



Our Steel, Your Future

Yamato

Yamato Kogyo Co., Ltd.

**FY2022/3
FACT BOOK**

May, 2022

TSE Prime Market (Securities Code: 5444)

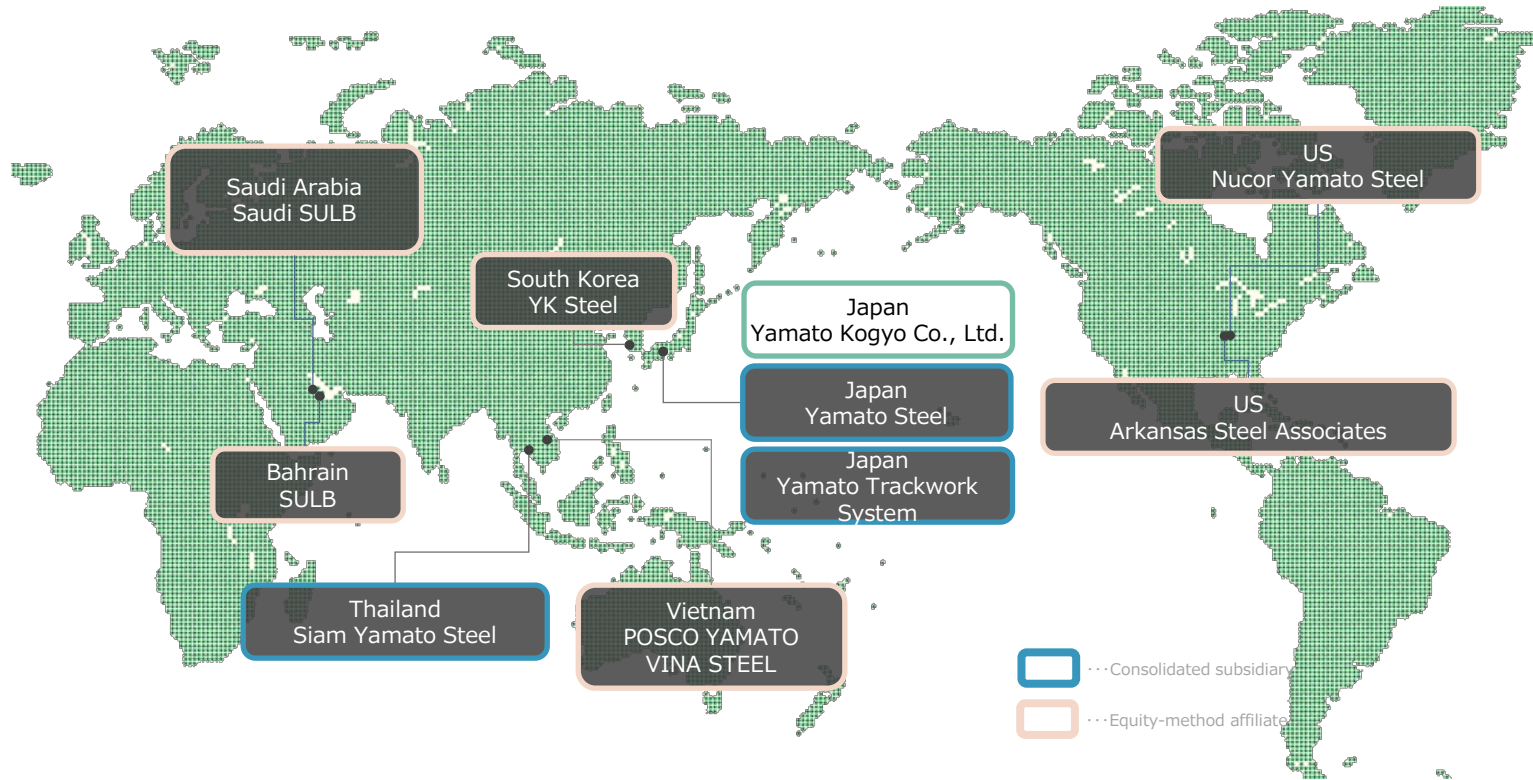
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Yamato Kogyo

Yamato Kogyo Group Overview

- ◆ Manufactures and sells steel products in seven countries in the world, with a focus on steel products for construction
- ◆ The Group's total crude steel production is 6.52 million tons(FY 2022/3), making it one of the top producers of section steel.
- ◆ The majority of ordinary profit is generated outside Japan, and the ordinary profit margin has been above 10% for nine consecutive years since FY2014/3.

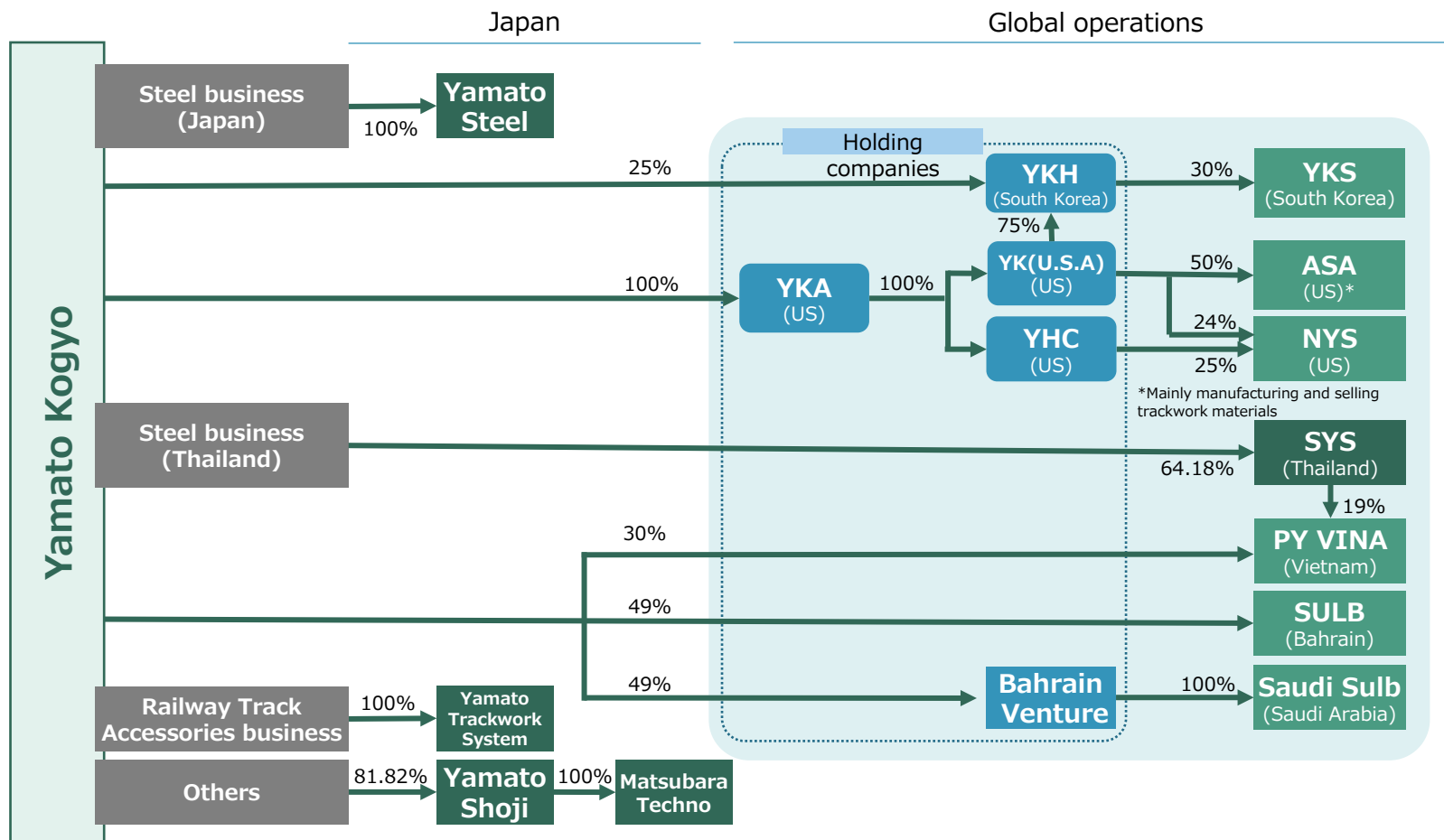


List of Group Companies

Company name		Country	Location	Investment ratio	JV partner	Main products	Long steel production capacity (Rolling capacity)
<Consolidated subsidiaries>							
Yamato Steel	“Mother Factory” supporting overseas operations	 Japan	Himeji City, Hyogo	100%	-	Section steel	700K tons
Yamato Trackwork System	Integrated manufacturer of trackwork materials	 Japan	Himeji City, Hyogo	100%	-	Trackwork materials	-
Siam Yamato Steel (SYS)	Thailand’s largest section steel manufacturer	 Thailand	Bangkok	64.18%	Siam Cement Mitsui & Co. Sumitomo Corporation	Section steel	1,100K tons
<Equity-method affiliates>							
Nucor Yamato Steel (NYS)	Section steel market leader in North America	 US	Blytheville, Arkansas	49%	Nucor	Section steel	2,300K tons
Arkansas Steel (ASA)	Tie plate leading supplier in North America	 US	Newport, Arkansas	50%	Sumitomo Corporation	Tie plates	-
YK Steel* (YKS)	One of the three major rebar manufacturer groups in South Korea	 South Korea	Saha District, Busan Metropolitan City	30%	Daehan Steel	Steel bars (rebar)	850K tons
SULB	Top-class manufacturer of section steel in the Middle East and Gulf countries	 Bahrain	Manama	49%	Foulath	Section steel	600K tons
Saudi Sulb		 Saudi Arabia	Jubail	49%	Foulath	Section steel	400K tons
POSCO YAMATO VINA STEEL (PY VINA)	Vietnam’s sole H-beam manufacturer	 Vietnam	Phu My, Ba Ria-Vung Tau Province	49%	POSCO	Section steel	500K tons

* We, Yamato Kogyo decreased the equity ratio in Aug 2021 aiming to strengthen ties between YKS and Daehan Steel. [Change of equity ratio from Yamato:Daehan= 49%:51%, to Yamato:Daehan = 30%: 70%.]

Corporate Structure



Yamato Kogyo

Changes in Major Performance Indicators (1)

(Million yen)	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3	FY2023/3 Estimate
Net Sales	158,923	193,630	187,451	150,978	142,136	176,073	201,299	181,964	136,025	150,029	193,000
Operating profit	5,472	8,506	6,993	11,215	10,739	8,340	9,272	11,333	10,018	13,290	14,000
Equity in earnings (losses) of affiliates	7,887	10,169	13,984	10,299	8,376	7,041	17,069	7,744	8,521	40,348	-
Ordinary profit	13,531	19,691	22,663	23,585	21,519	17,828	31,469	23,125	21,569	57,646	79,000
Net profit	7,681	9,532	13,377	12,994	11,319	12,238	22,793	14,762	4,984	39,917	56,000
EBITDA*	19,473	26,104	28,130	28,285	25,046	21,827	33,194	26,341	25,209	59,429	-
Ordinary profit margin	8.5%	10.2%	12.1%	15.6%	15.1%	10.1%	15.6%	12.7%	15.9%	38.4%	40.9%
CAPEX*	7,732	3,313	4,905	3,636	5,940	8,991	10,702	9,780	6,464	3,606	5,400
Depreciation and Amortization	5,755	7,070	6,749	6,412	5,572	6,087	6,494	7,085	6,568	5,687	5,900
Operating CF	13,566	16,932	22,744	33,386	19,178	13,751	24,393	26,105	27,042	11,457	-
Investment CF (excl. change in time deposits)	- 7,241	- 2,056	- 5,154	- 8,903	- 7,996	- 18,251	- 10,237	- 20,803	- 11,216	-6,215	-
FCF*	6,325	14,876	17,590	24,483	11,182	- 4,500	14,156	5,302	15,826	5,241	-
Financial CF	- 6,972	- 5,540	- 4,517	- 7,582	- 5,426	- 3,903	- 3,949	- 6,694	- 9,937	-15,904	-
Net assets	211,949	259,682	304,622	308,068	309,198	320,073	333,692	342,606	325,797	375,686	-
Total assets	256,006	310,236	351,952	347,051	348,951	367,083	384,068	383,025	359,788	414,928	-
Financial assets*	68,033	91,863	117,779	131,887	135,098	128,008	135,735	130,558	132,314	135,583	-

*EBITDA = Operating profit + Depreciation and Amortization + Goodwill amortization + Equity in earnings (losses) of affiliates

*CAPEX = Increase in tangible fixed assets and intangible fixed assets

*FCF = Operating CF + Investment CF (excl. change in time deposits)

*Financial assets = Cash and deposits + Investment securities (excl. those for unconsolidated subsidiaries and affiliates) + Long-term deposits

Yamato Kogyo

Changes in Major Performance Indicators (2) Quarterly

(Million yen)	FY2019/3				FY2020/3				FY2021/3				FY2022/3			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Net Sales	46,729	51,084	51,782	51,704	48,316	50,286	41,400	41,962	38,246	45,990	24,520	27,269	32,805	34,887	40,014	42,323
Operating profit	2,086	2,438	2,083	2,665	2,981	3,986	2,549	1,817	3,077	3,755	1,858	1,328	1,616	2,137	4,777	4,759
Equity in earnings (losses) of affiliates	4,070	4,396	4,613	3,990	3,349	2,592	757	1,046	3,571	1,382	2,694	874	6,253	10,089	12,458	11,546
Ordinary profit	8,088	8,244	7,464	7,673	7,061	7,769	4,590	3,705	7,474	5,487	4,546	4,062	8,303	12,813	18,505	18,023
Net profit	6,392	6,004	5,067	5,330	4,676	5,420	2,644	2,022	5,138	-3,198	2,934	110	5,532	9,309	12,980	12,093
EBITDA*	7,694	8,434	8,331	8,735	8,040	8,309	5,095	4,897	8,381	7,049	5,996	3,783	9,273	13,649	18,645	17,758
Ordinary profit margin	17.3%	16.1%	14.4%	14.8%	14.6%	15.4%	11.1%	8.8%	19.5%	11.9%	18.5%	14.9%	25.3%	36.7%	46.2%	42.6%
Operating CF	3,241	8,146	5,745	7,261	5,467	10,504	-1,555	11,689	11,708	7,181	5,643	2,510	7,596	-3,347	616	6,591
Investment CF (excl. change in time deposits)	-1,846	-2,619	-2,213	-3,559	-1,934	-4,423	-1,806	-12,640	-1,973	-4,029	-1,767	-3,447	-3,149	-1,737	338	-1,669
FCF*	1,395	5,527	3,532	3,702	3,533	6,081	-3,361	-951	9,735	3,152	3,876	-937	4,447	-5,085	955	4,922
Financial CF	-2,133	-151	-1,519	-146	-3,078	-253	-3,046	-317	-3,647	-1,880	-4,160	-250	-5,963	-1,691	-7,882	-366
Net assets	312,253	324,191	334,763	333,692	336,643	336,578	336,124	342,606	335,756	332,589	325,270	325,797	340,221	347,364	352,467	375,686
Total assets	358,710	370,098	382,263	384,068	385,414	380,598	377,689	383,025	375,709	362,149	358,901	359,788	375,656	382,196	390,743	414,928
Financial assets*	121,796	131,887	134,603	135,735	136,118	139,005	132,654	130,558	134,699	135,563	133,485	132,314	137,719	131,072	125,404	135,583

*EBITDA = Operating profit + Depreciation and Amortization + Goodwill amortization + Equity in earnings (losses) of affiliates

*FCF = Operating CF + Investment CF (excl. change in time deposits)

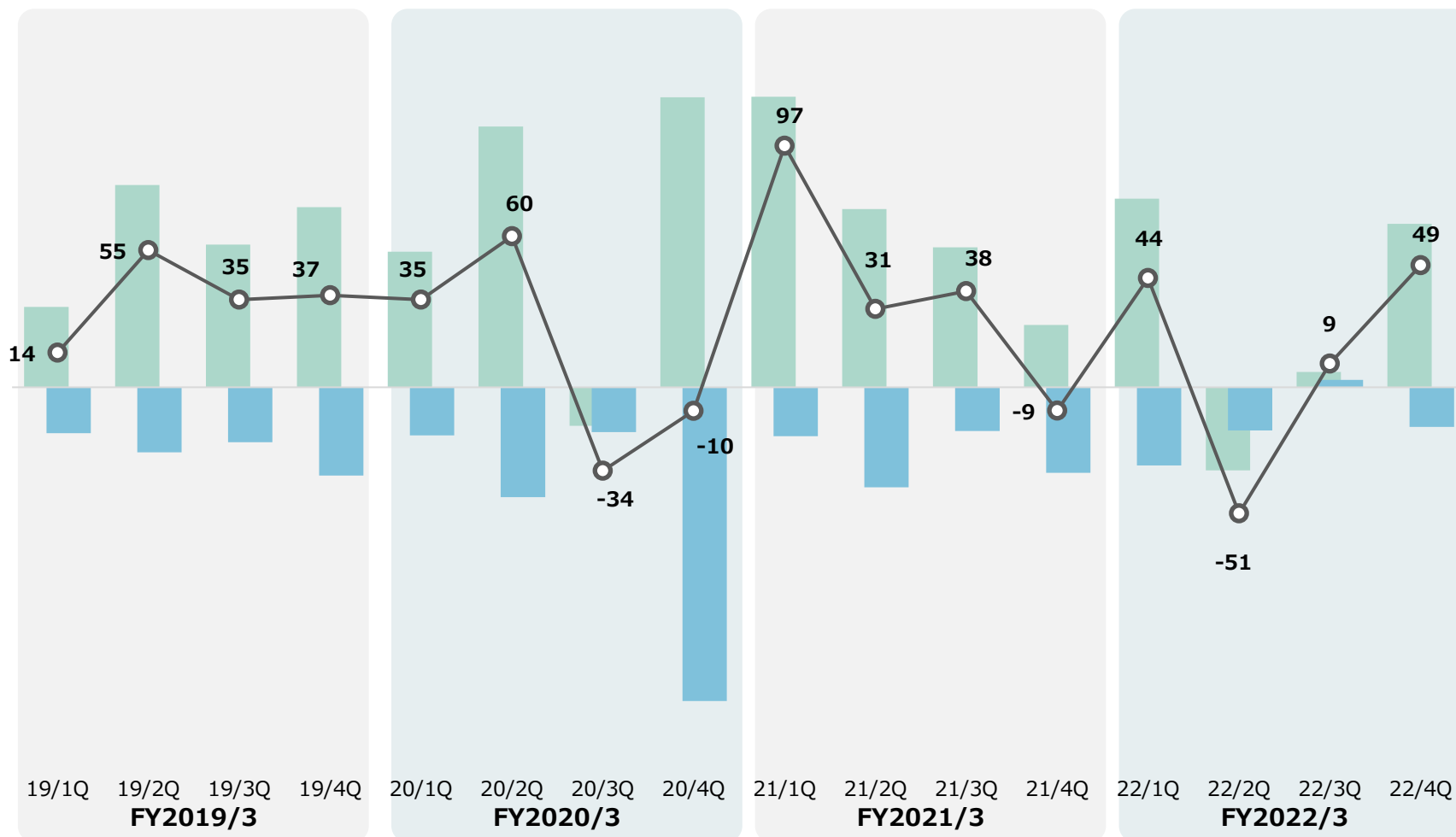
*Financial assets = Cash and deposits + Investment securities (excl. those for unconsolidated subsidiaries and affiliates) + Long-term deposits

The State of Cash Flow, Quarterly

Changes in FCF*

(100 million yen)

Operating CF Investment CF (excl. change in time deposits) FCF*



Yamato Kogyo

Changes in Performance by Segment (1)

(Million yen)	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
<Japan: Yamato Steel>											
Net Sales	43,157	37,820	52,263	47,625	40,762	40,614	47,702	54,019	47,552	39,927	57,354
Operating profit	1,851	1,418	3,254	4,848	5,943	4,495	3,409	5,508	6,161	3,226	2,346
Depreciation and Amortization	1,879	1,580	1,361	1,237	1,174	1,190	1,283	1,292	1,381	1,278	1,288
EBITDA*	3,730	2,998	4,615	6,085	7,117	5,685	4,692	6,800	7,542	4,504	3,634
EBITDA margin	8.6%	7.9%	8.8%	12.8%	17.5%	14.0%	9.8%	12.6%	15.9%	11.3%	6.3%
<Thailand: SYS>											
Net Sales	59,143	64,323	77,648	77,706	59,790	53,153	65,964	77,265	66,882	52,136	82,452
Operating profit	3,453	4,425	9,303	6,339	5,917	5,863	3,963	4,155	5,268	5,648	12,724
Depreciation and Amortization	2,108	2,049	2,496	2,690	2,869	2,766	3,192	3,594	3,959	3,841	3,860
Goodwill amortization	359	359	359	359	359	359	359	359	179	-	-
EBITDA*	5,920	6,833	12,158	9,388	9,145	8,988	7,514	8,108	9,406	9,489	16,584
EBITDA margin	10.0%	10.6%	15.7%	12.1%	15.3%	16.9%	11.4%	10.5%	14.1%	18.2%	20.1%
<South Korea: YKS>											
FY2021/3: Results of 8 months from January to August (Changed from a consolidated subsidiary to an equity-method affiliate in September)											
Net Sales	50,183	49,810	57,102	55,285	44,536	42,044	58,389	61,656	59,703	33,851	-
Operating profit	227	-329	-3,549	-3,695	56	1,140	2,728	710	1,735	2,507	-
Depreciation and Amortization	1,022	1,856	2,972	2,508	2,083	1,376	1,388	1,135	1,307	890	-
EBITDA*	1,249	1,527	-577	-1,187	2,139	2,516	4,116	1,845	3,042	3,397	-
EBITDA margin	2.5%	3.1%	-1.0%	-2.1%	4.8%	6.0%	7.0%	3.0%	5.1%	10.0%	-

*EBITDA = Operating profit + Depreciation and Amortization + Goodwill amortization

Yamato Kogyo

Changes in Performance by Segment (2)

<Railway Track Accessories business>

(Million yen)	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
Net Sales	5,126	6,690	6,346	6,573	5,623	6,039	3,717	8,065	7,518	8,048	7,179
Operating profit	741	1,211	987	979	714	967	20	815	636	836	532
Depreciation and Amortization	217	163	137	210	192	152	139	386	334	352	344
EBITDA*	958	1,374	1,124	1,189	906	1,119	159	1,201	970	1,188	877
EBITDA margin	18.7%	20.5%	17.7%	18.1%	16.1%	18.5%	4.3%	14.9%	12.9%	14.8%	12.2%

*EBITDA = Operating profit + Depreciation and Amortization + Goodwill amortization

Yamato Kogyo

Changes in Performance by Segment (3) Quarterly

(Million yen)	FY2019/3				FY2020/3				FY2021/3				FY2022/3			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<Japan: Yamato Steel>																
Net Sales	13,150	13,354	13,884	13,631	12,940	12,411	11,495	10,706	9,250	10,236	10,017	10,424	11,566	13,357	15,944	16,485
Operating profit	1,389	1,390	1,178	1,551	1,459	1,621	1,714	1,367	1,098	880	771	477	158	347	913	927
<Thailand: SYS>																
Net Sales	18,188	18,992	20,680	19,405	18,558	18,429	15,236	14,659	14,935	11,179	12,146	13,876	18,770	18,709	21,615	23,357
Operating profit	871	1,172	1,057	1,055	1,184	1,785	1,472	827	1,607	1,415	1,412	1,214	1,826	2,083	4,360	4,453
<South Korea: YKS>																
FY2021/3 2Q: Results of 5 months from April to August (Changed from a consolidated subsidiary to an equity-method affiliate in September)																
Net Sales	13,717	16,635	14,934	16,370	15,124	17,250	12,938	14,391	11,800	21,955	-	-	-	-	-	-
Operating profit	99	39	258	314	833	858	-121	165	682	1,843	-	-	-	-	-	-
<Railway Track Accessories business>																
Net Sales	1,601	2,029	2,208	2,227	1,618	2,118	1,651	2,131	1,757	2,222	2,059	2,010	1,593	2,092	1,704	1,788
Operating profit	190	297	91	237	44	241	92	259	190	230	251	165	131	260	139	1

Yamato Kogyo

Changes in Sales by Location (1)

	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
<Japan: Yamato Steel>											
Sales volume (10K tons)	52.6	51.5	66.1	56.6	53.9	57.6	60.7	60.4	53.7	49.7	56.3
Metal spread (K yen/ton)	37.1	35.4	37.5	45.1	47.2	39.8	40.4	48.9	54.4	44.7	43.2
<Thailand: SYS>											
Sales volume (10K tons)	87.1	96.8	101.6	100.3	81.6	92.0	96.7	98.2	85.1	71.9	87.3
Metal spread (K B/ton)	11.5	12.3	12.6	12.0	12.6	11.1	10.5	11.4	12.7	12.5	14.2
<South Korea: YKS>											
FY2021/3: Results of 8 months from January to August (Changed from a consolidated subsidiary to an equity-method affiliate in September)											
Sales volume (10K tons)	79.1	85.8	90.5	86.0	76.0	86.5	97.2	93.0	95.1	60.5	-
Metal spread (10K W/ton)	28.1	29.9	27.6	27.1	29.3	25.8	27.8	27.6	31.8	32.3	-

Yamato Kogyo

Changes in Sales by Location (2) Quarterly

	FY2019/3				FY2020/3				FY2021/3				FY2022/3			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<Japan: Yamato Steel>																
Sales volume (10K tons)	15.1	14.9	15.3	14.9	14.1	13.9	13.2	12.5	11.5	13.1	12.6	12.3	12.9	13.7	15.1	14.7
Metal spread (K yen/ton)	46.8	47.5	48.5	52.9	52.6	55.6	56.0	53.6	50.5	46.0	42.8	39.3	37.2	40.8	44.9	48.4
<Thailand: SYS>																
Sales volume (10K tons)	23.6	24.3	25.9	24.2	23.1	23.3	19.1	19.4	20.6	15.5	16.8	18.8	24.1	21.0	20.9	21.4
Metal spread (K B/ton)	10.8	11.3	11.2	12.1	12.3	12.8	13.3	12.3	12.5	13.3	12.4	11.7	11.1	12.3	17.2	16.9
<South Korea: YKS>																
FY2021/3 2Q: Results of 5 months from April to August (Changed from a consolidated subsidiary to an equity-method affiliate in September)																
Sales volume (10K tons)	21.0	25.6	22.6	23.6	22.3	26.8	21.1	24.8	21.0	39.4	-	-	-	-	-	-
Metal spread (10K W/ton)	26.7	27.2	27.0	29.8	32.4	31.2	32.4	31.4	31.9	32.4	-	-	-	-	-	-

Yamato Kogyo Group

Changes in Sales by Steel Product Type & Group's total sales volume

Group total	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
Net Sales by steel product type (%)											
H-beam	67.4	64.6	64.7	63.3	62.0	62.1	60.1	61.8	60.2	64.5	68.4
Rebar	19.4	19.6	19.0	18.2	17.6	18.8	20.7	18.7	20.7	18.7	16.5
Sheet pile	2.6	3.0	3.1	3.9	3.9	4.3	5.4	5.8	4.9	4.2	3.3
Angle	1.0	3.1	3.3	4.3	4.8	3.9	3.7	3.6	4.9	3.7	3.8
Others	9.6	9.7	9.9	10.3	11.7	10.9	10.1	10.1	9.3	8.9	8.0
The Group's total Sales volume (incl. semi-finished products, DRI, and inter-group transactions; in 10K tons)	423.5	449.0	520.0	578.2	504.8	539.1	545.1	602.7	563.1	564.6	652.8
The Group's shareholding-ratio-based Sales volume (incl. semi-finished products, DRI, and inter-group transactions; in 10K tons)	293.7	308.6	351.9	371.5	326.3	351.9	362.8	389.0	365.0	344.0	352.2

Group companies

Changes in Sales by Steel Product Type (1)

	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
<Yamato Steel: %>											
H-beam	86	84	86	80	80	83	82	78	80	80	86
Channel	5	4	3	4	4	3	3	2	2	2	2
Sheet pile	4	7	7	11	12	10	11	14	13	12	8
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H-beam	95	94	94	93	92	91	91	92	90	91	93
Sheet pile	2	3	3	4	5	6	6	6	8	6	5
Channel	1	1	2	2	2	2	2	1	1	1	1
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H-beam	84	83	84	80	79	76	72	70	74	75	78
Sheet pile	5	6	4	6	6	7	11	11	5	5	5
Angle	2	4	3	4	4	4	8	8	11	9	5
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Tie plate	99	99	100	99	100	100	100	100	99	99	99
<YKS: %>											
Rebar	100	100	100	100	100	100	100	100	100	100	100
<PY VINA: %>											
H-beam	-	-	-	-	-	-	-	-	-	97	99
Sheet pile	-	-	-	-	-	-	-	-	-	2	1

Group companies

Changes in Sales by Steel Product Type (2)

	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
<SULB: %>											
H-beam	-	-	70	82	80	84	85	86	86	82	85
I-beam	-	-	25	12	13	10	10	11	11	12	10
Angle	-	-	5	6	7	6	5	3	3	5	5

	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
<Saudi Sub: %>											
H-beam	42	42	39	37	39	46	45	44	40	49	35
Angle	33	42	48	53	50	40	36	40	43	33	50
Channel	23	9	7	5	7	10	12	12	9	14	10



H-beam



Angle



Rebar



Sheet pile



Tie plate

Steel Business Environment in Japan

Japan's Macro Statistics & Crude Steel Production/Consumption Statistics

(K tons, K people, K households, M m ²)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth rate	0.0%	1.4%	2.0%	0.3%	1.6%	0.8%	1.7%	0.6%	-0.2%	-4.5%	1.6%
Population	128,499	128,424	128,314	128,169	127,985	127,763	127,503	127,202	126,860	126,476	-
New housing starts	841	893	987	880	920	974	946	952	883	812	865
Floor area of construction starts	127	135	148	130	129	132	134	131	127	113	122
Crude steel production	107,601	107,232	110,595	110,666	105,134	104,775	104,661	104,319	99,284	83,186	-
Electric furnace included above	24,858	24,925	24,915	25,679	24,053	23,262	25,318	26,088	24,301	21,140	-
% of electric furnace	23.1%	23.2%	22.5%	23.2%	22.9%	22.2%	24.2%	25.0%	24.5%	25.4%	-
Hot rolled steel production	94,832	94,807	96,965	97,882	93,020	92,636	92,441	92,440	87,714	73,765	-
Crude steel self-sufficiency rate	113.5%	113.1%	114.1%	113.1%	113.0%	113.1%	113.2%	112.9%	113.2%	112.8%	-
Exports of Semi-finished and Finished Steel Products	40,656	41,458	42,502	41,346	40,804	40,505	37,471	35,839	33,127	29,823	-
Imports of Semi-finished and Finished Steel Products	5,563	5,733	5,413	6,733	5,918	6,014	6,233	6,040	6,455	5,065	-
Apparent consumption of crude steel (Product-based)	64,100	63,950	65,240	67,690	62,950	62,171	64,380	65,410	63,210	52,630	-
Per capita consumption	499	498	508	528	492	487	505	514	498	416	-
Real consumption of steel materials	43,767	44,032	48,113	52,117	48,336	46,932	50,298	51,537	49,360	-	-
Per capita real consumption	341	343	375	407	378	367	394	405	389	-	-
Steel material self-sufficiency rate	216.7%	215.3%	201.5%	187.8%	192.4%	197.4%	183.8%	179.4%	177.7%	-	-
YSC											
(K tons)	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
Crude steel production	611	598	747	638	614	668	681	685	603	580	639
Finished steel product sales	526	515	661	566	539	577	607	604	538	497	563
Estimated domestic production share of H-beams	13.6%	12.1%	13.4%	11.7%	11.2%	11.1%	12.9%	12.6%	12.0%	12.3%	-

(Source) Real GDP growth rate: International Monetary Fund World Economic Outlook, October 2021

Population: United Nations, Department of Economic and Social Affairs, Population Division (2019) World Population Prospects 2019, Online Edition. Rev. 1

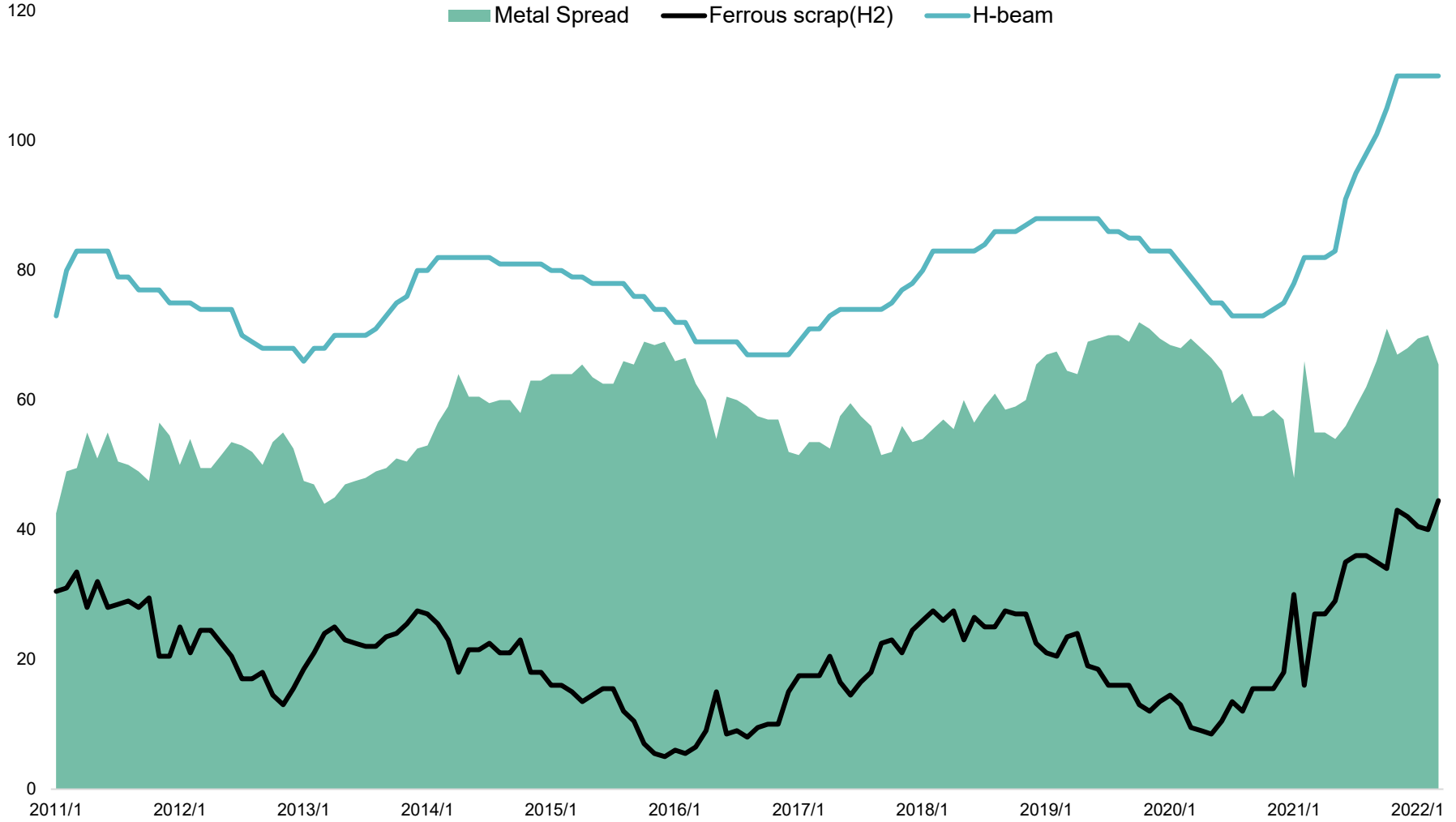
Apparent consumption of crude steel, crude steel production, etc.: World Steel Association "STEEL STATISTICAL YEARBOOK 2021"

New housing starts, floor area of construction starts: "Building Starts" by Ministry of Land, Infrastructure, Transport and Tourism

Competitive Environment Data by Country - Japan

Market Price Trends of H-beam and Ferrous Scrap (H2)

(K yen/ton, monthly initial price)



(Note) According to Sangyo Press Co., Ltd. : Tokyo area, prices if brought in to wholesaler's yard, main unit prices, based on the date of publication in Japan Metal Bulletin.

Business Environment by Country

(Source)

Real GDP growth rate: International Monetary Fund World Economic Outlook, October 2021

Population: United Nations, Department of Economic and Social Affairs, Population Division (2019) World Population Prospects 2019, Online Edition. Rev. 1.

Apparent consumption of crude steel, crude steel production, etc.: World Steel Association "STEEL STATISTICAL YEARBOOK 2021"

(Definition)

Crude steel self-sufficiency rate = Crude steel production / Hot rolled steel production

Steel material self-sufficiency rate = Hot rolled steel production / Real consumption of steel materials

Thailand

(K tons, K people)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth rate	0.8%	7.2%	2.7%	1.0%	3.1%	3.4%	4.1%	4.2%	2.4%	-6.1%	1.6%
Population	67,518	67,836	68,145	68,439	68,715	68,971	69,210	69,428	69,626	69,800	-

Crude steel production	4,256	3,641	3,613	5,835	5,069	5,400	6,762	6,403	4,246	4,467	-
Electric furnace included above	4,238	3,328	3,579	4,095	3,718	3,825	4,471	6,403	4,246	4,467	-
% of electric furnace	99.6%	91.4%	99.1%	70.2%	73.3%	70.8%	66.1%	100.0%	100.0%	100.0%	-
Hot rolled steel production	6,936	6,721	7,070	8,710	3,841	9,542	9,318	9,032	7,799	7,156	-
Crude steel self-sufficiency rate	61.4%	54.2%	51.1%	67.0%	132.0%	56.6%	72.6%	70.9%	54.7%	62.4%	-
Exports of Semi-finished and Finished Steel Products	1,599	1,569	1,504	1,414	1,254	1,460	1,853	1,916	1,654	1,224	-
Imports of Semi-finished and Finished Steel Products	12,498	15,183	15,866	15,081	14,628	17,605	14,486	15,468	16,745	10,752	-

Apparent consumption of steel materials (Product-based)	14,518	16,380	17,829	19,248	18,149	20,777	19,038	19,200	18,467	16,286	-
Per capita consumption	215	241	262	281	264	301	275	277	265	233	-
Real consumption of steel materials	13,307	15,456	16,644	17,431	16,500	18,664	16,947	17,117	17,102	-	-
Per capita real consumption	197	228	244	255	240	271	245	247	246	-	-
Steel material self-sufficiency rate	52.1%	43.5%	42.5%	50.0%	23.3%	51.1%	55.0%	52.9%	45.6%	-	-

SYS

	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
Crude steel production	936	1,031	1,088	1,060	821	976	1,023	1,040	918	754	964
Finished steel product sales	871	969	1,017	1,003	816	921	968	983	851	720	860
Estimated domestic share	100.0%	100.0%	100.0%	98.7%	91.0%	91.0%	99.8%	99.2%	95.0%	88.0%	91.0%

South Korea

(K tons, K people)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth rate	3.7%	2.4%	3.2%	3.2%	2.8%	2.9%	3.2%	2.9%	2.0%	-0.9%	4.0%
Population	49,786	50,061	50,346	50,608	50,823	50,983	51,096	51,172	51,225	51,269	-
Crude steel production	68,519	69,073	66,061	71,543	69,670	68,576	71,030	72,464	71,412	67,079	-
Electric furnace included above	26,377	25,955	25,768	24,197	21,171	21,055	23,354	24,183	22,696	20,820	-
% of electric furnace	38.5%	37.6%	39.0%	33.8%	30.4%	30.7%	32.9%	33.4%	31.8%	31.0%	-
Hot rolled steel production	66,473	66,317	64,541	68,905	67,756	67,131	69,557	69,785	68,273	65,752	-
Crude steel self-sufficiency rate	103.1%	104.2%	102.4%	103.8%	102.8%	102.2%	102.1%	103.8%	104.6%	102.0%	-
Exports of Semi-finished and Finished Steel Products	28,866	30,227	28,927	31,906	31,173	30,586	31,355	30,056	29,986	27,619	-
Imports of Semi-finished and Finished Steel Products	22,828	20,402	19,033	22,408	21,674	23,285	19,323	14,928	16,352	11,502	-
Apparent consumption of steel materials (Product-based)	56,391	54,069	51,762	55,521	55,800	57,076	56,313	53,710	53,226	48,964	-
Per capita consumption	1,133	1,080	1,028	1,097	1,098	1,120	1,102	1,050	1,039	955	-
Real consumption of steel materials	35,555	35,133	35,587	39,315	39,708	41,616	41,713	41,302	40,478	-	-
Per capita real consumption	714	702	707	777	781	816	816	807	790	-	-
Steel material self-sufficiency rate	187.0%	188.8%	181.4%	175.3%	170.6%	161.3%	166.8%	169.0%	168.7%	-	-

YKS

	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3
Crude steel production	914	913	853	797	665	692	838	819	888	868	902
Finished steel product sales	792	859	906	860	760	866	973	930	952	901	886

Vietnam

(K tons, K people)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth rate	6.4%	5.5%	5.6%	6.4%	7.0%	6.7%	6.9%	7.1%	7.0%	2.9%	2.6%
Population	88,871	89,802	90,753	91,714	92,677	93,640	94,601	95,546	96,462	97,339	–
Crude steel production	4,900	5,298	5,474	5,847	5,647	7,811	11,473	15,471	17,469	19,900	–
Electric furnace included above	4,900	5,298	4,653	4,385	3,381	4,687	6,310	6,000	4,925	4,800	–
% of electric furnace	100.0%	100.0%	85.0%	75.0%	59.9%	60.0%	55.0%	38.8%	28.2%	24.1%	–
Hot rolled steel production	5,470	5,049	5,123	5,657	7,199	8,657	11,302	14,532	15,401	16,419	–
Crude steel self-sufficiency rate	89.6%	104.9%	106.9%	103.4%	78.4%	90.2%	101.5%	106.5%	113.4%	121.2%	–
Exports of Semi-finished and Finished Steel Products	1,137	1,280	1,383	1,523	1,512	2,537	4,034	5,368	5,213	7,773	–
Imports of Semi-finished and Finished Steel Products	7,869	7,779	9,951	12,359	16,343	19,499	16,222	14,155	15,432	13,634	–
Apparent consumption of steel materials (Product-based)	9,698	109,560	11,769	14,441	18,254	22,328	21,617	22,312	24,313	23,337	–
Per capita consumption	109	122	130	157	197	238	229	234	252	240	–
Real consumption of steel materials	10,393	11,299	12,320	15,211	19,407	23,339	22,692	23,029	25,245	–	–
Per capita real consumption	117	126	136	166	209	249	240	241	262	–	–
Steel material self-sufficiency rate	52.6%	44.7%	41.6%	37.2%	37.1%	37.1%	49.8%	63.1%	61.0%	–	–

PY VINA FY2021/3: Included from 2Q.

(K tons)	FY2012/3	FY2013/3	FY2014/3	FY2015/3	FY2016/3	FY2017/3	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2021/3
Crude steel production	–	–	–	–	–	–	–	–	–	445	576
Finished steel product sales	–	–	–	–	–	–	–	–	–	356	432
Estimated market share*	–	–	–	–	–	–	–	–	–	77.0%	82.0%

*Only for PY VINA production size

(K tons, K people)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth rate	1.6%	2.2%	1.8%	2.5%	3.1%	1.7%	2.3%	3.0%	2.2%	-3.4%	5.7%
Population	311,584	314,044	316,401	318,673	320,878	323,016	325,085	327,096	329,065	331,003	–
Crude steel production	86,398	88,695	86,878	88,174	78,845	78,475	81,612	86,607	87,761	72,732	–
Electric furnace included above	52,107	52,414	52,641	55,174	49,540	52,587	55,824	58,903	61,171	51,380	–
% of electric furnace	60.3%	59.1%	60.6%	62.6%	62.8%	67.0%	68.4%	68.0%	69.7%	70.6%	–
Hot rolled steel production	83,339	87,043	86,567	89,130	78,514	78,502	82,451	86,436	87,251	73,482	–
Crude steel self-sufficiency rate	103.7%	101.9%	100.4%	98.9%	100.4%	100.0%	99.0%	100.2%	100.6%	99.0%	–
Exports of Semi-finished and Finished Steel Products	13,288	13,560	12,508	11,961	10,000	9,247	10,211	8,623	7,271	6,323	–
Imports of Semi-finished and Finished Steel Products	26,590	30,886	29,812	41,369	36,485	30,913	35,366	31,726	27,116	19,880	–
Apparent consumption of steel materials (Product-based)	89,200	96,200	95,700	106,957	96,131	91,861	97,722	99,775	97,613	80,043	–
Per capita consumption	286	306	302	336	300	284	301	305	297	242	–
Real consumption of steel materials	101,604	112,483	113,473	123,691	118,889	115,389	122,150	127,067	125,749	–	–
Per capita real consumption	326	358	359	388	371	357	376	388	382	–	–
Steel material self-sufficiency rate	82.0%	77.4%	76.3%	72.1%	66.0%	68.0%	67.5%	68.0%	69.4%	–	–

Saudi Arabia

(K tons, K people)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth rate	10.0%	5.4%	2.7%	3.7%	4.1%	1.7%	-0.7%	2.4%	0.3%	-4.1%	3.2%
Population	28,268	29,155	30,052	30,917	31,718	32,443	33,101	33,703	34,269	34,814	-
Crude steel production	5,275	5,203	5,471	6,291	5,229	5,461	4,831	5,240	8,191	7,775	-
Electric furnace included above	5,275	5,203	5,471	6,291	5,229	5,461	4,831	5,240	8,191	7,775	-
% of electric furnace	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-
Hot rolled steel production	4,650	4,600	4,900	5,000	5,500	5,000	4,500	7,350	7,550	7,700	-
Crude steel self-sufficiency rate	113.4%	113.1%	111.7%	125.8%	95.1%	109.2%	107.4%	71.3%	108.5%	101.0%	-
Exports of Semi-finished and Finished Steel Products	699	285	247	123	1,129	1,141	1,138	1,775	2,497	1,299	-
Imports of Semi-finished and Finished Steel Products	6,210	8,092	6,664	6,641	6,491	7,355	4,610	3,739	7,945	7,006	-
Apparent consumption of steel materials (Product-based)	12,000	12,540	13,300	14,100	13,500	12,200	11,834	10,263	9,992	10,920	-
Per capita consumption	425	430	443	456	426	376	358	305	292	314	-
Real consumption of steel materials	15,205	16,179	18,400	19,041	18,911	15,842	14,667	12,685	13,722	-	-
Per capita real consumption	538	555	612	616	596	488	443	376	400	-	-
Steel material self-sufficiency rate	30.6%	28.4%	26.6%	26.3%	29.1%	31.6%	30.7%	57.9%	55.0%	-	-

(K tons, K people)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth rate	6.9%	4.5%	5.1%	4.3%	5.1%	3.1%	2.4%	1.2%	1.7%	-6.1%	2.3%
Population	8,947	9,142	9,198	9,214	9,263	9,361	9,487	9,631	9,771	9,890	—
Crude steel production	2,000	2,408	2,878	2,390	3,006	3,149	3,309	3,247	3,327	2,722	—
Electric furnace included above	2,000	2,408	2,878	2,390	3,006	3,149	3,309	3,247	3,327	2,722	—
% of electric furnace	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	—
Hot rolled steel production	1,950	2,156	2,549	2,765	2,959	3,126	3,246	3,167	3,029	2,275	—
Crude steel self-sufficiency rate	102.6%	111.7%	112.9%	86.4%	101.6%	100.7%	101.9%	102.5%	109.8%	119.6%	—
Exports of Semi-finished and Finished Steel Products	949	248	265	860	634	3,404	2,951	2,584	3,802	2,955	—
Imports of Semi-finished and Finished Steel Products	6,115	6,242	5,590	6,647	6,608	7,422	6,501	5,747	5,441	4,933	—
Apparent consumption of steel materials (Product-based)	6,833	7,044	6,820	7,149	7,136	7,833	7,931	8,112	7,591	7,119	—
Per capita consumption	764	771	741	776	770	837	836	842	777	720	—
Real consumption of steel materials	9,145	8,562	8,070	9,158	8,935	9,340	9,735	9,305	8,800	—	—
Per capita real consumption	1,022	937	877	994	965	998	1,026	966	901	—	—
Steel material self-sufficiency rate	21.3%	25.2%	31.6%	30.2%	33.1%	33.5%	33.3%	34.0%	34.4%	—	—

World Total

(M tons, M people)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Real GDP growth rate	4.3%	3.5%	3.5%	3.5%	3.4%	3.3%	3.8%	3.5%	2.8%	-3.1%	6.1%
Population	7,041	7,125	7,210	7,295	7,379	7,464	7,547	7,631	7,713	7,795	-
Crude steel production	1,540	1,562	1,652	1,674	1,623	1,632	1,735	1,827	1,875	1,880	-
Electric furnace included above	456	450	421	437	407	420	481	527	520	491	-
% of electric furnace	29.5%	28.7%	25.4%	25.9%	25.1%	25.5%	27.6%	28.7%	27.9%	26.1%	-
Hot rolled steel production	1,460	1,513	1,623	1,659	1,609	1,589	1,614	1,698	1,751	1,773	-
Exports of Semi-finished and Finished Steel Products	419	416	413	458	467	477	463	457	439	396	-
Imports of Semi-finished and Finished Steel Products	404	402	401	443	453	463	448	444	440	386	-
Apparent consumption of steel materials (Product-based)	1,421	1,447	1,546	1,554	1,509	1,522	1,636	1,711	1,767	1,773	-
Per capita consumption	0.202	0.203	0.214	0.213	0.204	0.204	0.217	0.224	0.230	0.228	-
Real consumption of steel materials	1,331	1,360	1,467	1,463	1,410	1,424	1,537	1,610	1,659	-	-
Per capita real consumption	0.231	0.233	0.249	0.246	0.235	0.235	0.251	0.261	0.266	-	-

Reference

Changes in Apparent Consumption of Steel Products

(K tons)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World total	1,420,596	1,446,825	1,546,575	1,554,542	1,509,116	1,523,545	1,636,363	1,711,988	1,776,680	1,773,844
Japan	64,100	63,950	65,240	67,690	62,950	62,171	64,380	65,410	63,210	52,630
South Korea	56,391	54,069	51,762	55,521	55,800	57,076	56,313	53,710	53,226	48,964
US	89,200	96,200	95,700	106,957	96,131	91,861	97,722	99,775	97,613	80,043
Thailand	14,518	16,380	17,829	19,248	18,149	20,777	19,038	19,200	18,467	16,286
Vietnam	9,698	10,956	11,769	14,441	18,254	22,328	21,637	22,312	24,313	23,337
Saudi Arabia	12,000	12,540	13,300	14,100	13,500	12,200	11,834	10,263	9,992	10,920
UAE	6,833	7,044	6,820	7,149	7,136	7,833	7,931	8,112	7,591	7,119
China	641,223	660,105	741,446	710,768	672,340	681,020	773,840	836,050	911,890	995,040
India	69,788	72,383	73,652	76,050	80,198	83,643	88,680	96,737	102,622	89,333
Taiwan	18,096	17,777	18,571	19,558	17,527	18,277	17,653	17,787	17,615	18,506
Indonesia	10,952	12,500	12,692	12,898	11,375	12,673	13,593	15,083	15,944	15,092
Malaysia	8,238	8,922	10,049	10,079	10,001	10,256	9,443	9,776	9,207	6,813
Philippines	5,108	6,008	6,705	7,325	8,760	9,677	9,819	10,726	10,059	8,662

(Note) Prepared by us based on World Steel Association, "STEEL STATISTICAL YEARBOOK 2021"

Changes in Crude Steel Production

(K tons)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World total	1,539,886	1,562,407	1,652,454	1,674,178	1,623,113	1,631,516	1,735,087	1,826,644	1,875,330	1,880,445
Electric furnace included above	456,081	450,575	421,998	437,270	407,308	419,775	480,642	526,572	519,601	491,716
%	29.5%	28.7%	25.4%	25.9%	24.9%	25.5%	27.5%	28.8%	27.9%	26.1%
Japan	107,601	107,232	110,595	110,666	105,134	104,775	104,661	104,319	99,284	83,186
Electric furnace included above	24,858	24,925	24,915	25,679	24,053	23,262	25,318	26,088	24,301	21,140
%	23.1%	23.2%	22.5%	23.2%	22.9%	22.2%	24.2%	25.0%	24.5%	25.4%
South Korea	68,519	69,073	66,061	71,543	69,670	68,576	71,030	72,464	71,412	67,079
Electric furnace included above	26,377	25,955	25,768	24,197	21,171	21,055	23,354	24,183	22,696	20,820
%	38.5%	37.6%	39.0%	33.8%	30.4%	30.7%	32.9%	33.4%	31.8%	31.0%
US	86,398	88,695	86,878	88,174	78,845	78,475	81,612	86,607	87,761	72,732
Electric furnace included above	52,107	52,414	52,641	55,174	49,540	52,587	55,824	58,903	61,171	51,380
%	60.3%	59.1%	60.6%	62.6%	62.8%	67.0%	68.4%	68.0%	69.7%	70.6%
Thailand	4,256	3,641	3,613	5,835	5,069	5,400	6,762	6,403	4,246	4,467
Electric furnace included above	4,238	3,328	3,579	4,095	3,718	3,825	4,471	6,403	4,246	4,467
%	99.6%	91.4%	99.1%	70.2%	73.3%	70.8%	66.1%	100.0%	100.0%	100.0%
Vietnam	4,900	5,298	5,474	5,847	5,647	7,811	11,473	15,471	17,469	19,900
Electric furnace included above	4,900	5,298	4,653	4,385	3,381	4,687	6,310	6,000	4,925	4,800
%	100.0%	100.0%	85.0%	75.0%	59.9%	60.0%	55.0%	38.8%	28.2%	24.1%
Saudi Arabia	5,275	5,203	5,471	6,291	5,229	5,461	4,831	5,240	8,191	7,775
Electric furnace included above	5,275	5,203	5,471	6,291	5,229	5,461	4,831	5,240	8,191	7,775
%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
China	701,968	731,040	822,000	822,306	803,825	807,609	870,741	929,038	995,419	1,064,767
Electric furnace included above	70,946	64,796	48,444	54,337	47,457	50,928	80,741	99,038	102,528	97,958
%	10.1%	8.9%	5.9%	6.6%	5.9%	6.3%	9.3%	10.7%	10.3%	9.2%

(Note) Prepared by us based on World Steel Association, "STEEL STATISTICAL YEARBOOK 2021"

Changes in Global Real GDP Growth Rate

Released by IMF in October 2021

(%)												Outlook
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
World total	4.3	3.5	3.5	3.5	3.4	3.3	3.8	3.5	2.8	-3.1	5.9	3.6
Japan	-0.1	1.5	2.0	0.4	1.2	0.5	2.2	0.3	0.7	-4.6	2.4	2.4
South Korea	3.7	2.4	3.2	3.2	2.8	2.9	3.2	2.9	2.0	-0.9	4.3	2.5
US	1.6	2.2	1.8	2.5	3.1	1.7	2.3	3.0	2.2	-3.4	6.0	3.7
Thailand	0.8	7.2	2.7	1.0	3.1	3.4	4.1	4.2	2.3	-6.1	1.0	3.3
Vietnam	6.4	5.5	5.6	6.4	7.0	6.7	6.9	7.1	7.0	2.9	3.8	6.0
Saudi Arabia	10.0	5.4	2.7	3.7	4.1	1.7	-0.7	2.4	0.3	-4.1	2.8	7.6
UAE	6.9	4.5	5.1	4.3	5.1	3.1	2.4	1.2	1.7	-6.1	2.2	4.2
Bahrain	2.0	3.7	5.4	4.4	2.5	3.6	4.3	1.8	2.0	-5.1	2.4	3.3
China	9.5	7.9	7.8	7.3	6.9	6.8	6.9	6.8	6.1	2.3	8.0	4.4
India	6.6	5.5	6.4	7.4	8.0	8.3	7.0	6.1	4.2	-7.3	9.5	8.2
Taiwan	3.7	2.2	2.5	4.7	1.5	2.2	3.3	2.7	3.0	3.1	5.9	3.2
Indonesia	6.2	6.0	5.6	5.0	4.9	5.0	5.1	5.2	5.0	-2.1	3.2	5.4
Malaysia	5.3	5.5	4.7	6.0	5.0	4.5	5.8	4.8	4.3	-5.6	3.5	5.6
Philippines	3.9	6.9	6.8	6.3	6.3	7.1	6.9	6.3	6.0	-9.6	3.2	6.5

(Source) International Monetary Fund World Economic Outlook, October 2021

World Population Trends UN, World Population Prospects

(K people)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 Estimate
World total	7,041,194	7,125,828	7,210,582	7,295,291	7,379,797	7,464,022	7,547,859	7,631,091	7,713,468	7,794,799
Japan	128,499	128,424	128,314	128,169	127,985	127,763	127,503	127,202	126,860	126,476
South Korea	49,786	50,061	50,346	50,608	50,823	50,983	51,096	51,172	51,225	51,269
US	311,584	314,044	316,401	318,673	320,878	323,016	325,085	327,096	329,065	331,003
Thailand	67,518	67,836	68,145	68,439	68,715	68,971	69,210	69,428	69,626	69,800
Vietnam	88,871	89,802	90,753	91,714	92,677	93,640	94,601	95,546	96,462	97,339
Saudi Arabia	28,268	29,155	30,052	30,917	31,718	32,443	33,101	33,703	34,269	34,814
Bahrain	1,278	1,300	1,315	1,336	1,372	1,426	1,494	1,569	1,641	1,702
China	1,376,498	1,384,206	1,391,883	1,399,454	1,406,848	1,414,049	1,421,022	1,427,648	1,433,784	1,439,324
India	1,250,288	1,265,780	1,280,842	1,295,601	1,310,152	1,324,517	1,338,677	1,352,642	1,366,418	1,380,004
Taiwan	23,269	23,347	23,422	23,492	23,557	23,618	23,675	23,726	23,774	23,817
Indonesia	245,116	248,452	251,805	255,128	258,383	261,556	264,651	267,671	270,626	273,524
Malaysia	28,651	29,068	29,469	29,867	30,271	30,685	31,105	31,528	31,950	32,366
Philippines	95,570	97,213	98,872	100,513	102,113	103,664	105,173	106,651	108,117	109,581

(Source) United Nations, Department of Economic and Social Affairs, Population Division (2019)
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