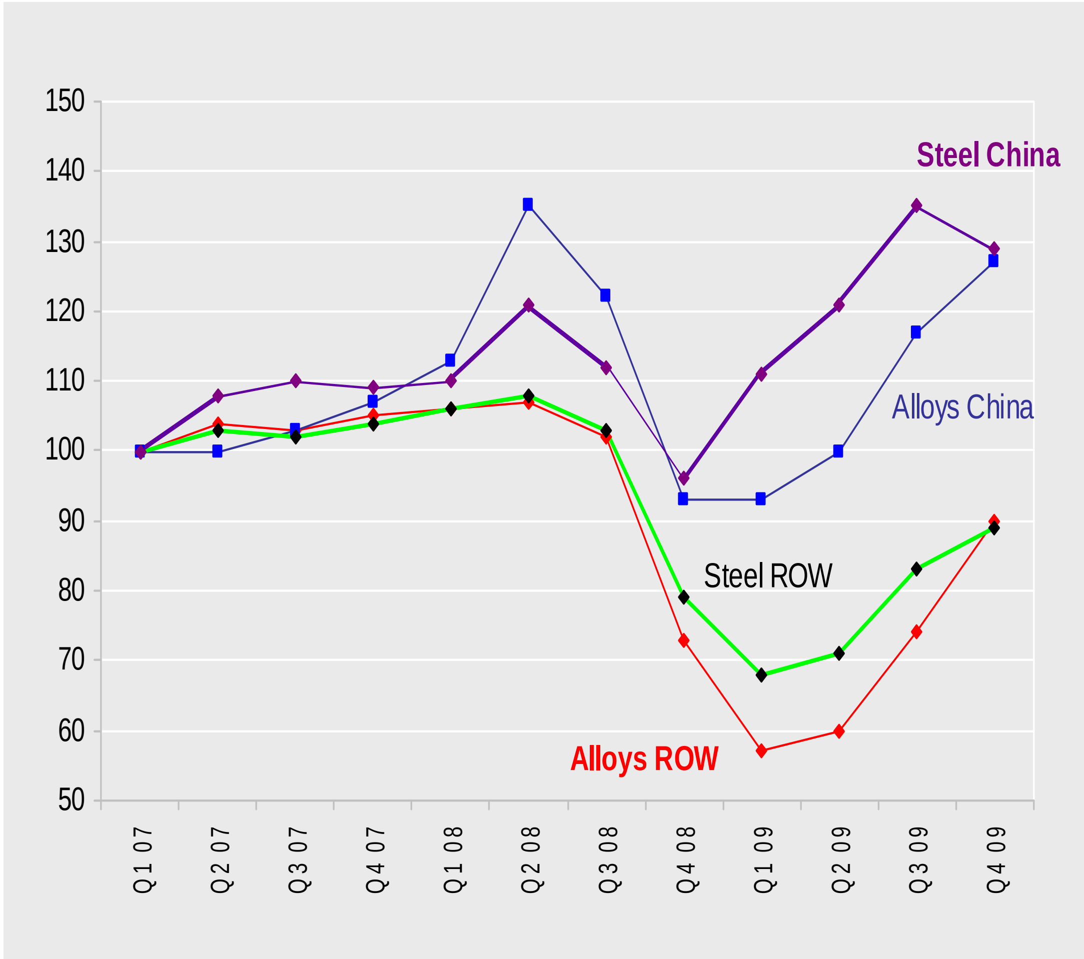


Source: WorldSteel Org

Mn Alloy Output & Steel Changes

Base Period = Q1 2007 = 100

- In Q4 09 both China's Steel and Alloy production increased by over 25% compared with output in Q1 07.
- Production of both Steel and Mn Alloys in the Rest of the World (ROW) increased in each subsequent qtr in 2009 – reaching roughly 90% of Q1 07 levels by Q4 09.
- Mn Alloy production in both China and ROW fell lower than steel production in each qtr as of Q4 08 - as suppliers pinned output to real demand and reduced their inventories.



Source: WorldSteel Org

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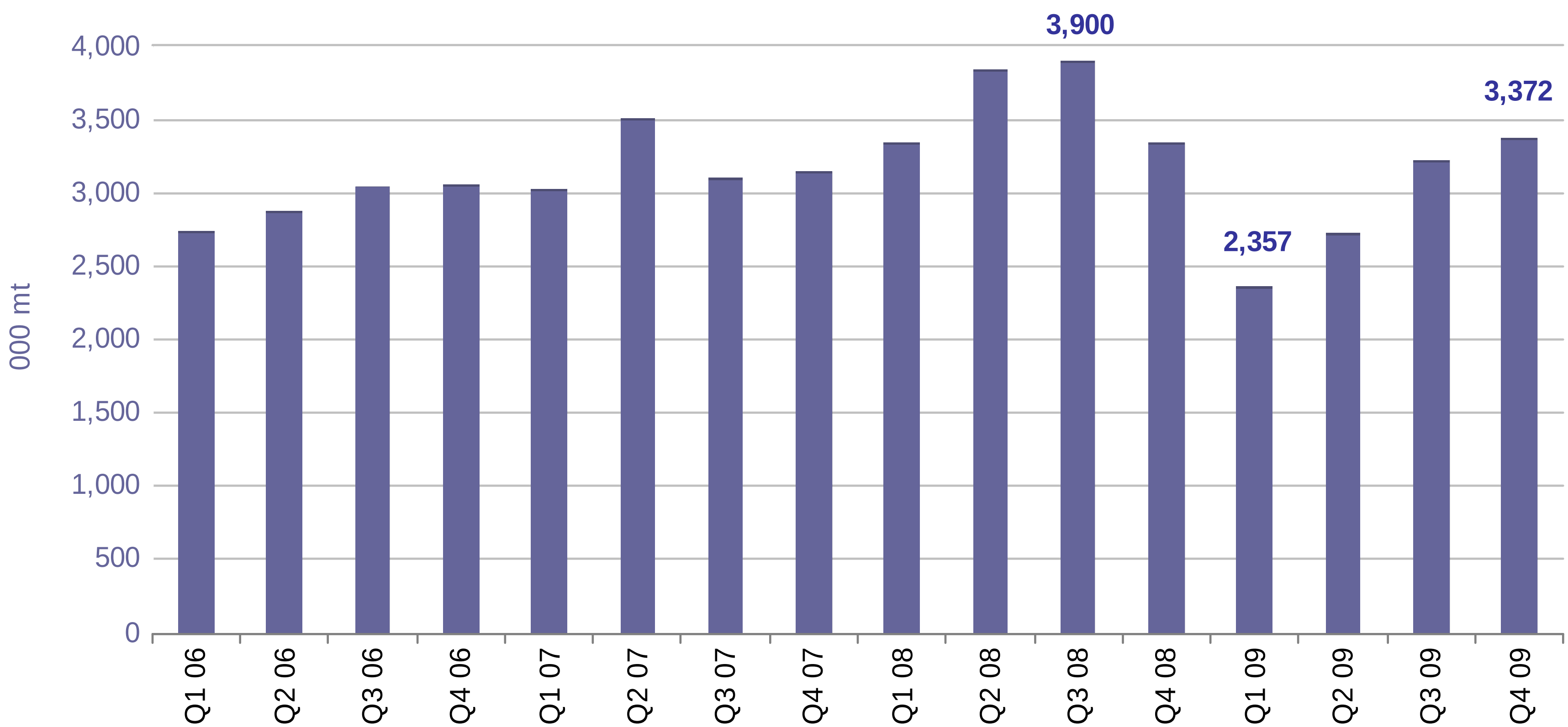
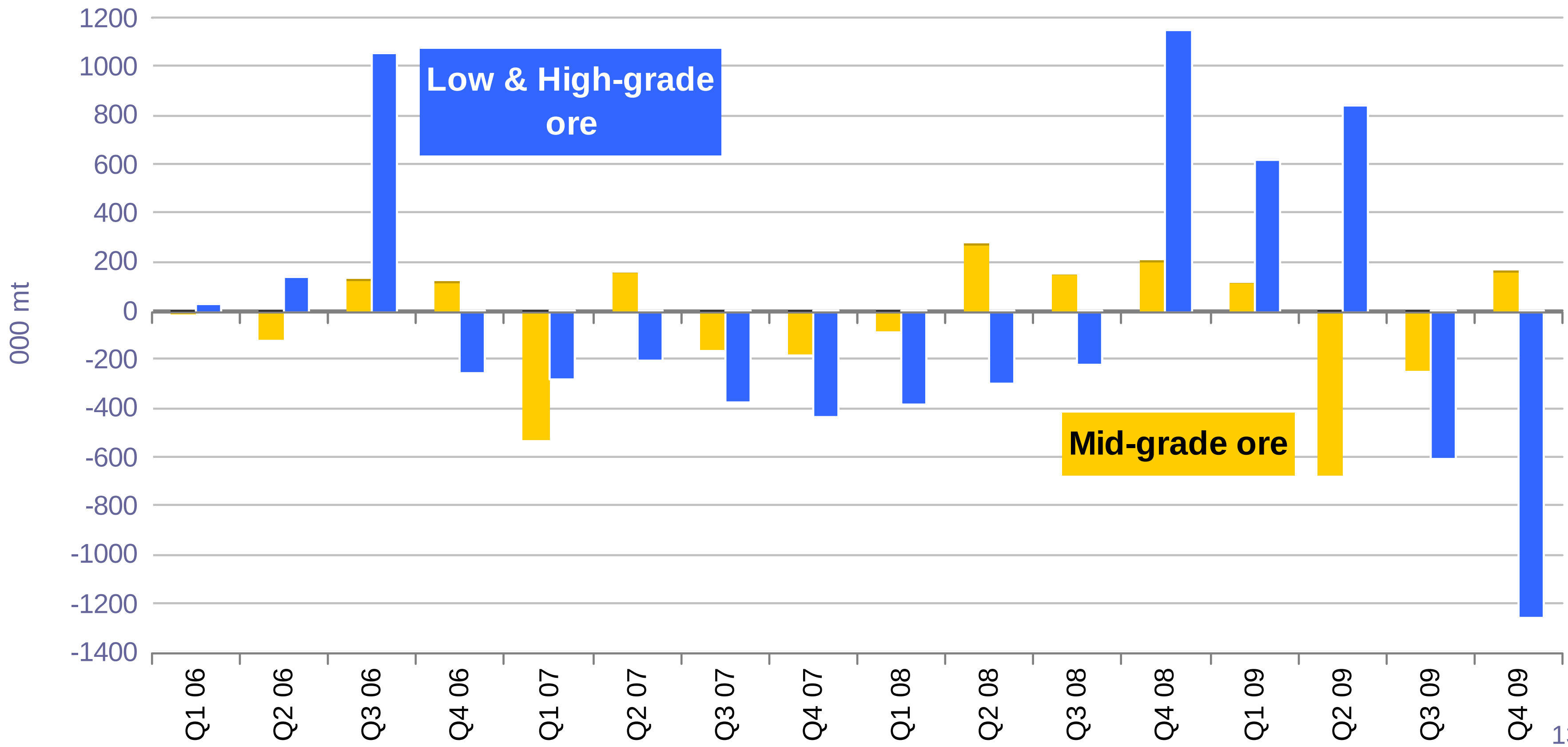
Mn Ore Supply (Mn content)

- Mn ore production peaked in Q3 08 and was down 40% as it bottomed out in Q1 09
- Prices went from high of $18/dmtu in early H2 08 to $3.50 in H1 09



IMnI Members' Ore Inventory Change (Wet mt)

- High and low grade ore inventories continued to rise from Q4 08 through Q2 09, but have been reduced by almost 2 million mt in H2 09. They were down 391K mt for full year 2009.
- Mid grade ore inventories declined by 641K mt in 2009.



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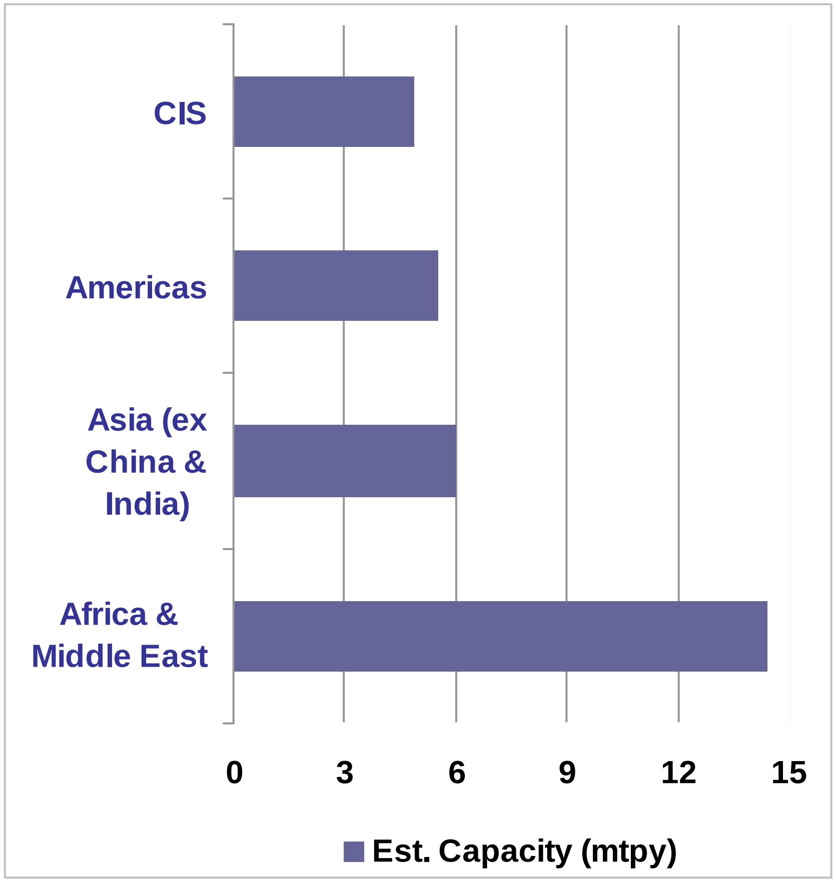
Mn Ore Estimated Capacity (Wet million mt) - 2009

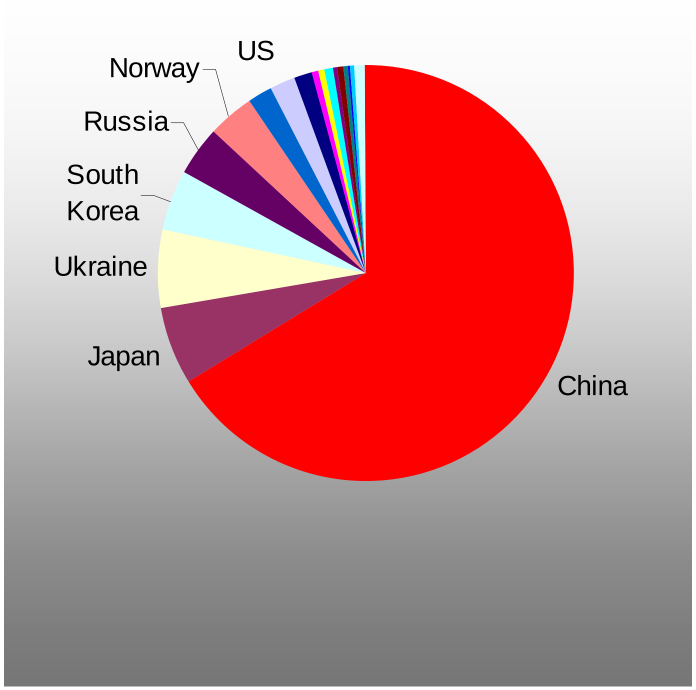
- Estimated total capacity of the four regions: nearly 31 million mt per year (mtpy)
- Africa & Middle East total combined capacities: almost 14.5 million mtpy – comprised in most part by South Africa, Gabon and Ghana
- Asia excluding China & India (as their ore caters mostly to their domestic markets) was 6 million mtpy – mostly Australian capacity
- The Americas, which is dominated by Brazil and Mexico, were nearly 6 million mtpy
- A good majority of CIS capacity is within the Ukraine and not for export. Kazakhstan falls under CIS as well.



Capacity in Europe (including Turkey) has been excluded, roughly 300K mtpy

Global Importers of Mn Ore - 2009

	mt	% of total
Total	**14,557,501**	**100.0%**
China	9,614,999	66.0%
Japan	900,243	6.2%
Ukraine	885,847	6.1%
South Korea	682,526	4.7%
Russia	569,257	3.9%
Norway	525,674	3.6%
India (Data thru Aug 09)	306,022	2.1%
US	268,853	1.8%
France	193,688	1.3%
Venezuela (Data thru Nov 09)	92,684	0.6%
Italy (Data thru Nov 09)	76,556	0.5%
Slovakia (Data thru Nov 09)	69,105	0.5%
Mexico (Data thru Nov 09)	61,571	0.4%
Belgium (Data thru Nov 09)	59,086	0.4%
Spain (Data thru Nov 09)	53,964	0.4%
Greece (Data thru Nov 09)	31,508	0.2%
Taiwan (Data thru Nov 09)	26,991	0.2%
Other	138,927	1.0%



Source: GTIS (declared imports by 2-22-10)

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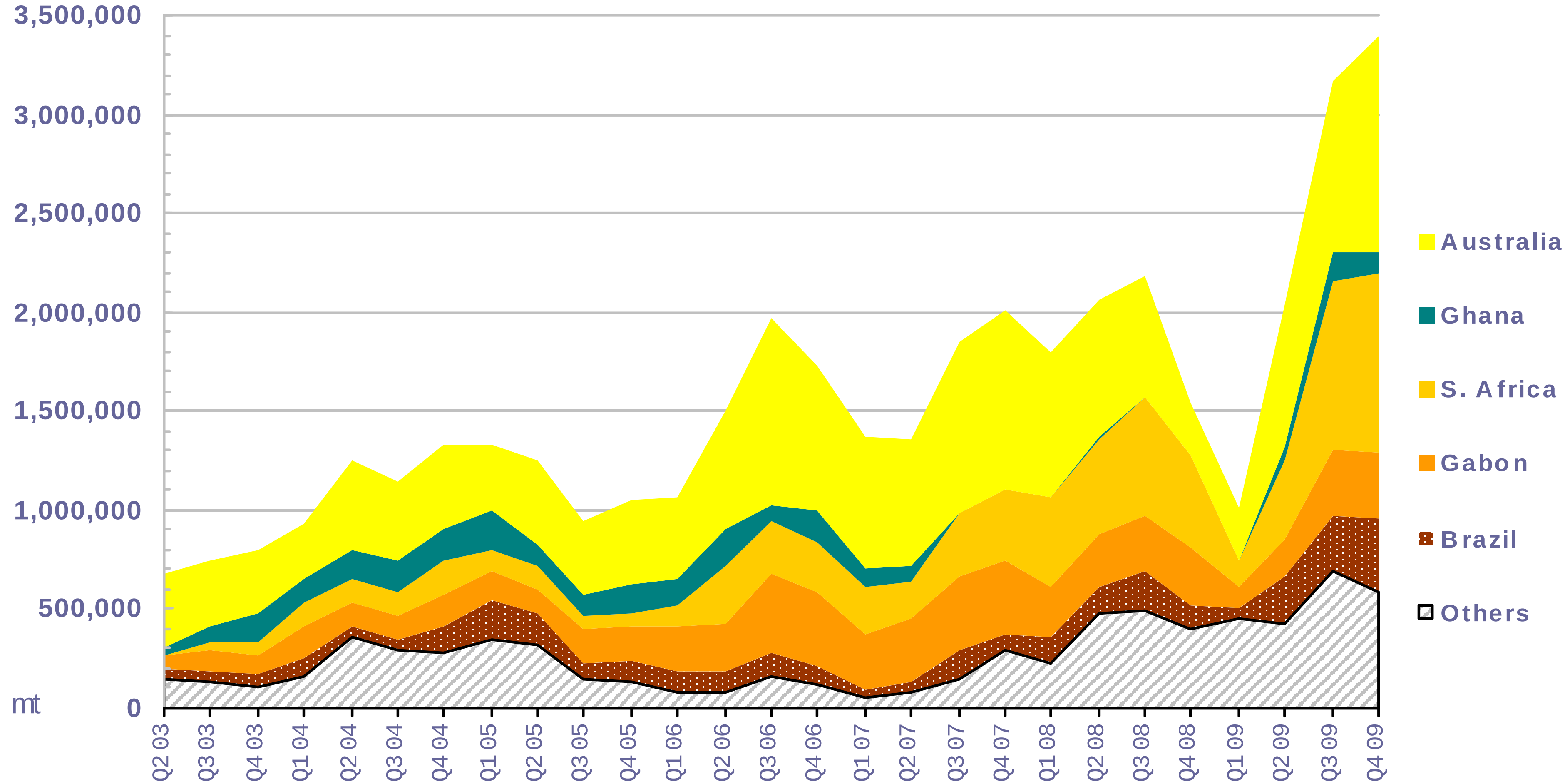
Mn Ore – China Imports from Majors

- China imported 3.4 million mt in Q4 09 and 9.6 million mt in 2009
- Market Share: Australia 31%; S. Africa 24%; Gabon 10%; Brazil 10%; Ghana 3%; Others 22%

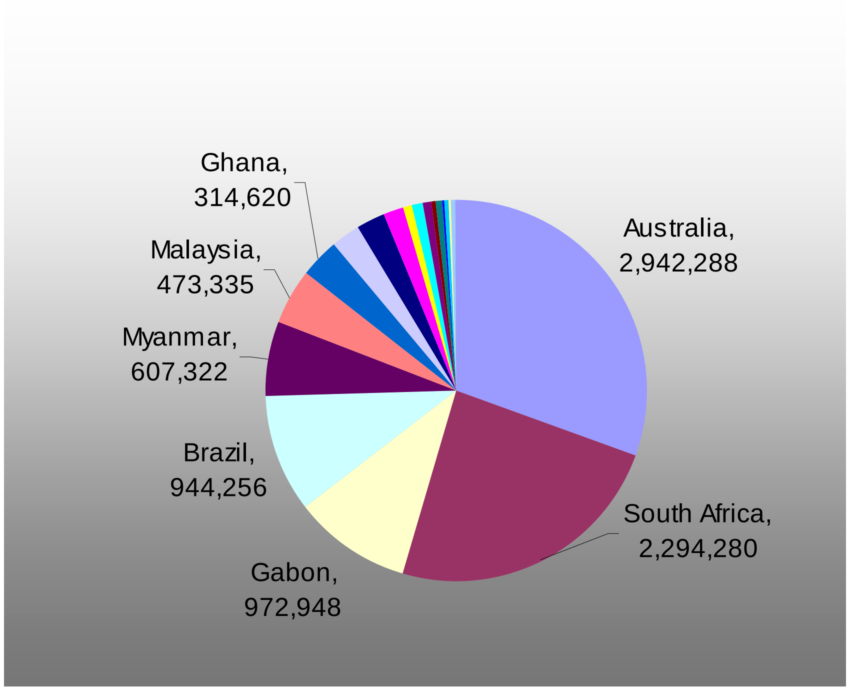


Source: GTIS

Exporters of Mn Ore to China -2009

	mt	% of total
Total	**9,614,999**	**100.0%**
Australia	2,942,288	30.6%
South Africa	2,294,280	23.9%
Gabon	972,948	10.1%
Brazil	944,256	9.8%
Myanmar	607,322	6.3%
Malaysia	473,335	4.9%
Ghana	314,620	3.3%
Indonesia	249,555	2.6%
India	236,275	2.5%
Kazakhstan	143,028	1.5%
Vietnam	90,724	0.9%
Cote d Ivoire	86,500	0.9%
Namibia	62,082	0.6%
Morocco	45,514	0.5%
Turkey	41,304	0.4%
Zambia	26,053	0.3%
Thailand	18,933	0.2%
Mexico	15,402	0.2%
Bulgaria	8,663	0.1%
Philippines	7,552	0.1%
Other	34,365	0.4%

Source: GTIS



Marginal Suppliers* to China -2009

	mt	% of total
Total	**2,146,607**	**100.0%**
Myanmar	607,322	28.3%
Malaysia	473,335	22.1%
Indonesia	249,555	11.6%
India	236,275	11.0%
Kazakhstan	143,028	6.7%
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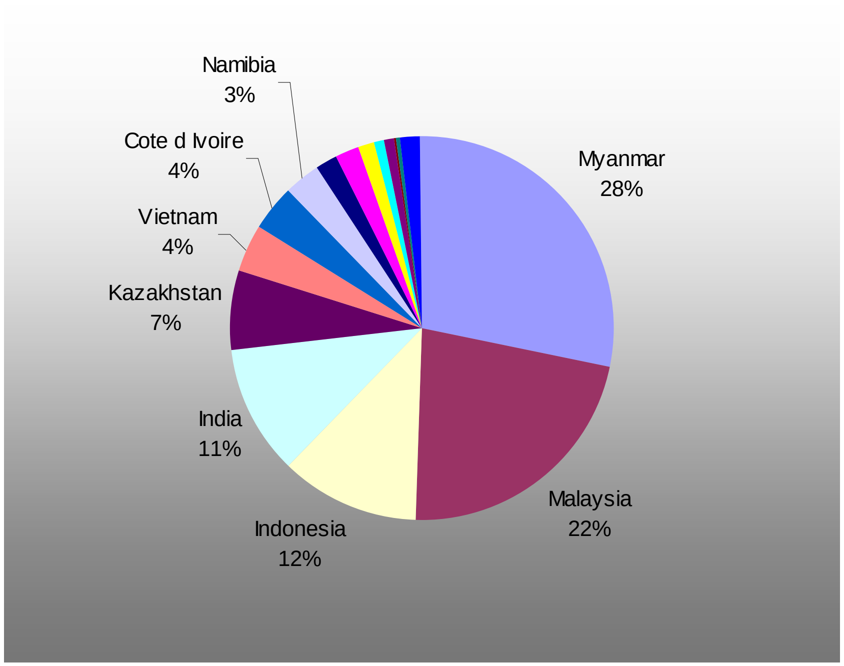

Source: GTIS

*countries of origin excluding Australia, Brazil, Gabon, Ghana and South Africa

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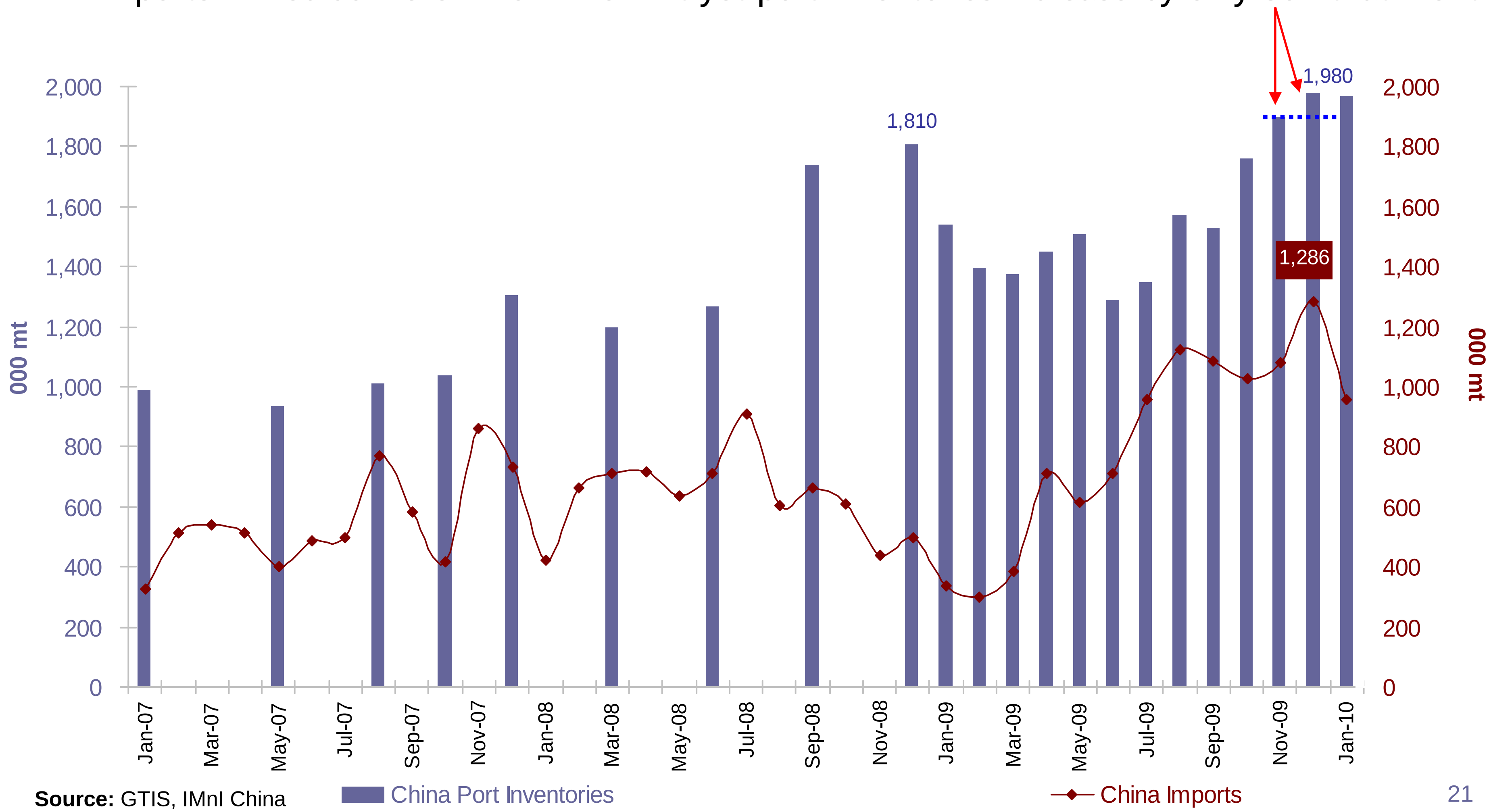
Mn Ore – China Imports & Port Inventories

- Port inventories peaked in December 2009 at 2 million mt – up 9% year on year
- Imports in Dec 09 were 1.29 million mt yet port inventories increase by only 80K that month



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Summary of Key Points

- After **deep crisis-related production cuts** in the production of Mn ore and alloys, there was growth in Q4 09 – linked to increases in steel production.
- While the Rest of the World is gradually increasing production rates in steel and Mn alloys, China mimics its new line of ***high speed trains*** and is rushing ahead at record levels.
- China's appetite for Mn Ore imports has **NEVER been greater!!**
- China imported nearly **1/3 of the world's ore production capacity** in 2009 (excluding it's own and that of India and Europe). And accounted for **2/3 of worldwide declared imports.**
- Global inventories have run down. The **return of demand outside China**, coupled with **continued strength** from China, has tightened the Mn Ore & alloy markets.

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IMnI's Market Research & Statistics - Reports

Market Research Reports for Mn Ore and Mn Alloys

- 4 Quarterly reports
- 1 Annual report

Trade Reports for Mn Ore, Mn Alloys, Mn Metal and Mn Dioxide

- Monthly reports covering both imports and exports (country by country)

Online Data Query & Database – Easy access to data online

Various Special Reports – Offering deeper insight into developments

China Weekly Report – Coverage of all Mn Commodities

IMnI's Market Research & Statistics - Strengths

Data directly from members

- Major ore and alloy producers submit production, inventory and sales data directly to IMnI Market Analyst

Access to top data providers

- Best available trade data - GTIS
- Journals and services covering regions under-represented
- IMnI China representative has access to the best available China statistics

IMnI's Market Research & Statistics

Adheres to 'Kaizen' = *never-ending efforts for improvement…*

Active Statistics Committee in frequent communication with IMnI Market Analyst

- Comprised of market analysts from major IMnI members
- 3 – 4 Committee meetings annually
- Providing guidance and feedback
- Making suggestions for improvement of tools

For more information or sample market research, please contact: Mark Camaj
stats@manganese.org

Thank You!

Questions?