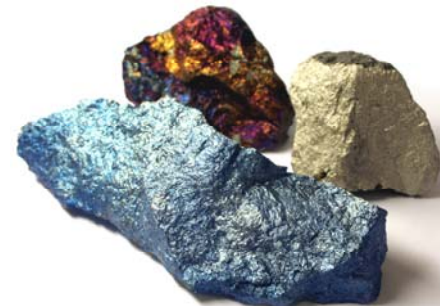




# Global Overview of Mn Ore & Alloys

## 锰矿和锰合金的全球概况

Mark Camaj  
Market Analyst, IMnI





## Presentation General Overview:

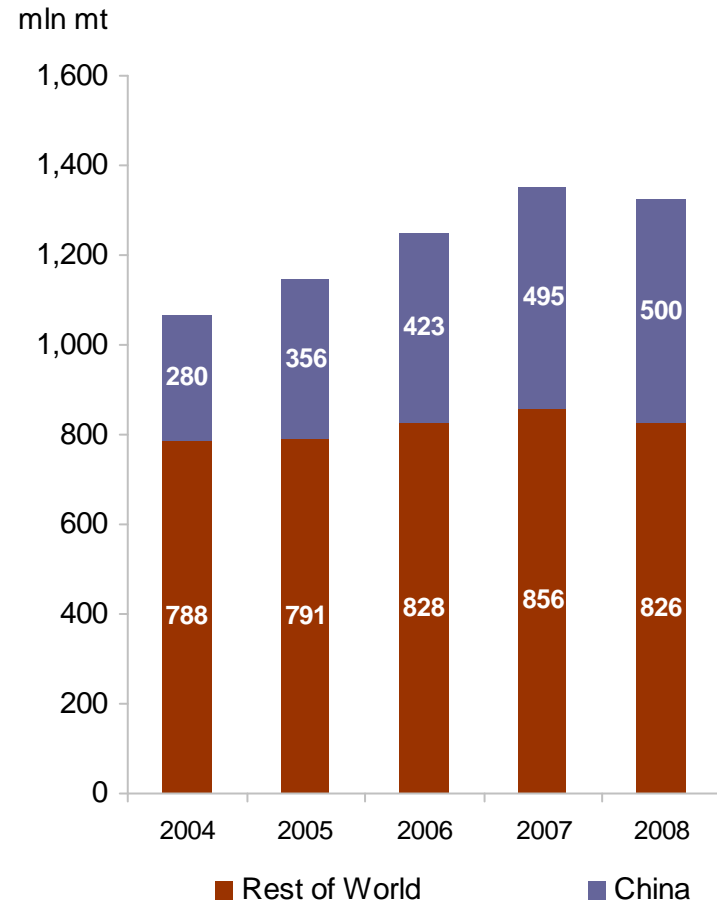
- Steel in 2008
- Mn Alloy in 2008
- Mn Ore in 2008
- Summary



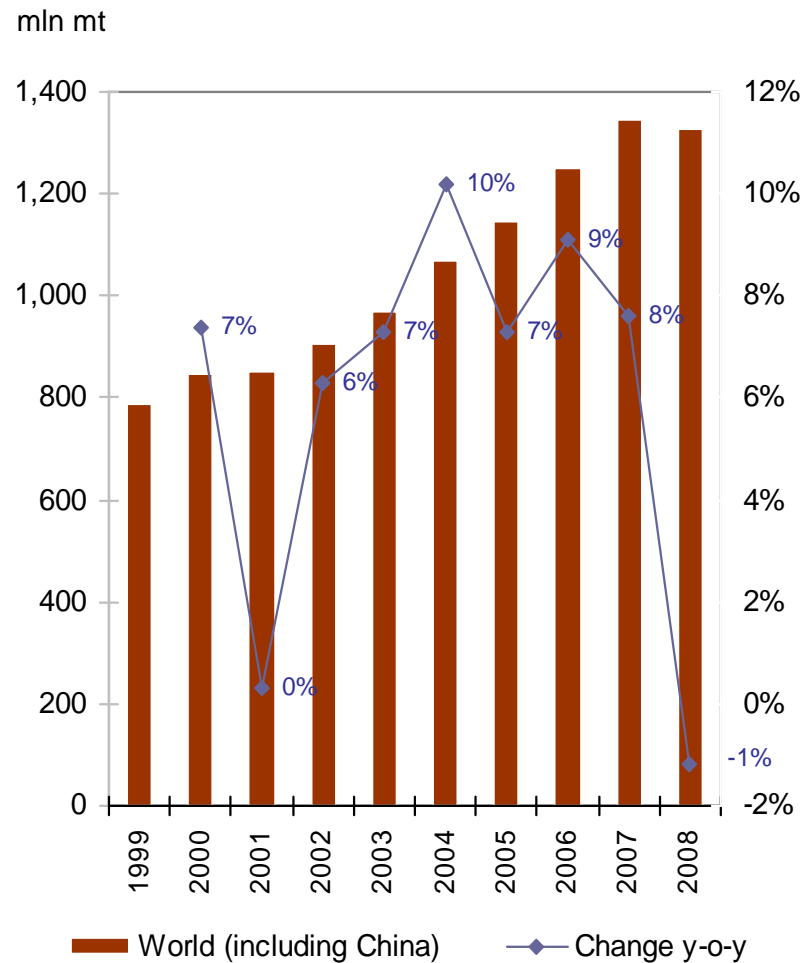
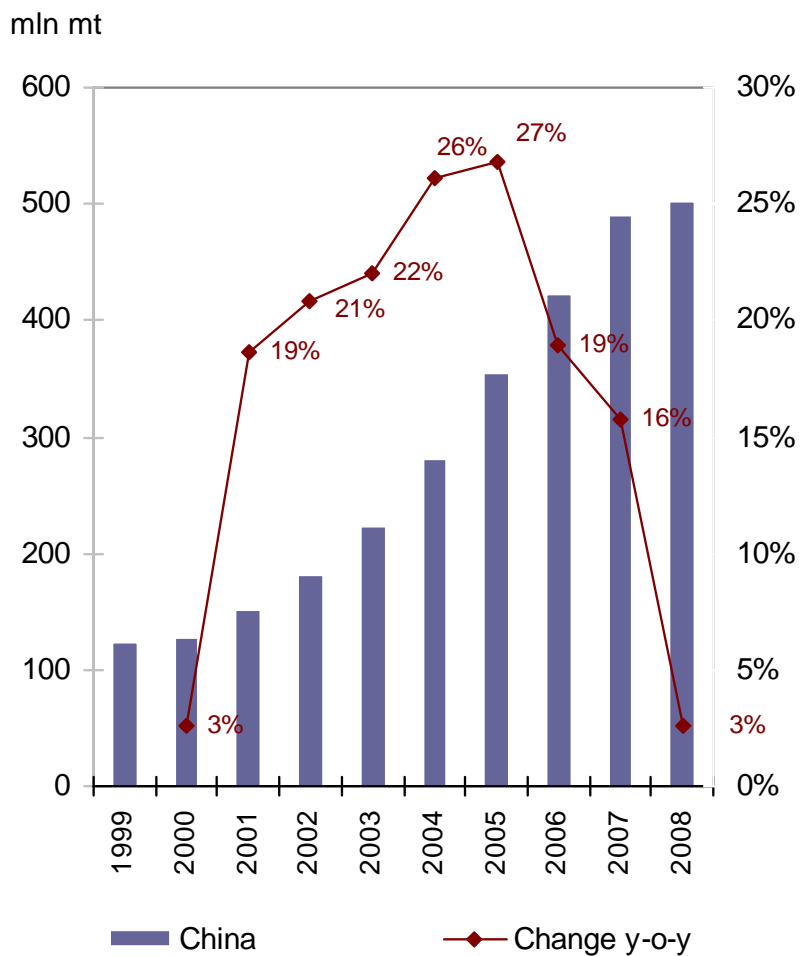
- Steel in 2008
- Mn Alloy in 2008
- Mn Ore in 2008
- Summary

## Steel in 2008 2008年的钢铁市场回顾

- 90% of Mn consumed as alloys in the steel production process
- 钢材生产过程所消耗的锰有90%是锰合金
- Global crude output down 1.8% in 2008 to 1.326 billion mt
- 2008年全球钢材总产量为13.26亿公吨，下降1.8%。
- Since the turn of the century, average global growth rate had been 7%, with only 2001 having a growth rate under 6% - In that recession year, growth was relatively flat (0.3%).
- 从本世纪初开始，全球钢材产量的年平均增长率一直保持在7%，2001年除外。在2001年全球经济衰退，钢材产量的增长率仅有0.3%
- China production up a mere 1.1% to 500 million mt
- 2008年中国的钢材产量仅上升了1.1%，总量为5亿公吨
- China's 7-yr CAGR\* (2000-07) was 21.4%
- 中国00-07年的复合年增长率为21.4%
- Jan. 2009 total global output down 24%; China output up 2.4%
- 2009年1月全球的总产量下降了24%，中国的产量增长了2.4%



## Steel in 2008





## Steel & Mn Stats 钢材和锰的统计数据

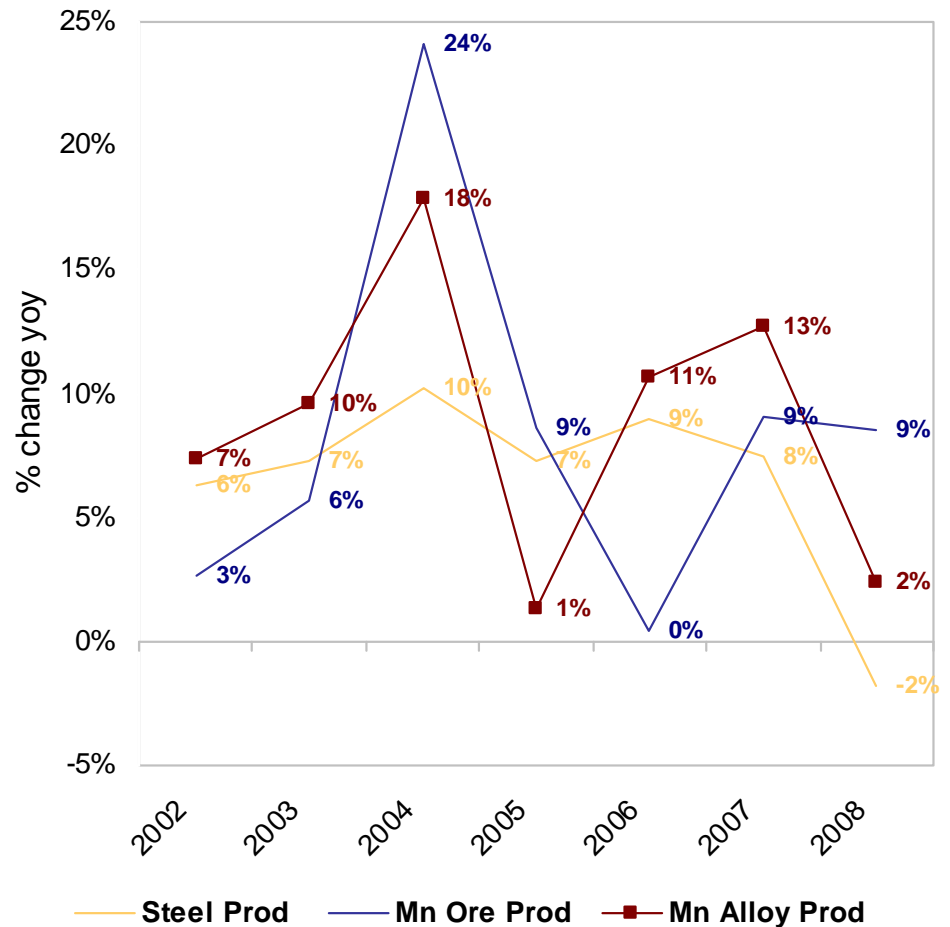
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
Steel Production (Million mt)	850	904	970	1,069	1,147	1,251	1,351	1,327
% Change yoy		6.3%	7.3%	10.2%	7.3%	9%	7.5%	-1.8%
Mn Ore* Production (K mt)	7,935	8,153	8,618	10,715	11,660	11,705	12,768	13,853
% Change yoy		2.7%	5.7%	24.1%	8.6%	0.4%	9.1%	8.5%
Mn Alloy** Production (K mt)	7,786	8,358	9,157	10,798	10,655	11,800	13,296	13,623
% Change yoy		7.4%	9.6%	17.9%	1.3%	10.7%	12.7%	2.4%
Mn Alloy App Cons (K mt)	7,801	8,282	9,096	10,731	10,840	11,715	13,340	13,475
% Change yoy		6.2%	9.8%	18%	1%	8.1%	13.9%	1%
锰合金的约计消费量								
Mn Alloy Real Unit Cons (Kg per mt of steel)	9	9	9	10	10	10	10	10
实际单位耗量 (每公吨钢铁消耗多少千克)								

\*Mn Ore refers to ore in Mn content 含有锰的矿石

\*\*Mn alloy refers to gross alloy volumes 合金总量

## Steel & Mn Stats

- Mn ore & alloy production tends to follow the movement in steel production with a slight lag
- 锰矿和锰合金的产量跟随着钢材产量而浮动，但浮动步伐稍微有点滞后。
- Swings in Mn production tend to be more pronounced – bigger ups and bigger downs
- 与钢铁产量的变化相比，锰矿和锰合金的产量浮动更为剧烈，大起大落。
- Major Mn ore & alloy producers have announced significant cutbacks in production in response to production reductions by steel mills
- 随着钢铁厂产量的削减，各大主要的锰矿和锰合金厂家也已经宣布大幅削减生产。

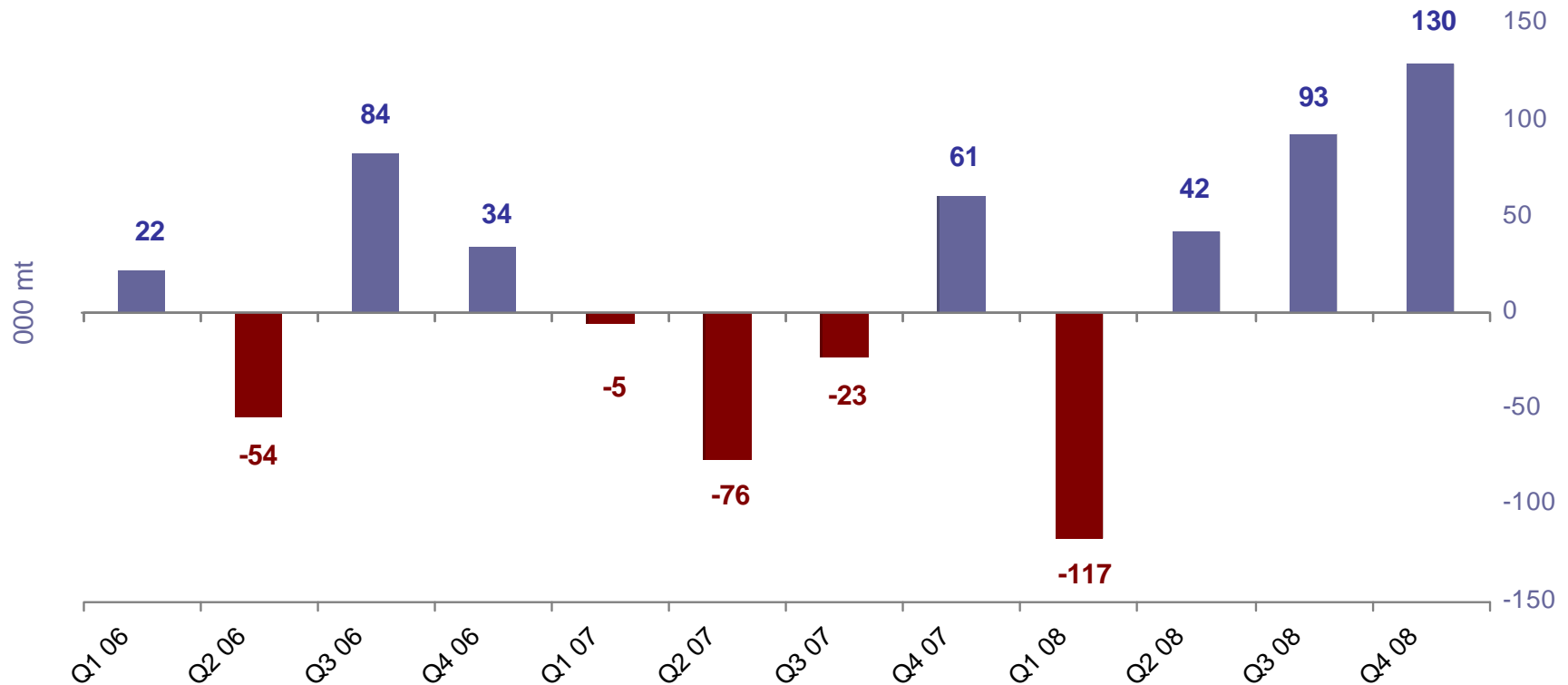




- Steel in 2008
- Mn Alloy in 2008
- Mn Ore in 2008
- Summary

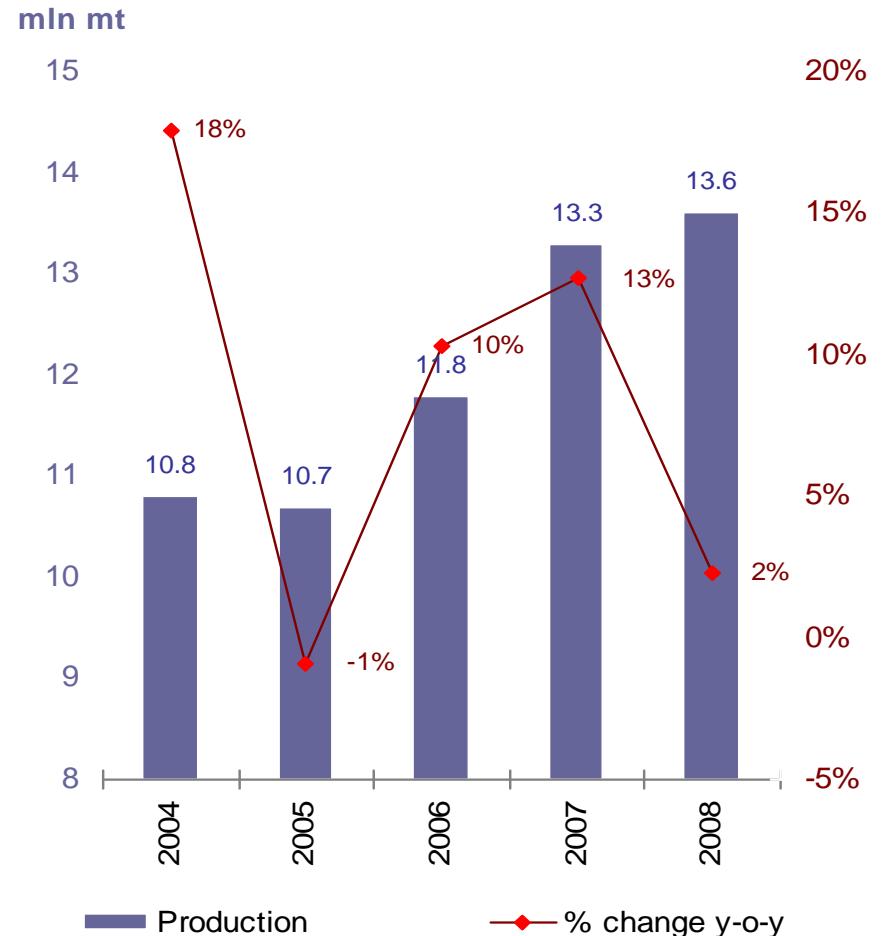
## Mn Alloy Supply Demand 锰合金全球供及与需求平衡图

- Q1 2008 deficit in supply of 120K mt 08年第一季度供小于求，供应短缺12万公吨
- 3 consecutive quarters of supply surplus 紧接着连续三个季度供大于求
- Q4 surplus of 130K mt of Mn alloys 第四季度锰合金的剩余供应量多达13万公吨



## Mn Alloy Production

- Mn alloy production up 2% in 2008 after two years of double digit growth – 13.6 million mt  
在连续两年保持双位数增长之后，2008年锰合金产量增幅收窄，仅增长2%，达1360万公吨，
- Mn alloy production in Q4 08 was down 24% from same period in 2007 – all major regions declined
- 由于各大主要产区都削减了产量，08年第四季度锰合金的产量与07年同比下降24%
- China accounts for roughly 51% of global production
- 中国的锰合金产量大约占全球总产量的一半，为51%
- Ukraine accounts for another 12%  
乌克兰则占12%
- India for 8% & EEA for 7%
- 印度和欧洲经济区各占8%和7%



## Mn Alloy Consumption 锰合金消费量

- Mn alloy consumption up a mere 1% in 2008 after healthy growth in two previous years – 13.5 million mt

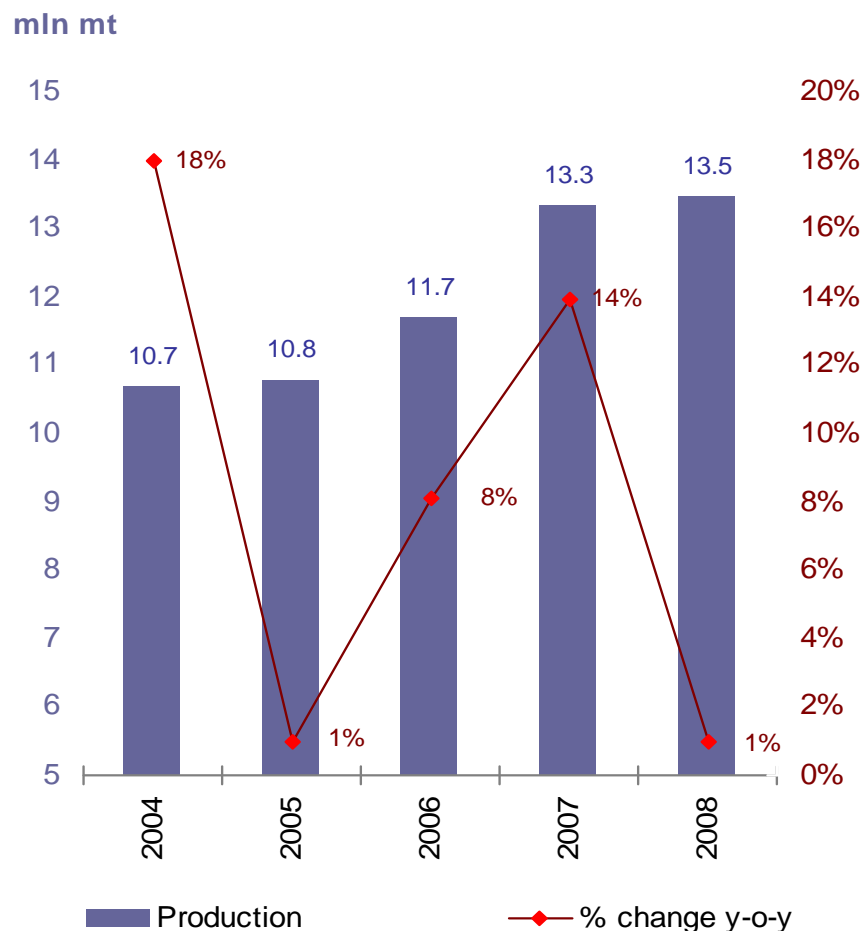
06-07年锰合金的消费量连续两年保持健康的增长，但08年消费量仅增长了1%，总量达1350万公吨

- Mn alloy consumption in Q4 08 was down 26% from same period in 2007 – all major regions declined

由于各大主要消费区域需求缩减，08年第四季度锰合金的消费量与07年同比下降了26%

- Weak demand in the latter part of year reduced exports of alloys and caused prices to begin to fall from their peaks reached throughout the year

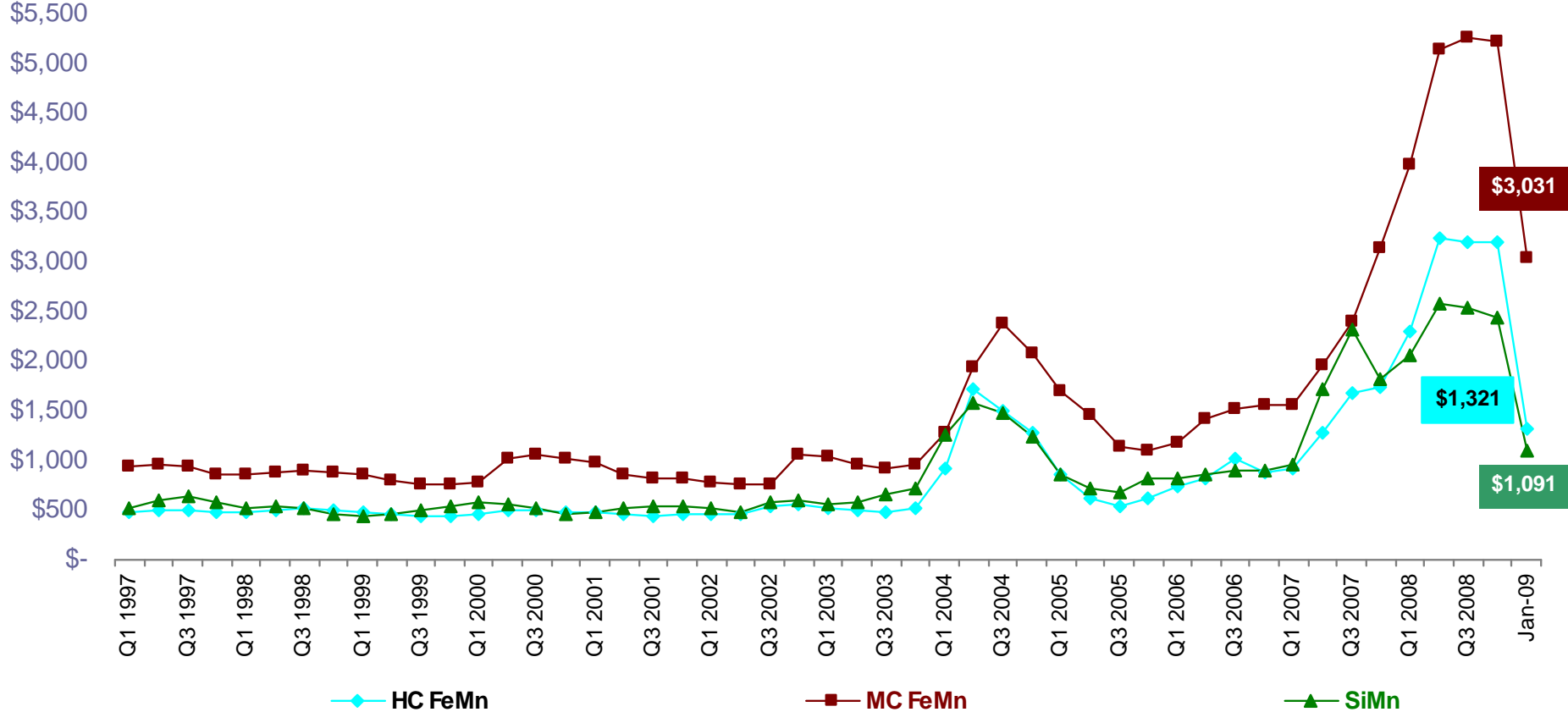
08年下半年出现的需求疲软，使得锰合金的出口量锐减，同时锰合金的价格也从其08年一直保持的高峰值开始下探



## Mn Alloy Prices

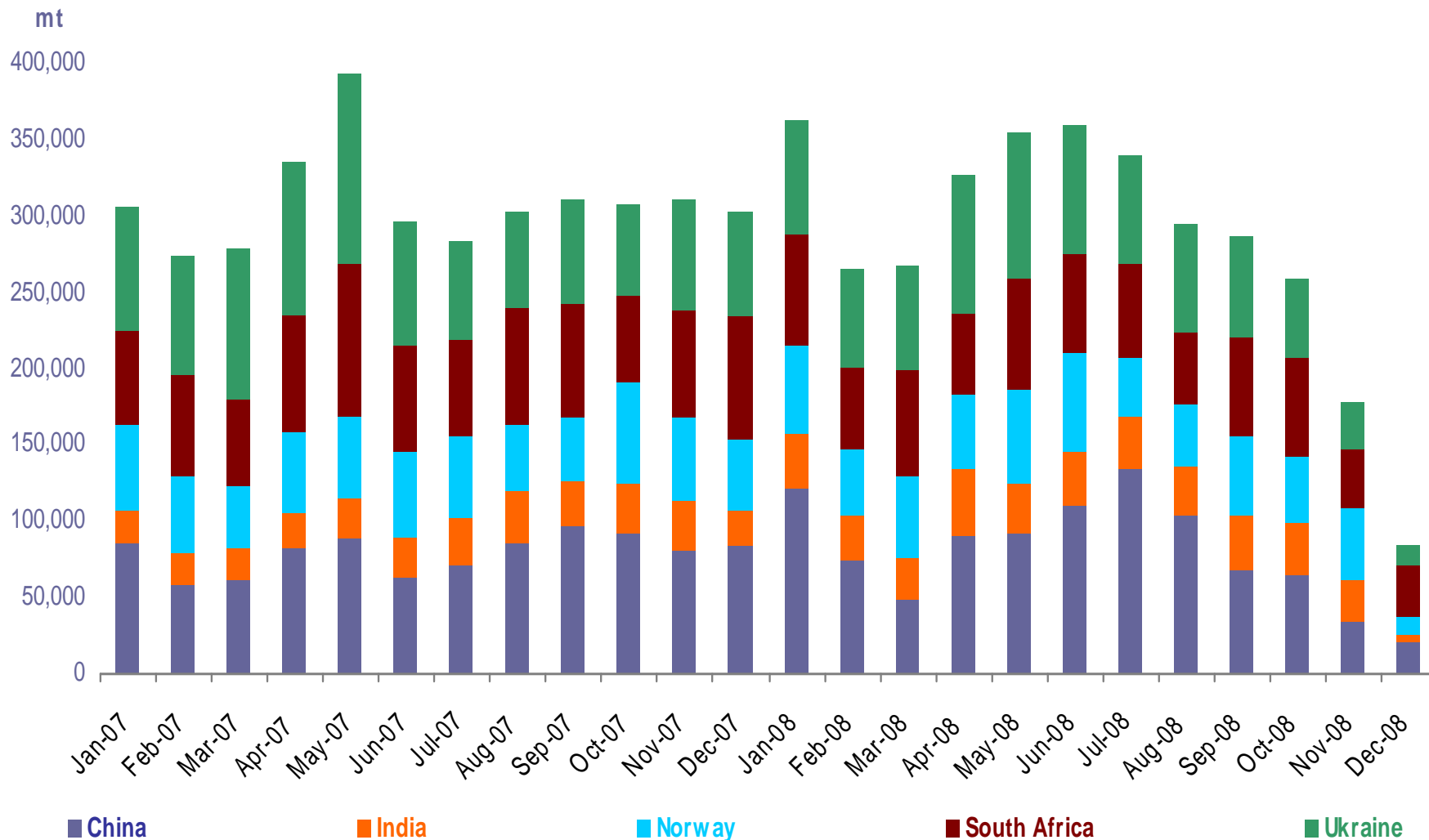
- Record highs in 2008 – inactive trading in Q4 08  
08年价格创历史新高（一公吨5000多美金），但在Q4季度却交易清淡
- Traders look to sell off material as steel mills seek to reduce inventories

USD\$/mt 由于钢铁厂打算削减库存，交易商倾向于抛售套现



## Mn Alloy Trade flows 锰合金贸易流量

- Imports decline sharply in Nov 2008 - China & Ukraine witness biggest falls in exports
- 08年11月主要消费国进口量急剧下滑 - 中国和乌克兰的锰合金出口量下滑幅度最大

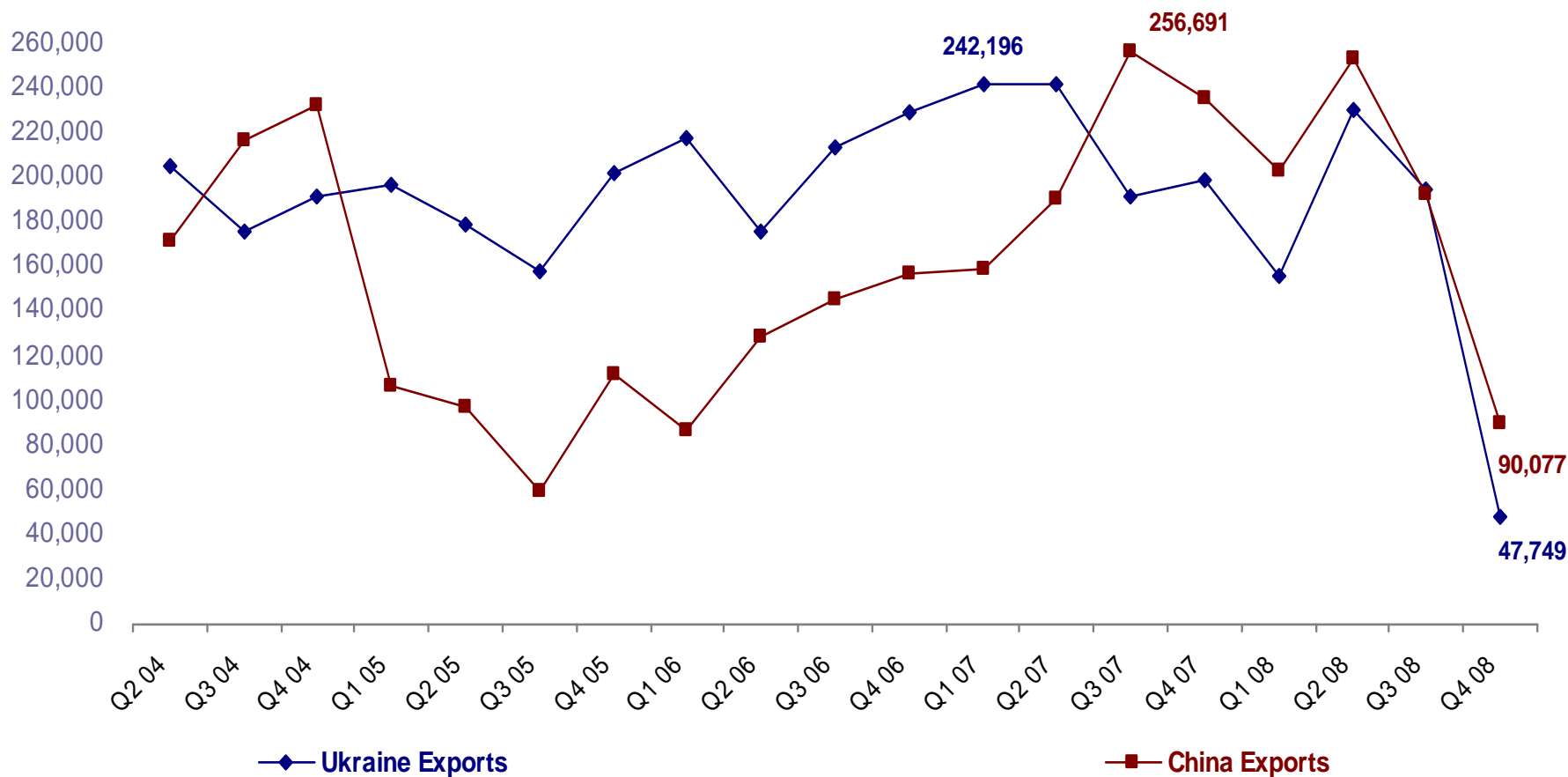


Source: GTIS (Declared Imports as of Feb. 10, 2009)



## Mn Alloy Trade flows (SiMn) 锰合金的全球贸易

- China exported 90K mt in Q4 08 vs. 236K mt in Q4 07 (-62% yoy), peaked Q3 07 257K mt
- 中国在08年第四季度出口了9万公吨Vs.07年同期出口量为23.6万公吨，同比下降62%，07年Q3的出口量创历史新高，达25.7万公吨
- Ukraine exported 48K mt in Q4 08 vs. 199K mt in Q4 07 (-76% yoy), peaked Q1 07 242K mt
- 乌克兰08 Q4出口4.8万公吨Vs.07年同期出口19.9万公吨，同比下降76%，07 Q1出口量创历史新高，24.2万公吨

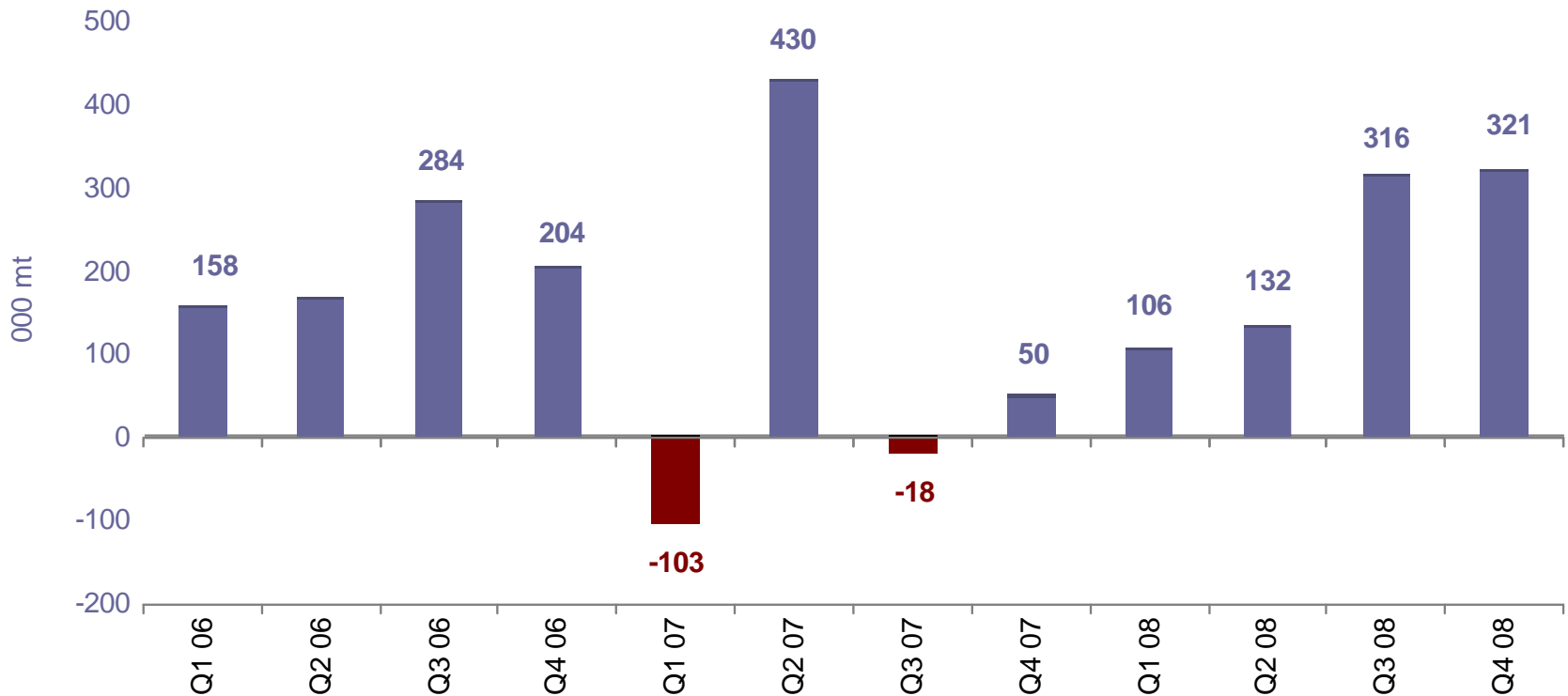




- Steel in 2008
- Mn Alloy in 2008
- Mn Ore in 2008
- Summary

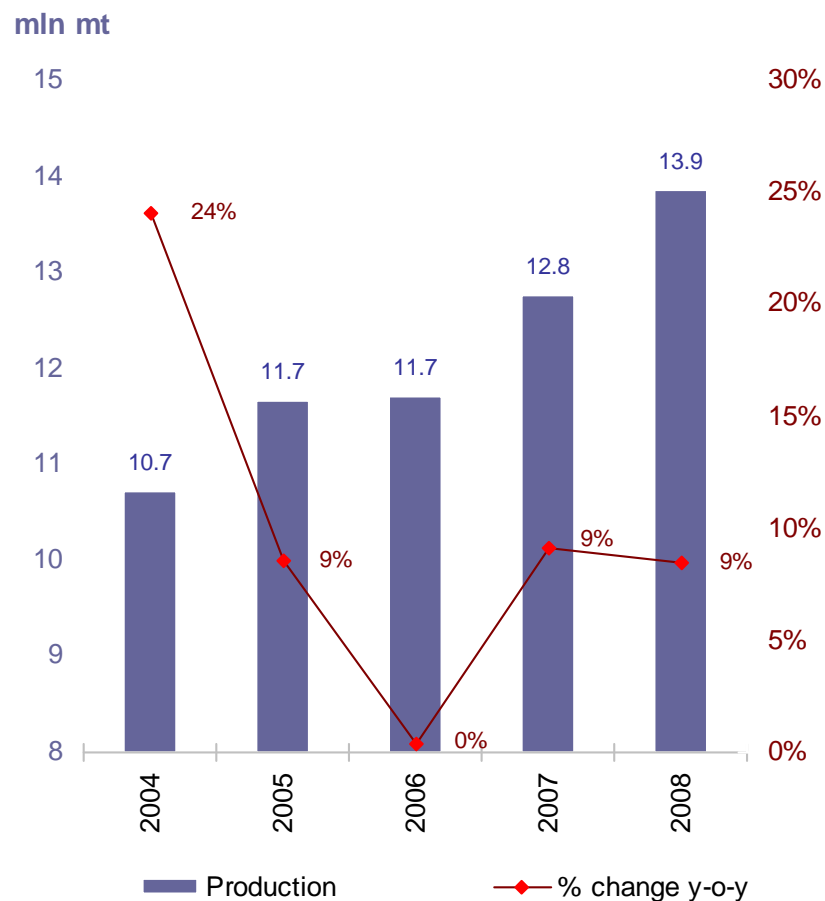
## Mn Ore Supply Demand (Mn content)

- Bigger surpluses in second half of 2008 08下半年供给过剩幅度进一步加大
- High prices led to more Mn units coming from non-traditional sources 锰矿价格的高涨导致更多新来源锰矿的出现/更多的非传统生产国加入到锰矿生产中来
- High grade ore in high demand throughout 2007 & 2008  
07、08年高品位矿石的需求持续旺盛



## Mn Ore Production (Mn content) 锰矿产量 (锰含量)

- Mn ore production up nearly 9% in 2008 for the second consecutive year – 13.9 million mt  
 08年锰矿产量连续第两年增长9%，达到1390万公吨
- Mn ore production in the first three quarters (Q1 thru Q3 08) was up 11% from the previous year.  
 08年前三个季度锰矿产量与去年同比增长11%
- Mn Ore production in Q4 08 was up 1% compared to the same period in 2007  
 08年第四季度锰矿产量增幅锐减，与07年同比仅增长1%
- Major cutbacks in 2009 production schedules announced in Q4 08 in response to slowdown in the downstream steel industry  
 由于下游钢铁产业增长放缓，08年第四季度很多厂家都宣布大规模地缩减09年的生产计划



## Mn Ore Production (Mn content)

- **High Grade** Mn Ore Production (greater than 43% Mn content) in 2008 was 6.9 million mt

08年高品位锰矿(锰含量大于43%)的产量为690万公吨

主要产地：南非和中东

- **Mid Grade** Mn Ore Production (between 30% and 43% Mn content) in 2008 was 3.5 million mt

08年中品位锰矿(锰含量为30%-43%)产量为350万公吨

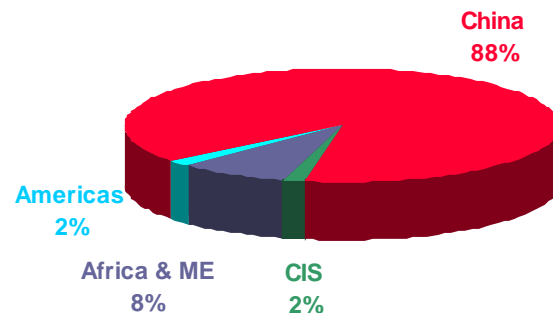
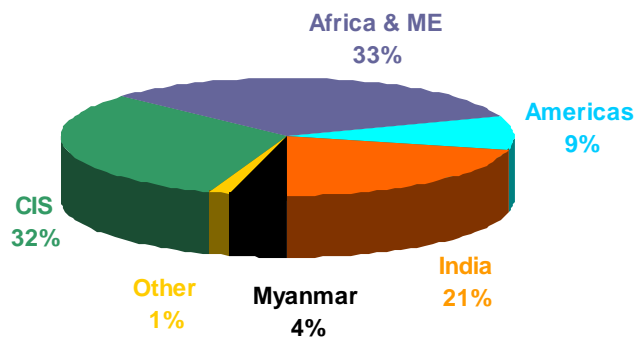
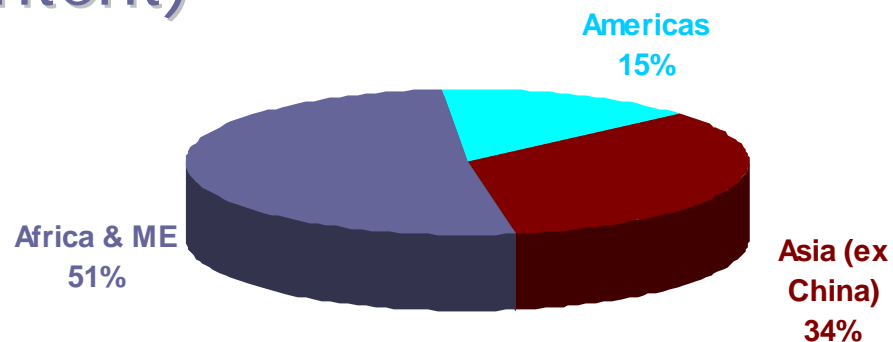
主要产地：南非和中东、独联体

- **Low Grade** Mn Ore Production (less than 30% Mn content) in 2008 was 3.5 million mt

低品位锰矿(锰含量小于30%)

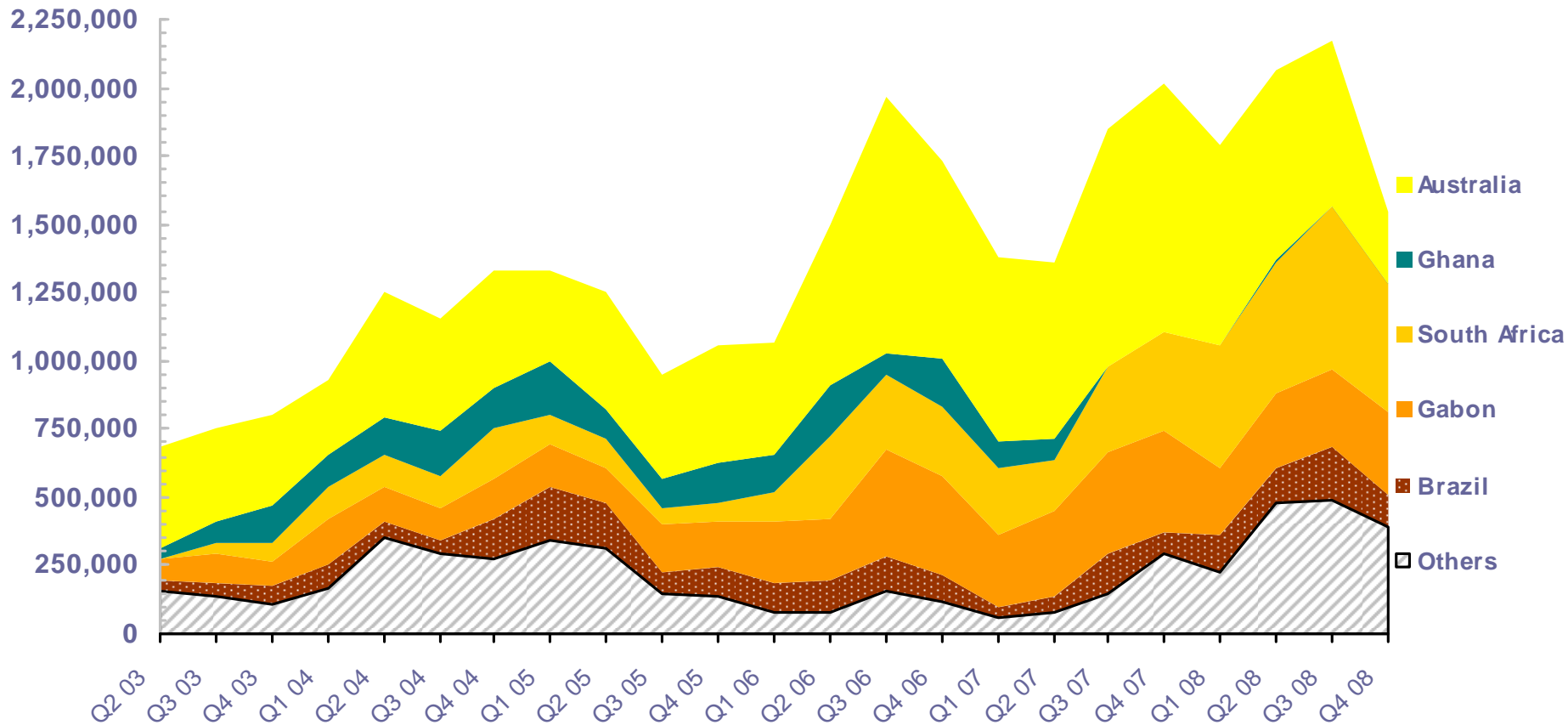
08年产量为350万公吨

主要产地：中国



## Mn Ore – China Imports – 中国锰矿进口量

- High Mn Ore prices throughout 2008 increased Chinese imports from smaller scale producing countries – these producers, **many regional neighbors** shipped nearly 1.6 million mt in 2008  
08年锰矿价格全年持续走高，因而增加了中国从其他较小规模锰矿生产国的进口量，08年中国从这些国家共进口了约160万公吨锰矿。
- Imports dropped off in Q4 as demand weakened and port inventories accumulated  
mt 由于需求的疲软和港口库存的积压，08年第四季度中国的锰矿进口量大幅下滑

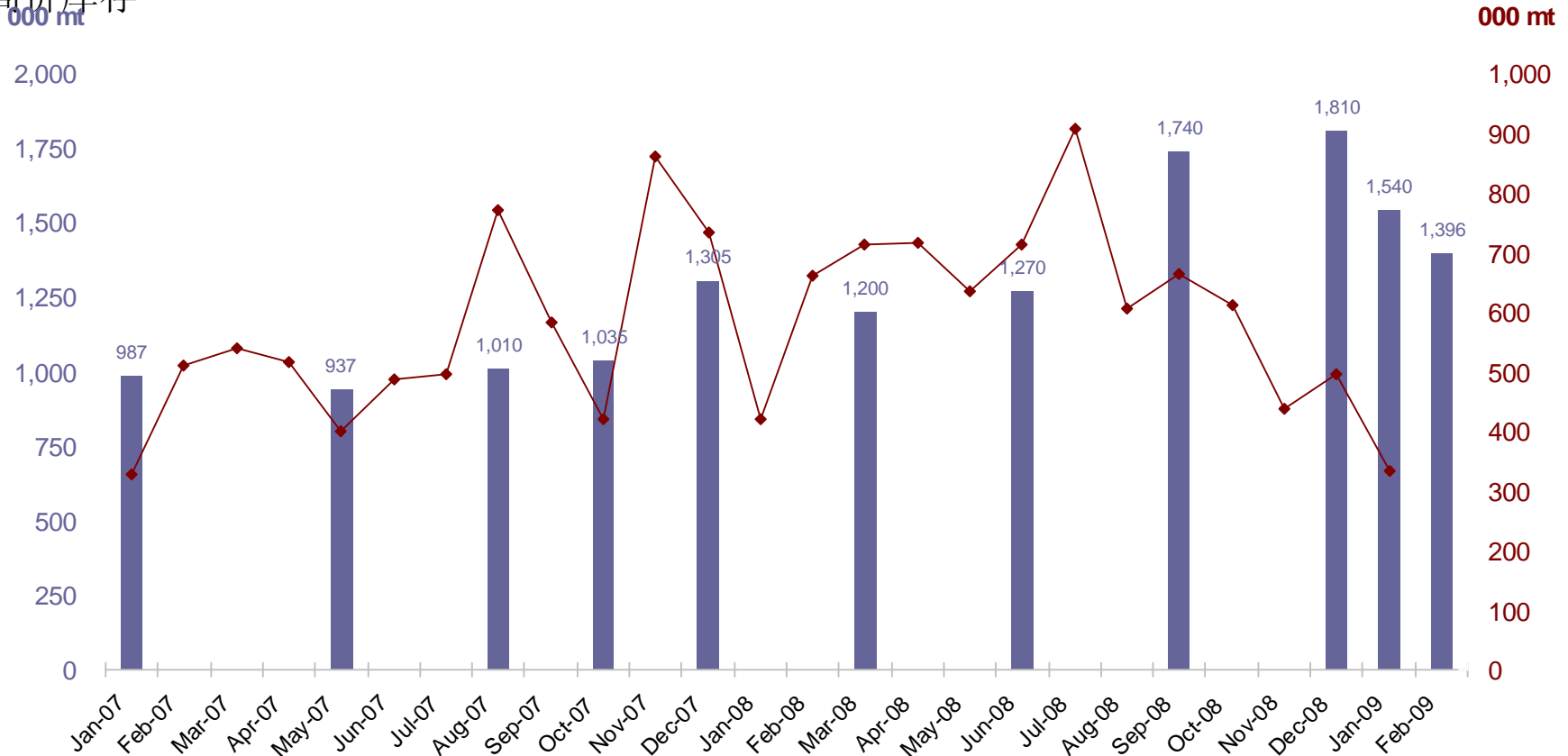




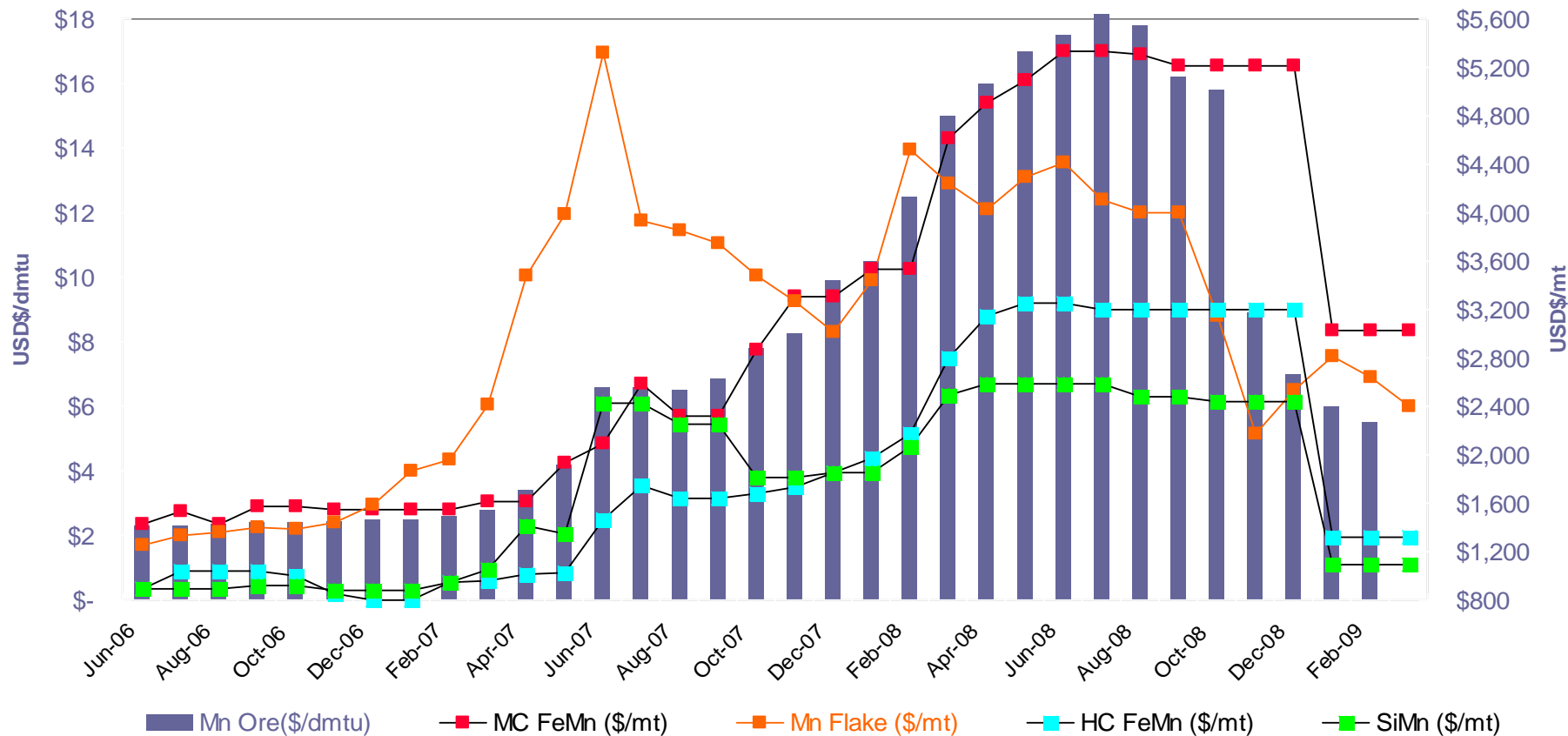
# International Manganese Institute

## Mn Ore – China Imports & Port Inventories 中国锰矿进口量和港口库存量

- Port inventories reached peak in December 2008 – nearing 2 million mt
- 中国锰矿的港口库存量在08年12月达到峰值，总量将近200万公吨
- Have been reduced by over 400K mt in January & February 2009 as imports fell
- 由于进口量的减少，09年1月和2月的港口库存量减少了大约40万公吨
- Traders forced to sell high priced stock cheaply due to Q2 08 contracts from major suppliers  
由于与主要生产商的合约是在08年第二季度价格高企时订立的，现在交易商被迫低价抛售这些高价库存



- Over 90% of Mn Flake/Metal (EMM) is produced in China using low grade domestic ore  
超过90%的电解金属锰片是在中国用低品位国内锰矿生产出来的
- EMM is driven by the specialty steel and 200 series stainless steel markets  
电解锰的需求是由特种钢和200系不锈钢市场带动的
- Different raw material inputs and customer base than alloy market – prices more volatile  
电解锰和锰合金的原材料以及客户群不同，其价格更易波动



Source: Metal Bulletin: Alloys - US free market duty paid fob Pittsburgh; EMM – free market warehouse

CRU : Mn Ore – China spot import



- Steel in 2008
- Mn Alloy in 2008
- Mn Ore in 2008
- Summary

## Summary – Global Economic Crisis 总结-全球经济危机

### 坏消息

- Global car sales plummeted 30% yoy in January 2009  
09年1月全球汽车销量与去年同期相比下降了30%
- EU19 residential and non-residential construction expected to fall in 2009;  
likewise in other developed countries  
预计欧盟19国的住宅和非住宅建筑价格在09年会下跌，其他发达国家也难以幸免
- Many property developments are put on hold in developing countries, especially  
in new cities in India, China & Gulf States  
很多发展中国家的房地产开发项目暂时搁浅，尤其是在印度、中国和海湾国家的一些新城市。
- Global Steel output in 2009 likely to drop the most since 1932 according to WSD  
(60% chance output = 1,149 million mt)  
世界钢铁动态信息服务公司WSD预计09年全球的钢材产量将会出现自1932年以来的最大跌幅，有60%的可能会跌至11.49亿公吨

### 好消息

- US Construction-related spending in House Democrats' stimulus proposal, could  
approach \$160 billion  
在美国民主党的经济刺激方案中，与建筑业相关的开支将近1600亿美元
- China announces \$586 billion stimulus plan to boost economy  
中国公布了5860亿美元的经济刺激方案来促进经济发展
- India Infrastructure can get a much needed boost from Government spending  
印度政府扩大开支，将推动印度的基础设施进一步发展

## Summary – Mn & its Reaction 锰相关市场的反应

- Steel mills have responded to weak demand by cutting production

钢铁厂已经通过削减产量来应对需求的疲软

- Ore producers and smelters react quickly by cutting back heavily on production in Q4 08 and for 2009

矿石生产商和冶炼厂也做出了迅速的反应 – 大幅削减08年第四季度和09年的生产计划

危机还会继续恶化，

- Short to Mid-term outlook is still uncertain, long-term outlook fundamentally unchanged and strong; **if the global economy gets back on track at its pre-crisis pace led on by a commodity hungry China**

短期和中期的市场前景仍然不太明朗；如果商品匮乏的中国能够带动全球经济以危机前夕的步伐复苏的话，长期的市场前景将在根本面上保持强劲和稳定的增长



Thank You!  
Questions?



# International Manganese Institute



IMnI provides **vision and guidance** to the manganese industry by promoting economic, social and environmental responsibility and sustainability for all stakeholders.

## Market Research & Statistics

Provides the most comprehensive reports & tools available on manganese supply, demand and trade flows.

[stats@manganese.org](mailto:stats@manganese.org)

## Occupational Health, Environment & Safety

Develops and promotes universal best practices for a sustainable manganese industry.

[ohes@manganese.org](mailto:ohes@manganese.org)

## Events & Conferences

Organizes worldwide industry gatherings, including the biggest global manganese event for networking and learning.

[events@manganese.org](mailto:events@manganese.org)



International Manganese Institute

17 rue Duphot  
75001 Paris, France

Tel: +33 (0)1 45 63 06 34  
Fax: +33 (0)1 42 89 42 92



[info@manganese.org](mailto:info@manganese.org)  
[www.manganese.org](http://www.manganese.org)



- IMnI provides vision and guidance to the manganese industry by promoting economic, social and environmental responsibility and sustainability for all stakeholders.

国际锰协为锰行业的长远发展提供指引——促使所有利益攸关者履行经济、社会以及环保方面的责任并推动锰行业的可持续发展。

- Market Research & Statistics: provides the most comprehensive reports & tools available on manganese supply, demand and trade flows.

市场研究和数据：国际锰协为其会员提供最全面的锰系产品供应和贸易流量的报告及市场调查工具

- Occupational Health, Environment & Safety: Develops and promotes universal best practices for a sustainable manganese industry.

职业健康、环境和安全：开发并推动在职业健康、环境和安全方面全球最好的规范标准，以实现锰行业的可持续发展。

- Events & Conferences: Organizes worldwide industry gatherings, including the biggest global manganese event for networking and learning.

活动和会议：组织世界范围的产业聚会，包括最大规模的世界锰业活动，以供同业者建立人际网络和相互学习。