

# Hankuk Carbon (017960)

Not rated

Stock price (Feb 27, KRW)	6,480
Market cap (USD mn)	251
Shares outstanding (mn)	44
52W High/Low (KRW)	7,640/5,740
6M avg. daily turnover (USD mn)	0.8
Free float (%)	57.4
Foreign ownership (%)	16.4
Major shareholders (%)	
Mun-Su Cho and 5 others	26.3
MITSUI & CO., LTD.	9.6

Yr to	Sales	OP	NP	EPS	% chg	EBITDA	PE	EV/EBITDA	PB	ROE	DY
Dec	(W bn)	(W bn)	(W bn)	(KRW)	(YoY)	(W bn)	(x)	(x)	(x)	(%)	(%)
2014A	231	23	20	520	24.4	30	11.2	4.1	0.8	7.6	2.1
2015A	243	26	23	578	11.2	32	11.3	5.3	0.9	8.0	2.0
2016F	258	27	17	403	(30.3)	34	15.0	2.7	0.9	5.7	2.1
2017F	234	14	12	300	(25.6)	21	21.6	5.3	0.9	4.1	2.0
2018F	250	23	19	455	51.9	29	14.2	3.5	0.9	6.1	2.0

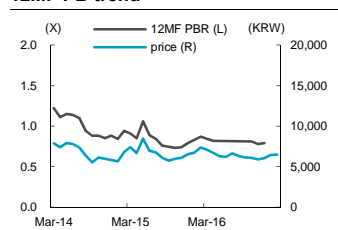
Note: NP in equity-method accounting

## Enjoy the downstream revival

### Performance

	1M	6M	12M
Absolute (%)	3.8	1.1	(6.9)
Rel. to Kospi (%)	3.8	(1.3)	(15.5)

### 12MF PB trend



**Imminent turnaround for downstream industry:** Hankuk Carbon along with Dongsung Fintec (Dongsung) rule the market for cryogenic insulation used in LNG carriers. According to KIS' shipbuilding sector supply-demand model, the LNG carrier market struck a supply-demand balance in 2016 and carrier tenders are expected to resume from 2017. It is estimated that Korea's Big 3 shipyards will win orders for 27 LNG carriers in 2017 and 30 in 2018, up sharply from just seven ships won in 2016. For Hankuk Carbon, LNG cryogenic insulation is most crucial to company-wide earnings, accounting for ~60% of sales. We believe recovery signals for the downstream industry would provide a good entry point.

**Both orders and earnings to remain sluggish through end-2017:** Hankuk Carbon's orders and earnings will likely hit bottom in 2017 and pick up rapidly from 2018. Of note, the coming upcycle for LNG carriers should be led by Hyundai Heavy Industries (HHI) and Samsung Heavy Industries (SHI). For Hankuk Carbon, orders received from the two shipbuilders can be worth up to W16bn per ship while orders from Daewoo Shipbuilding & Marine Engineering (DSME) are worth W5bn at most. As such, the rewards for cryogenic insulation makers such as Hankuk Carbon and Dongsung should be bigger than in 2013-2014, the previous boom period. We peg Hankuk Carbon's 2017F sales at W234bn (-9.1% YoY) and OP at W14bn (-47.8% YoY). As the cryogenic insulation orders secured when the LNG carrier market was in a slump from 2014-2016 will be booked as sales in 2017, OPM would erode YoY. However, the downstream industry's LNG carrier orders should climb from 2017 and subsequently lead to more cryogenic insulation orders and sales from 2018.

**Overcoming sluggish market conditions with sound financials:** Hankuk Carbon has a stable financial structure with net cash of W155bn at end-2016. Despite sluggish downstream industry conditions, Hankuk Carbon is accumulating cash every year with no loss-making units. The company is pursuing a new, long-term growth driver by funding M&A opportunities with its cash holdings. In particular, the company is seeking to utilize its carbon materials for greater sales in the aviation market. A good financial structure is a driving force that prepares the company for the next upcycle with little vulnerability to short-term fluctuations in earnings and orders.

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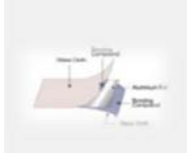
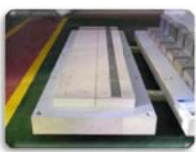
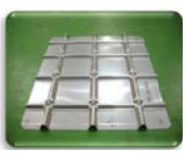

Table 20. Earnings estimates

(W bn, %)

	1Q16	2Q16	3Q16	4Q16P	1Q17	2Q17	3Q17	4Q17	2015	2016P	2017F	2018F
<b>Sales</b>	<b>57.5</b>	<b>83.8</b>	<b>49.5</b>	<b>66.8</b>	<b>55.8</b>	<b>58.1</b>	<b>50.4</b>	<b>69.8</b>	<b>242.5</b>	<b>257.6</b>	<b>234.1</b>	<b>250.2</b>
LNG	37.6	64.0	30.2	45.5	35.7	38.4	31.1	48.1	155.2	177.3	153.4	168.7
Carbon	7.0	6.2	6.2	7.3	7.1	6.4	6.4	7.6	33.6	26.7	27.5	28.1
GP	6.0	6.9	6.8	7.5	6.5	7.6	7.2	8.0	23.5	27.2	29.4	30.3
Others	6.5	5.4	5.8	6.0	6.2	5.1	5.5	5.8	28.8	23.7	22.5	22.5
<b>OP</b>	<b>5.5</b>	<b>10.4</b>	<b>4.1</b>	<b>6.8</b>	<b>4.7</b>	<b>2.3</b>	<b>2.0</b>	<b>5.0</b>	<b>25.5</b>	<b>26.9</b>	<b>14.0</b>	<b>22.5</b>
<b>OPM</b>	<b>9.6</b>	<b>12.5</b>	<b>8.3</b>	<b>10.1</b>	<b>8.5</b>	<b>4.0</b>	<b>4.0</b>	<b>7.1</b>	<b>10.5</b>	<b>10.4</b>	<b>6.0</b>	<b>9.0</b>
<b>New orders</b>	<b>64.3</b>	<b>1.2</b>	<b>4.2</b>	<b>72.1</b>					<b>107.7</b>	<b>145.0</b>	<b>81.7</b>	<b>207.0</b>
<b>Backlog</b>	<b>288.7</b>	<b>225.9</b>	<b>199.9</b>	<b>226.5</b>					<b>258.8</b>	<b>226.5</b>	<b>154.9</b>	<b>193.2</b>

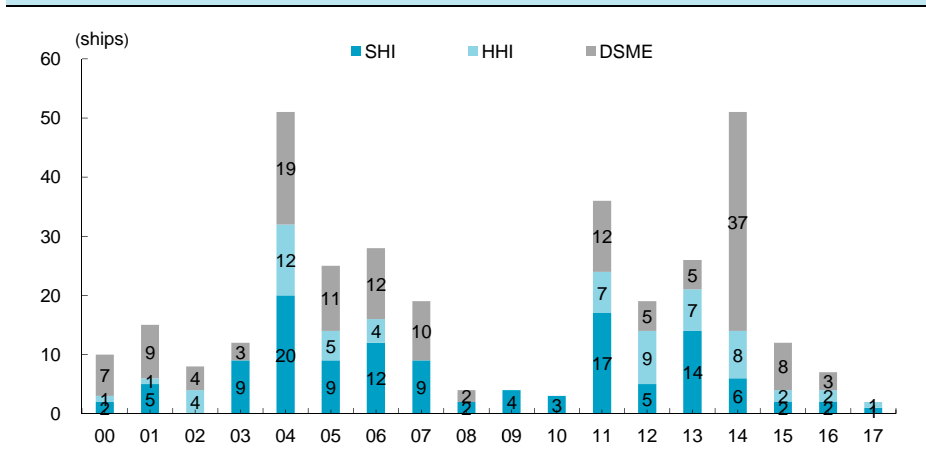
Source: Korea Investment & Securities

Table 21. Main cryogenic insulation products: Hankuk Carbon can win orders worth ~W16bn per LNG carrier

Category	R-PUF	Triplex	Insulation panel	Membrane	Pipe insulation
Image					
Description	- A highly compressed glass fiber reinforced polyurethane foam to withstand the impact of wind and waves - A component of the insulation panel	- Secondary barrier - Made using fiber glass	- Actual cryogenic insulation using R-PUF featured in the cargo hold of LNG vessels	- Core material in LNG storage and transport equipment that is used as the primary barrier that withstands the shrinkage stress and impact from the extreme low temperatures when exposed to direct contact with LNG	- Insulation for pipes installed within pipes to prevent the gasification of liquefied natural gas - Also widely used in FLNG equipment
Companies	- Hankuk Carbon, Dongsung	- Hankuk Carbon	- Hankuk Carbon, Dongsung	- Dongsung, TMC	- Dongsung, Kangrim
Value per vessel		W13bn-15bn per panel W4bn-4.5bn for R-PUF		W4bn-4.5bn	W2.5bn
Dongsung	Available	Not available	Available	Available	Available
Hankuk Carbon	Available	Available	Available	Not available	Available (Lacks references)

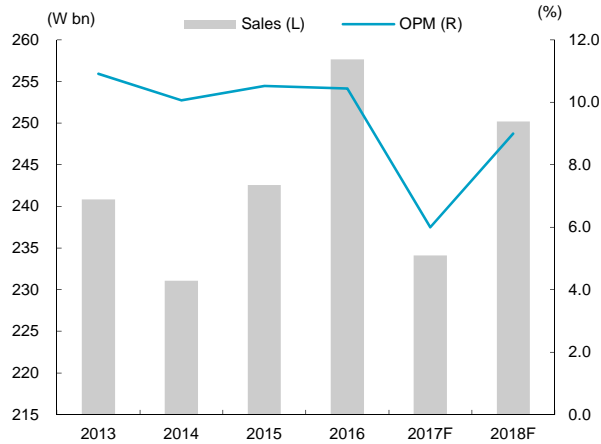
Source: Hankuk Carbon, Korea Investment & Securities

Figure 58. LNG carrier orders outlook



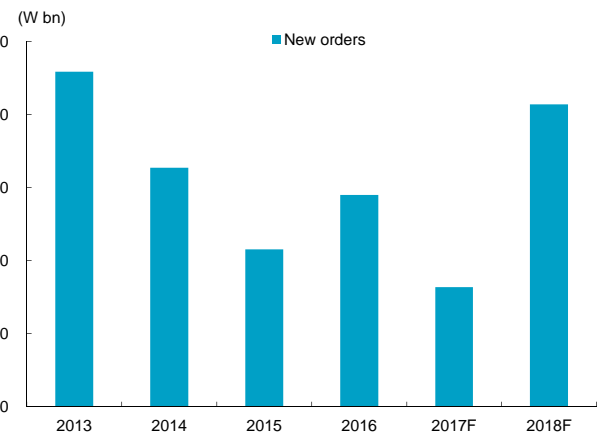
Source: Korea Investment & Securities

Figure 59. Annual earnings



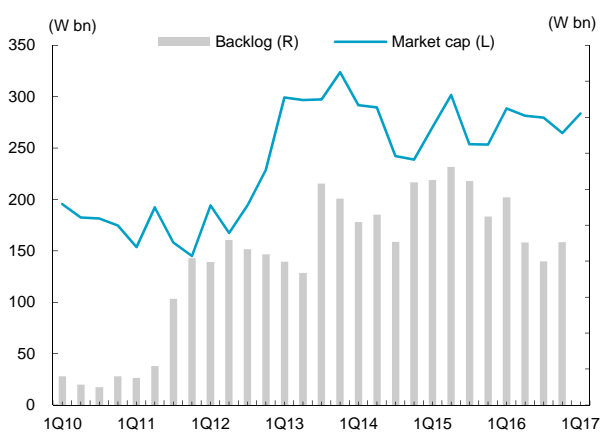
Source: Company data, Korea Investment & Securities

Figure 60. New orders



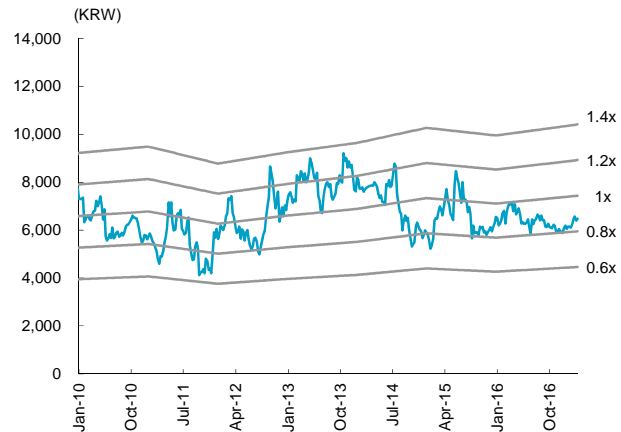
Source: Company data, Korea Investment & Securities

Figure 61. Backlog and market cap



Source: Company data, Korea Investment & Securities

Figure 62. PB band



Source: Korea Investment & Securities

## Glossary

- Cryogenic insulation: Refers to using insulating material for the purpose of preventing heat from coming into a low-temperature space. Often also needs to be water and moisture resistant. The cryogenic insulation products manufactured by Dongsung are used in the storage tanks of LNG carriers that transport LNG at -162°C
- Insulation panel: Actual cryogenic insulation using R-PUF featured in the cargo hold of LNG carriers
- Membrane: Core material in LNG storage and transport equipment that is used as the primary barrier that withstands the shrinkage stress and impact from the extreme low temperatures when exposed to direct contact with LNG
- Pipe insulation: Insulation for pipes installed within pipes to prevent the gasification of liquefied natural gas; Also widely used in FLNG equipment

**Balance sheet**

FY-ending Dec. (W bn)	2014A	2015A	2016F	2017F	2018F
Current assets	229	227	251	251	269
Cash & cash equivalents	37	60	31	35	38
Accounts & other receivables	37	61	26	28	30
Inventory	64	70	52	47	50
Non-current assets	114	120	124	120	124
Investment assets	14	18	19	17	18
Tangible assets	71	73	74	74	74
Intangible assets	11	10	11	10	11
Total assets	343	347	375	372	392
Current liabilities	51	56	71	62	69
Accounts & other payables	39	40	39	35	38
ST debt & bonds	7	9	10	12	13
Current portion of LT debt	0	0	0	0	0
Non-current liabilities	10	10	10	10	10
Debentures	0	0	0	0	0
LT debt & financial liabilities	5	5	5	5	5
Total liabilities	61	66	82	72	79
Controlling interest	282	282	294	301	315
Capital stock	20	20	20	20	20
Capital surplus	65	65	65	65	65
Other reserves	0	(19)	(19)	(19)	(19)
Retained earnings	197	215	226	233	246
Minority interest	0	0	0	0	0
Shareholders' equity	282	282	294	301	315

**Income statement**

FY-ending Dec. (W bn)	2014A	2015A	2016F	2017F	2018F
Sales	231	243	258	234	250
COGS	191	198	210	202	208
Gross profit	40	45	47	33	42
SG&A expenses	17	19	20	19	20
Operating profit	23	26	27	14	23
Financial income	5	9	18	3	3
Interest income	3	2	2	3	3
Financial expenses	3	5	13	0	0
Interest expenses	0	0	0	0	0
Other non-operating profit	(0)	1	(7)	0	0
Gains (Losses) in associates, subsidiaries and JV	0	0	0	0	0
Earnings before tax	26	30	24	16	25
Income taxes	6	8	8	4	6
Net profit	20	23	17	12	19
Net profit of controlling interest	20	23	17	12	19
Other comprehensive profit	1	1	1	1	1
Total comprehensive profit	21	23	17	13	19
Total comprehensive profit of controlling interest	21	23	17	13	19
EBITDA	30	32	34	21	29

**Cash flow**

FY-ending Dec. (W bn)	2014A	2015A	2016F	2017F	2018F
C/F from operations	19	2	90	9	24
Net profit	20	23	17	12	19
Depreciation	6	6	6	5	5
Amortization	1	1	1	1	1
Net incr. in W/C	(6)	(31)	67	(9)	(1)
Others	(2)	3	(1)	0	0
C/F from investing	(73)	43	(117)	(1)	(19)
Capex	(14)	(7)	(7)	(6)	(6)
Decr. in fixed assets	0	0	0	0	0
Incr. in investment	(57)	52	(0)	2	(1)
Net incr. in intangible assets	(1)	0	(2)	(0)	(2)
Others	(1)	(2)	(108)	3	(10)
C/F from financing	31	(22)	(3)	(3)	(3)
Incr. in equity	32	0	0	0	0
Incr. in debt	2	2	3	3	3
Dividends	(4)	(5)	(5)	(5)	(5)
Others	1	(19)	(1)	(1)	(1)
C/F from others	(0)	0	0	0	0
Increase in cash	(23)	24	(29)	6	3

**Key financial data**

FY-ending Dec.	2014A	2015A	2016F	2017F	2018F
Per-share data (KRW)					
EPS	520	578	403	300	455
BPS	6,884	7,333	7,108	7,280	7,598
DPS	120	130	130	130	130
Growth (%)					
Sales growth	(4.1)	5.0	6.2	(9.1)	6.9
OP growth	(11.5)	9.8	5.3	(47.8)	60.3
NP growth	33.1	15.0	(27.2)	(25.6)	51.9
EPS growth	24.4	11.2	(30.3)	(25.6)	51.9
EBITDA growth	(8.2)	8.2	4.0	(38.7)	41.5
Profitability (%)					
OP margin	10.1	10.5	10.4	6.0	9.0
NP margin	8.5	9.4	6.4	5.3	7.5
EBITDA margin	12.9	13.3	13.0	8.8	11.6
ROA	6.2	6.6	4.6	3.3	4.9
ROE	7.6	8.0	5.7	4.1	6.1
Dividend yield	2.1	2.0	2.1	2.0	2.0
Dividend payout ratio	24.9	21.8	32.3	43.4	28.6
Stability					
Net debt (W bn)	(116)	(80)	(155)	(155)	(165)
Debt/equity ratio (%)	4.2	5.2	5.9	6.7	7.3
Valuation (x)					
PE	11.2	11.3	15.0	21.6	14.2
PB	0.8	0.9	0.9	0.9	0.9
EV/EBITDA	4.1	5.3	2.7	5.3	3.5

Note: K-IFRS (consolidated)

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