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STEEL MARKET DEVELOPMENT IN JAPAN

Note by the Japan Iron and Steel Federation

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STEEL MARKET DEVELOPMENT IN JAPAN

Steel Supply and Demand in Japan

The Japanese Economy

1. In the second quarter of 2008, Japan's quarterly real GDP growth rate (second preliminary report) was negative 0.7%, the first decline in four quarters. Looking at domestic demand, personal consumption was down for the first time in seven quarters and there were declines in residential investment and private-sector capital investment, too. Exports, which had been fueling economic growth, posted a 2.5% decrease, the first downturn in 13 quarters. Since July, almost all economic indicators, including production, new orders, exports, consumption, employment and business sentiment, have continued to point to an economic downturn. There is a risk of a further weakening in Japan's economy as the global economy feels the effects of the deepening U.S. financial crisis.

Quarterly real GDP growth rates by final demand category

（unit: %）

Final demand category	2006			2007						2008	
	2Q	3Q	4Q	1Q	2Q	3Q	4Q		Contribution toChange in GDP	1Q	2Q
Real GDP	0.5	0.0	1.1	1.1	▲ 0.3	0.2	0.6	2.1	100%	0.7	▲ 0.7
Private Consumption	0.5	▲ 1.0	1.0	0.6	0.3	0.0	0.4	1.5	55%	0.7	▲ 0.5
Residential investment	▲ 2.1	0.8	2.3	▲ 1.6	▲ 4.3	▲ 7.3	▲ 9.8	▲ 9.5	3%	4.3	▲ 3.5
Private capital investment	3.7	0.9	1.8	1.2	▲ 1.9	0.4	1.0	2.1	16%	▲ 0.1	▲ 0.5
Public investment	▲ 6.0	▲ 4.9	2.1	3.2	▲ 2.6	▲ 2.0	0.2	▲ 2.5	4%	1.0	▲ 5.1
Exports	0.6	2.3	0.8	3.3	2.0	2.6	2.6	8.6	16%	3.4	▲ 2.5
Imports	1.2	▲ 0.2	0.1	0.7	1.2	▲ 0.3	0.8	1.7	-11%	1.2	▲ 2.6
GDP Deflator	-1.2	-0.8	-0.6	-0.6	-0.5	-0.6	-1.3	-0.8		-1.5	-1.6

Source: Cabinet Office

Note: The growth rates in the table are shown changes from the previous quarter in real terms.

Performance of Steel Consuming Industries in Japan

2. In the construction industry, there was a sharp downturn in building construction following the June 2007 enactment of amendments to Japan's Building Standards Law. Building construction has

remained lower than one year earlier in 2008 as well. In the civil engineering category, the long-term decline in activity continues as governments cut back budgets for public-works projects.

3. In the automobile industry, the long-term weakness in domestic sales in Japan continues but exports remain strong. Although automobile production is consistently high, the impact of the high cost of crude oil is having an impact on automobile demand in Japan and overseas. In the industrial machinery industry, the IIP has peaked and is starting to fall. For electrical machinery, though, the IIP is still strong.

Steel Supply and Demand

Steel orders

4. Orders for ordinary steel products by sector (domestic demand) started declining year-on-year in the second half of 2007 and have remained weak in 2008. By sector, consistent strength in the manufacturing sector, primarily automobiles and shipbuilding, has been supporting domestic demand. However, there are signs of a change, notably a year-on-year downturn in the volume of steel products ordered by manufacturers in August. In addition, orders in the construction sector and orders from dealers are declining.

Orders Booked for Ordinary Steel Products

Unit: 1,000 tons

	Ordinary steel orders for domestic demand			
	Total	Construction Sector	Manufacturing Sector	dealers
CY 2006	56,403	13,391	26,208	16,804
CY 2007	57,260	13,716	27,089	16,454
2007/ 1Q	14,375	3,340	6,719	4,316
2Q	14,268	3,494	6,572	4,202
3Q	14,245	3,430	6,785	4,030
4Q	14,372	3,452	7,014	3,906
2008/ 1Q	14,314	3,292	6,965	4,057
2Q	14,399	3,491	6,793	4,115

Source: The Japan Iron and Steel Federation

Steel production

5. Crude steel production in Japan reached an all-time high of 120.20 million tons in 2007 and has remained high in 2008.

6. Since the 1970s, Japan’s crude steel production has remained at about 100 million tons every year. By process, LD converter steel accounts for about 75% of output and electric arc furnace steel for the remainder (25%). In recent years, growth in the output of blast furnace steel companies has caused the share of LD converter steel to increase.

Crude Steel Production and Ordinary Steel and Special Steel Production in Japan

Unit : 1,000 tonnes

	Crude steel production	LD converters	share	Electric furnace	share	Ordinary steel production	Special steel production
1997	104,545	70,295	67.2%	34,249	32.8%	81,064	16,517
1998	93,548	63,716	68.1%	29,832	31.9%	72,090	14,774
1999	94,192	65,452	69.5%	28,740	30.5%	72,057	14,224
2000	106,444	75,784	71.2%	30,660	28.8%	81,635	15,748
2001	102,866	74,442	72.4%	28,424	27.6%	77,702	15,835
2002	107,745	78,533	72.9%	29,212	27.1%	79,315	17,451
2003	110,511	81,355	73.6%	29,156	26.4%	80,162	18,735
2004	112,718	82,956	73.6%	29,762	26.4%	81,847	19,843
2005	112,471	83,627	74.4%	28,844	25.6%	79,229	20,360
2006	116,226	85,965	74.0%	30,261	26.0%	81,313	20,982
2007	120,197	89,242	74.2%	30,955	25.8%	85,029	21,506
4Q	30,166	22,185	73.5%	7,982	26.5%	21,147	5,369
2007/ 1Q	29,527	21,855	74.0%	7,672	26.0%	20,996	5,509
2Q	29,892	21,845	73.1%	8,047	26.9%	21,217	5,303
3Q	29,907	22,688	75.9%	7,219	24.1%	21,319	5,220
4Q	30,877	22,854	74.0%	8,023	26.0%	21,494	5,466
2008/ 1Q	30,835	23,160	75.1%	7,675	24.9%	21,804	5,756
2Q	31,060	22,869	73.6%	8,191	26.4%	21,568	5,628

Source: Ministry of Economy, Trade and Industry

Note: Figures for special steel products are based on hot-rolled steel products.

Shipments and inventory of steel products

7. Shipments of ordinary steel products are higher than one year earlier as a consistently high volume of exports offset weakness in Japan. Inventories of ordinary steel products have generally been at a suitable level during 2008, but inventories started climbing again in August. As a result, the overall inventory ratio climbed to 119.8%, the highest since August 2005.

Shipments and Inventory of Ordinary Steel Products

Unit: 1,000 tonnes, %

	Shipments of ordinary steel products						Inventory of ordinary steel products						Overall inventory ratio	
	Total	Y-to-Y change	Shipments for domestic users	Y-to-Y change	Shipments for overseas users	Y-to-Y change	Producers	Y-to-Y change	Wholesalers	Y-to-Y change	Total	Y-to-Y change	Total	Domestic inventory ratio
CY 2003	79,893	0.1	57,872	0.9	22,020	▲2.0	5,213	▲1.3	1,612	26.3	6,825	4.1	101.8	121.4
CY 2004	82,184	2.9	59,584	3.0	22,600	2.6	4,881	▲2.3	1,608	7.0	6,488	▲0.2	96.7	111.1
CY 2005	79,258	▲3.6	59,389	▲0.3	19,868	▲12.1	4,936	1.5	1,523	▲5.3	6,459	▲0.3	103.5	116.8
CY 2006	81,458	2.8	60,614	2.1	20,844	4.9	4,952	0.3	1,363	▲10.5	6,315	▲2.2	90.4	106.3
CY 2007	84,586	3.8	62,408	3.0	22,178	6.4	5,260	6.2	1,492	9.4	6,759	6.9	96.2	108.9
2007/ 1Q	21,135	7.2	15,780	5.4	5,356	12.9	4,684	▲5.4	1,493	9.5	6,176	▲2.2	87.7	102.1
2Q	20,972	4.9	15,633	7.1	5,338	▲0.9	4,916	5.0	1,506	0.9	6,422	4.0	88.9	101.8
3Q	21,151	2.5	15,376	1.2	5,776	5.9	5,046	2.6	1,544	2.5	6,590	2.6	91.5	107.1
4Q	21,335	1.1	15,625	▲1.4	5,710	8.6	5,260	4.2	1,490	▲3.5	6,750	2.4	96.0	114.1
2008/ 1Q	22,460	6.3	15,923	0.9	6,537	22.1	4,654	▲11.5	1,440	▲3.4	6,095	▲9.7	74.6	90.1
2Q	21,305	1.6	15,477	▲1.0	5,828	9.2	4,855	4.3	1,504	4.4	6,359	4.3	86.7	101.3

Source: Ministry of Economy, Trade and Industry, The Japan Iron and Steel Federation

Japanese steel imports and exports

8. Exports of steel from Japan are consistently high mainly because of orders from manufacturers in Asia. Due to the large increase in the cost of steel raw materials, the average unit price for all steel exports increased to a record high of $1,162/ton in the second quarter of 2008.

9. Imports of ordinary steel products are currently increasing mainly because of growth in shipments from China. By product category, imports of wire rods, heavy and medium plates, and hot-rolled sheets and strips are increasing.

Japanese steel exports

unit: 1,000 tonnes, %

	Overall steel exports	Major destination						Ordinary steel exports				Special steel exports total	Average Price (US$/MT)
		US	EU27	China	Asian economies			Total	HR sheets & strips	CR sheets & strips	Galvanized sheets		
					Total	Korea	Others						
CY 2006	35,185	1,991	477	6,198	21,950	8,758	13,192	24,342	6,848	3,063	4,884	5,326	909.8
CY 2007	36,853	1,660	524	6,342	24,059	9,591	14,468	25,199	7,054	3,109	5,064	5,789	993.4
2007/ 1Q	8,888	483	133	1,584	5,618	2,232	3,387	6,066	1,674	780	1,222	1,422	973.2
2Q	9,138	454	106	1,628	5,952	2,349	3,603	6,156	1,663	781	1,320	1,455	988.5
3Q	9,300	371	164	1,565	6,083	2,415	3,669	6,455	1,855	784	1,311	1,457	991.5
4Q	9,528	352	122	1,565	6,405	2,596	3,809	6,522	1,863	764	1,340	1,456	1018.9
2008/ 1Q	10,483	441	151	1,767	6,964	2,781	4,183	7,240	2,067	845	1,336	1,570	1018.6
2Q	9,543	412	156	1,687	6,332	2,345	2,345	6,569	1,751	835	1,360	1,459	1161.9

Source: Customs Statistics

Japanese steel Imports

unit: 1,000 tonnes, %

	Ordinary steel imports										Special steel imports		
	Total	Wire rods	Heavy & medium plates	Hot rolled sheets & strips	Cold rolled sheets & strips	Galvanized sheets	Others	Major origin			Total	Stainless steel	Others
								Korea	Chinese Taipe	China			
CY 2006	3,747	284	215	1,590	913	357	387	2,147	910	588	241	183	58
CY 2007	3,796	250	187	1,712	962	371	314	2,167	830	699	286	219	67
2007/ 1Q	1,000	65	58	462	228	94	92	527	231	220	93	76	16
2Q	996	75	59	430	247	100	85	543	204	223	83	68	14
3Q	886	31	48	398	250	93	66	542	207	110	65	48	17
4Q	914	79	22	421	236	85	71	555	188	145	46	26	20
2008/ 1Q	872	36	32	408	244	88	63	546	188	101	45	31	14
2Q	1,013	89	90	457	225	85	67	556	186	240	54	37	17

Source: Customs Statistics

Conclusion

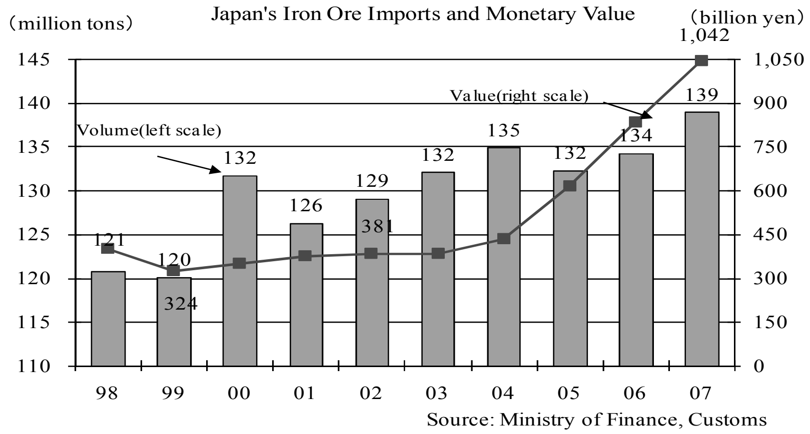
10. As the second half of 2008 began, major categories of the manufacturing sector, which had been strong until recently, started showing signs of a slowdown. In addition, the construction sector remained lackluster. In the world's major steel markets as well, there are indications of sudden shifts in economic conditions. This is true not only in Europe and North America, but even in China, where the strong pace of economic growth is slowing down.

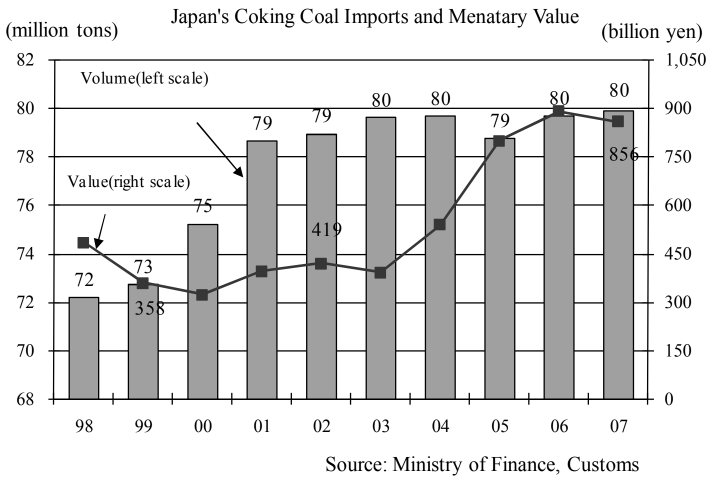
11. There are fears about the impact on all steel consuming industries, including indirect exports, of the international financial crisis sparked by the failure of large U.S. securities companies. In this environment, there is an even greater need to carefully watch upcoming developments.

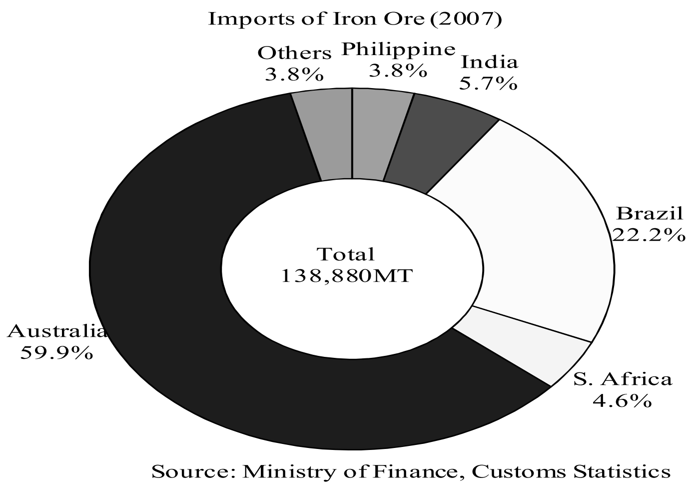
II. The Rising Cost of Raw Materials and the Japanese Steel Industry

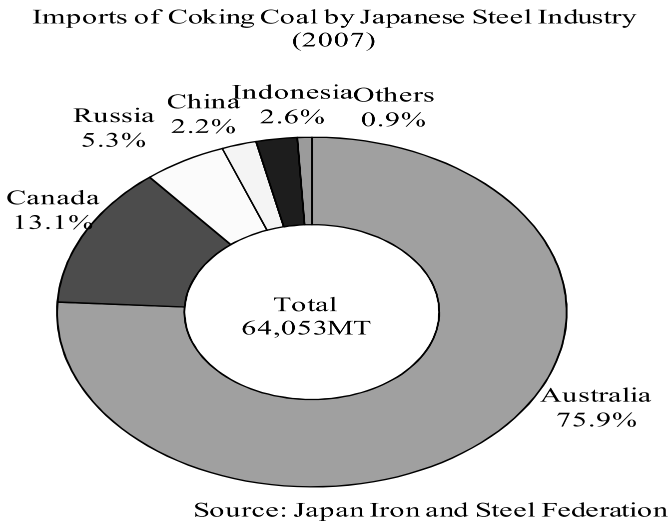
Japanese imports of raw materials

12. Japan relies on imports for all of the iron ore and coking coal needed to produce steel. Japan was the world's largest importer of iron ore for many years up to 2002. Since 2003, though, China has been the largest iron ore importer. Iron ore imports to China have increased rapidly since 2003. Although Japan's iron ore imports have been climbing along with crude steel production, Japan's share of global iron ore imports has relatively declined. By country, Japan imports about 60% of its iron ore from Australia and about 20% from Brazil. These two countries alone account for more than 80% of Japan's iron ore imports. One reason is the long history of involvement of Japanese trading companies and steelmaker in the development of Australian mines. Australia also has the advantage of a low transportation cost. For coking coal, Japan is still the world's largest importer. About 75% of this coal comes from Australia, followed by Canada and Russia.


Japan's Iron Ore Imports and Monetary Value
(million tons)
(billion yen)
1,042
145
140
135
130
125
120
115
110
1,050
900
750
600
450
300
150
0
Value(right scale)
Volume(left scale)
139
135
134
132
132
132
129
126
121
120
381
324
98
99
00
01
02
03
04
05
06
07
Source: Ministry of Finance, Customs


Japan's Coking Coal Imports and Menatary Value
(million tons)
(billion yen)
82
80
78
76
74
72
70
68
1,050
900
750
600
450
300
150
0
Volume(left scale)
Value(right scale)
80
80
80
80
79
79
79
75
73
72
856
419
358
98
99
00
01
02
03
04
05
06
07
Source: Ministry of Finance, Customs

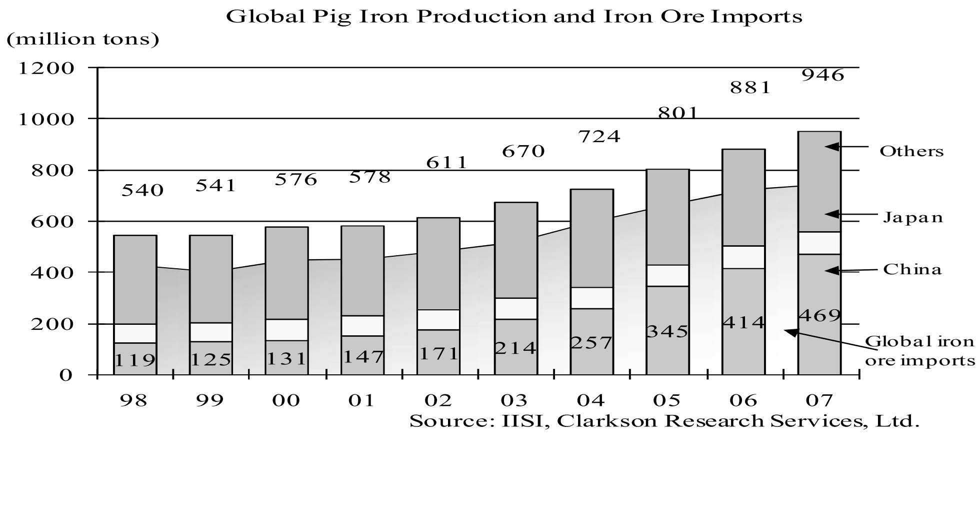

Imports of Iron Ore (2007)
Others
3.8%
Philippine
3.8%
India
5.7%
Brazil
22.2%
Total
138,880MT
Australia
59.9%
S. Africa
4.6%
Source: Ministry of Finance, Customs Statistics

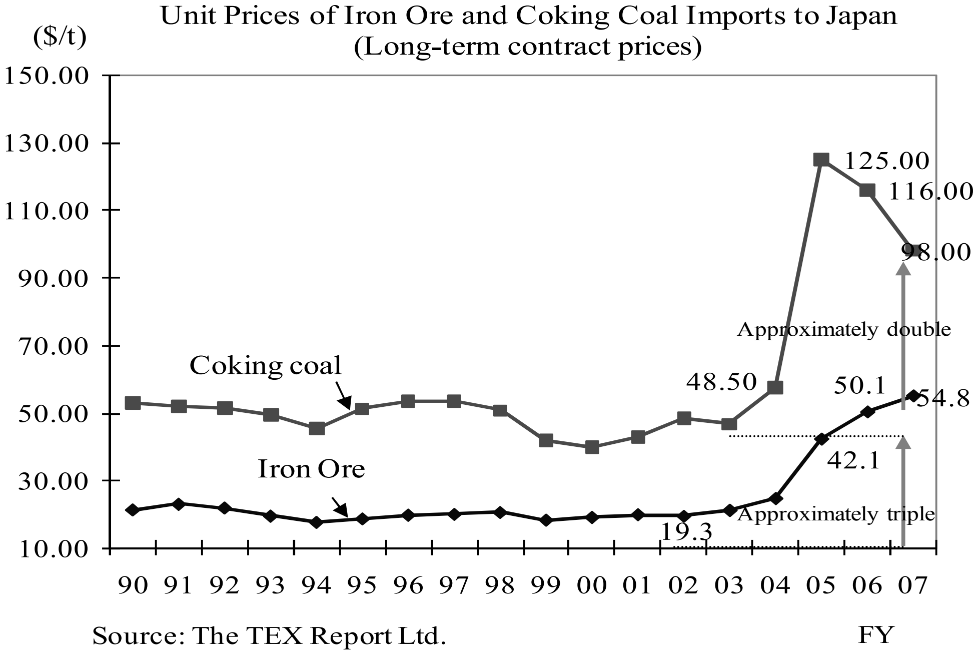


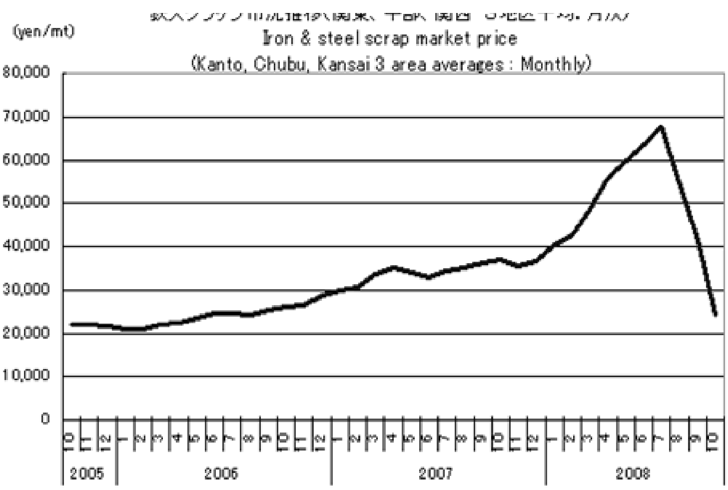
Steep increase in cost of raw materials

13. The balance between supply and demand for steelmaking raw materials has been tight since 2003 because of strong growth in demand for steel in China and other countries worldwide. Furthermore, unlike in the past, only a few companies in the world produce steelmaking materials, giving these companies greater control over prices and pushing up prices of iron ore and coking coal. In the post-war era, Japan has taken many actions to maintain a reliable supply of iron ore. For example, Japanese companies have developed an iron ore mine in India and signed long-term contracts with producers in Brazil and Australia. But the recent surge in spot prices has prompted producers to demand price increases in annual reviews even for long-term contracts. At the 2008 price negotiations, Japan's steelmakers and Brazil's Vale agreed to a 65% increase in the price of iron ore compared with the 2007 price. The following June, Baosteel, China's largest steelmaker, and Rio Tinto reached an agreement to hike the price of Australian iron ore by 79.9% for fines and 96.5% for lump ore. Japan's steelmakers were forced to accept the same price increases. These events demonstrate that Japan's influence on prices has weakened along with the decrease of country's global share of iron ore and coking coal imports.

14. Prices of scrap, rare-earth metals and other secondary raw materials have also increased significantly. But prices on the scrap market started falling in the second half of 2008.







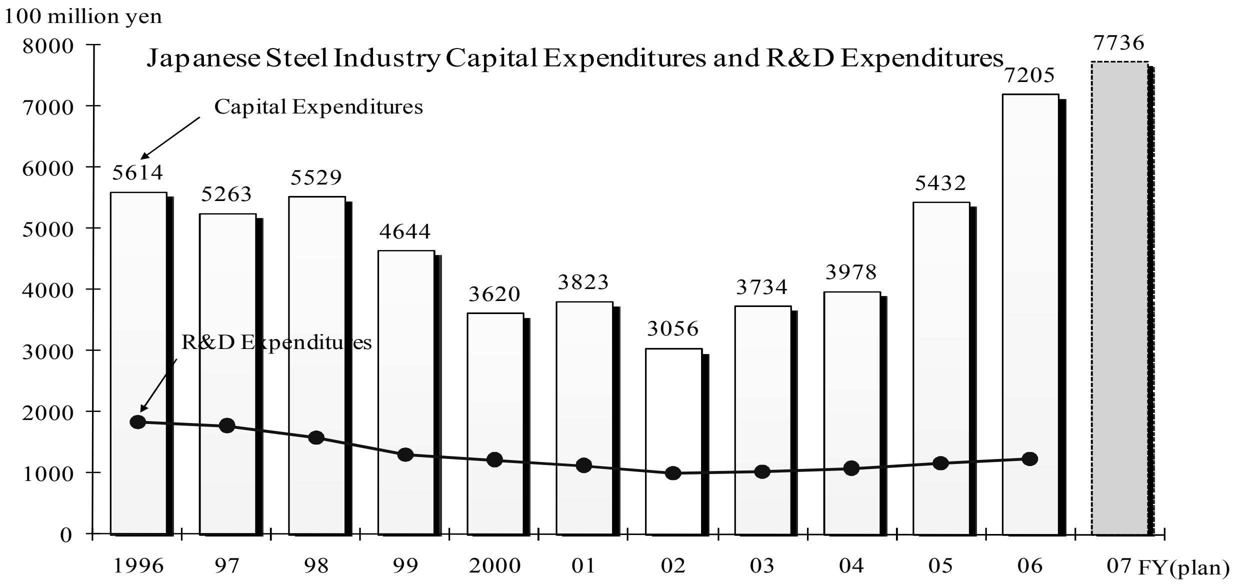
15. The price of iron ore in fiscal 2007 was about three times higher than in 2002 and coking coal was about twice as expensive as in fiscal 2003. Media reports estimate that higher prices of raw materials raised expenses in the Japanese steel industry by a cumulative ¥3,600 billion for the period between fiscal 2003 and 2007. Furthermore, the volume of maritime trading has grown in tandem with the global economy. This has created a tight supply of capacity on ships and raised the price of chartering vessels.

16. Steelmakers have been dedicated to fulfilling their obligation to supply the steel required by steel-consuming industries, which had been performing relatively well as was explained earlier. But these steep increases in expenses have exceeded the ability of steelmakers to absorb higher costs through their own cost-cutting measures. As a result, steelmakers have been forced to revise prices of steel products.

Earnings in the Japanese steel industry

17. Earnings at Japanese steelmakers briefly rebounded in the bubble period of 1990s. However, earnings subsequently fell along with a big drop in the prices of steel products. In response, companies conducted rigorous programs improve their profit structures by cutting costs and taking other actions. Concurrently, progress was made in building a sounder base for the entire Japanese steel industry, such as by using R&D investments to manufacture products with more added value. These initiatives produced an improvement in earnings throughout the industry over the past several years as Japanese manufacturers expanded operations along with growth in the global economy.

18. Looking at recent performance, sales at Japan's four major blast furnace steelmakers have increased in fiscal 2007 but net income as a percentage of sales has declined due to the higher cost of raw materials. There are concerns about a further downturn in earnings in the first half of fiscal 2008. The primary causes are a large increase in ocean freight rates and a further increase in prices of raw materials.



Earnings at Japan's Big Four Steelmakers

	FY2004	FY2005	FY2006	FY2007
Crude Steel Production (thousand MT)	72,749	73,256	76,316	79,630
Steel Products Shipment (thousand MT)	71,243	69,642	73,519	76,808
Sales (billion yen)	5,461	6,518	6,805	7,484
Net Profit (% to Sales)	6.5	10.4	10.4	8.6

Source: Securities reports

The Japan steel industry's measures against costly raw materials

19. Japan's steel industry is taking the following actions in response to the rapid increase in the cost of raw materials.

Participation into resource development operations

20. Japan's major trading companies and manufacturers are working with large iron ore producers to develop mines in Australia. One trading company has purchased additional rights from a company that produces iron ore and other minerals in South Africa. As these actions show, makers and trading companies in Japan's steel industry are increasing their efforts to maintain a reliable supply of raw materials for making steel. New business models are emerging, too. One large Japanese steelmaker plans to build a steel mill in Brazil. The mill is to use iron ore from a mine purchased by an equity-method affiliate of this steelmaker.

Use of inexpensive raw materials (development of technologies needed to use these materials)

21. All blast furnace steelmakers are working on the development of technologies that will permit altering the composition of raw materials. The objective is to use low-grade ore, iron ore fines and other inexpensive raw materials to produce steel of the same quality as when using expensive raw materials.

Measures against control of resource supplies by a few companies

22. When demand for iron ore was weak during the 1990s, the number of iron ore producers in the world declined steadily. Currently, only three companies supply about 80% of the world's iron ore: Vale (Brazil), Rio Tinto (United Kingdom) and BHP Billiton (Australia). As a result, there is already an oligopoly in the iron ore market. Recently, BHP Billiton, the third-largest iron ore producer, has announced its intention of purchasing Rio Tinto, which ranks second. If this is allowed to happen, a single enormous company will supply about 40% of the world's iron ore. Only two companies, this combined company and Vale, the largest producer, would then account for about 80% of global iron ore production.

23. Japan's steel industry has been steadfast in its opposition to this acquisition. This opposition includes appeals to government agencies that ensure fair competition in Japan, EU and other countries. In November 2007, in a statement from its chairman, JISF announced its strong opposition to the integration of BHP Billiton and Rio Tinto. JISF stated that the integration would further concentrate the iron ore market in a few companies and possibly prevent the market's price determination mechanism from functioning. In December, JISF sent statements opposing the integration to European Commissioner for Competition Neelie Kroes, and Australian Competition and Consumer Commission Chairman Graeme Samuel. In March 2008, JISF asked the Japan Fair Trade Commission to take the actions needed to preserve fair competition in the iron ore and coking coal markets.

24. On September 2, the Japan Fair Trade Commission announced that it would begin proceedings for interrogatories based on the Anti-Monopoly Law. On September 17, in response to BHP Billiton's refusal to accept delivery of the interrogatories (service by consular), the commission announced that it would proceed with another order procedure (service by publication).

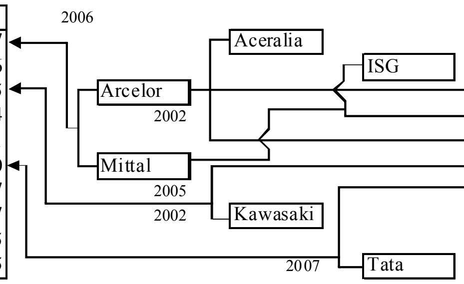
25. The Japanese steel industry will continue to cooperate with the investigations of agencies in Japan and other countries regarding this proposed acquisition. The industry will also ask that appropriate actions be taken. In addition, we will ask the steel industries of other countries to encourage government agencies to oppose the integration of BHP Billiton and Rio Tinto.

Realignment of the Steel Industry and Major Users and Suppliers

Top 10 Steelmakers of 2007

(million tons, %)

			2007	share
1	ArcelorMittal	Luxembourg	116.40	8.7
2	Nippon Steel	Japan	34.50	2.6
3	JFE Steel	Japan	33.80	2.5
4	Posco	S. Korea	32.78	2.4
5	Shanghai Baosteel	China	28.58	2.1
6	Tata Steel	India	26.52	2.0
7	Jiangsu Shagang	China	22.89	1.7
8	Tangshan	China	22.75	1.7
9	US Steel	USA	20.54	1.5
10	Wuhan	China	20.19	1.5



Top 10 Steelmakers of 2000

(million tons)

		2007
Nippon Steel	Japan	29.07
Posco	S. Korea	28.48
Arbed Group	Luxembourg	24.10
LNM Group	Netherland	22.44
Usinor	France	21.00
NKK	Japan	20.56
Corus	UK	19.98
Thyssen Krupp	Germany	18.00
Shanghai Baosteel	China	17.72
Riva Group	Italy	15.57

Source: Metal Bulletin

Note: Market shares: Calculated on the basis of IISI's global steel production statistics for 1997