

# Seoul Semiconductor (046890 KS)

## Vietnam relocation effect expected in 2H19

### BUY (Maintain)

CP (Apr. 29)	KRW19,750
TP (6 months)	KRW28,000
Upside	41.8%

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KOSPI	2,216.43p
KOSDAQ	750.60p
Market cap	KRW1,151.5bn/USD1,010.1mn
Par value	KRW500
Outstanding shares	58.3mn
Free float	39.3mn(67.4%)
52-week high/low	KRW25,050/KRW15,700
60-day avg. trading volume	570,940shrs
60-day avg. turnover	KRW12,430mn
Foreign ownership	15.79%
Major shareholders	
Jeong-Hun Lee and 2 others	31.00%
NPS	8.12%
Absolute performance	
3M	-15.8%
6M	2.6%
12M	3.9%
Relative performance	
3M	-20.2%
6M	-13.9%
12M	22.8%

- ◆ 1Q19 operating profit of KRW17.1bn misses consensus (KRW22.6bn) by 24.4%
- ◆ 2019 operating profit forecast at KRW112.5bn (+18.6% YoY)
- ◆ Retain BUY for a target price of KRW28,000

### 1Q19 operating profit of KRW17.1bn misses consensus (KRW22.6bn) by 24.4%

Seoul Semiconductor posted 1Q operating profit of KRW17.1bn (-53.1% QoQ, -0.9% YoY) on sales of KRW281.9bn (-6.2% QoQ, -0.4% YoY), missing the market consensus of KRW22.6bn by 24.4%. Weaker-than-expected earnings are caused by: 1) capacity utilization rate falling to 60% (vs. 77% in 4Q18) during relocation of LED packaging lines to Vietnam; and 2) costs from offshoring of domestic production lines. We expect earnings improvement from 2Q, considering a 14.1% decrease in inventory assets to KRW133.3bn at end-1Q vs. KRW155.2bn at end-2018.

### 2019 operating profit forecast at KRW112.5bn (+18.6% YoY)

Operating profit is projected to grow 15.3% QoQ to KRW19.7bn in 2Q. Cost-cutting effect from the relocation should materialize in 2H19. For 3Q, we forecast sales of KRW334bn (+13.6% QoQ) and operating profit of KRW37.1bn (+88.2% QoQ).

Facing tough competition from China, Korea's major LED manufacturers are withdrawing from display and lighting LED markets, except for high value-added automotive LED. Capacity expansion at 10.5G LCD lines in China should boost orders for LED used in 65-inch or larger TVs. This should benefit Seoul Semiconductor, which is relocating its general-purpose LED lines to Vietnam.

### Retain BUY for a target price of KRW28,000

We retain our BUY rating on Seoul Semiconductor for a target price of KRW28,000, in view of: 1) 2019F operating profit of KRW112.5bn (+18.6% YoY); and 2) expected synergy with LED lines in Vietnam. Shares have been weak on forecasts for sluggish 1Q earnings due to the relocation. However, market conditions will likely turn in favor of the company in the mid-to-long term, including major Korean LED makers withdrawing from general-use LED market and the US government keeping China's LED industry in check. As a leading LED company in Korea, Seoul Semiconductor deserves a re-rating.

Year to	Sales	OP	Pre-tax	NP	EPS	Growth	BPS	PER	EV/EBITDA	PBR	ROE	Net debt
December	(bn KRW)	(bn KRW)	(bn KRW)	(bn KRW)	(KRW)	(%)	(KRW)	(x)	(x)	(x)	(%)	ratio (%)
2017	1,110.4	98.3	70.5	40.3	692	11.4	10,196	40.3	8.7	2.7	6.7	23.0
2018	1,194.2	94.9	78.4	62.8	1,077	55.7	11,122	18.0	7.2	1.7	10.1	33.6
2019F	1,231.9	112.5	101.9	76.7	1,315	22.1	12,142	15.0	6.2	1.6	11.3	20.6
2020F	1,306.0	126.4	116.9	85.6	1,468	11.7	13,314	13.5	5.6	1.5	11.5	16.2
2021F	1,388.0	146.2	137.4	100.6	1,725	17.5	14,744	11.4	5.0	1.3	12.3	11.4

Source: Company data, Shinhan Investment Corp. / Note: TB = turn black, TR = turn red, RR = remain red

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## Target price calculation

	Value	Remarks
2019F ROE (%)	11.3	
2019F EPS (KRW)	1,315	
2018 PER average (x)	21.0	10% premium to 2018 PER (19.1x)
Target price	27,615	

Source: Shinhan Investment Corp.

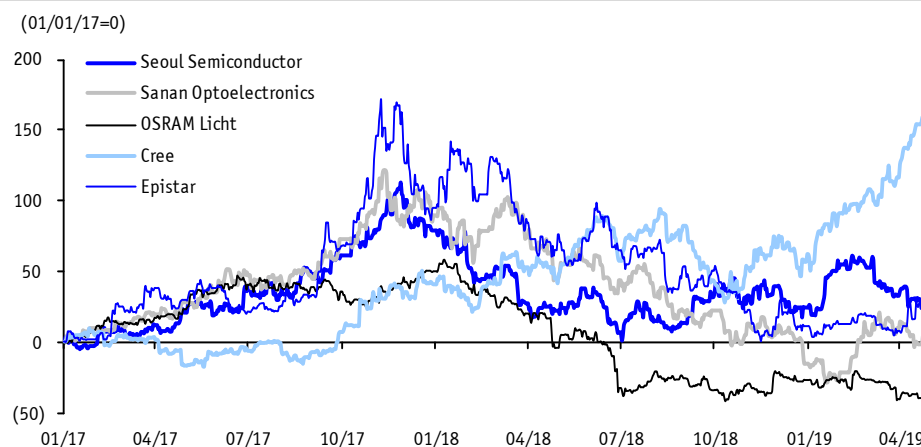
Note: Premium applied in view of 2019F operating profit growth of 18.6% YoY

## Valuation of LED companies based on consensus estimates

(bn USD, x, %)	Market cap	2019F				2020F			
		PER	PBR	EV/EBITDA	ROE	PER	PBR	EV/EBITDA	ROE
Sanan Optoelectronics	8.2	14.6	2.2	10.7	14.4	12.7	1.9	9.1	15.6
Cree	6.8	82.0	3.0	26.1	1.8	51.4	2.9	21.1	4.3
OSRAM Licht	3.4	103.1	1.2	9.6	1.2	20.5	1.2	6.6	6.2
Toyoda Gosei	2.9	12.9	0.9	4.9	6.8	9.6	0.8	4.2	8.7
LG Innotek	2.5	17.7	1.3	5.0	7.2	12.5	1.1	4.5	9.6
Seoul Semiconductor	1.0	16.3	1.6	6.7	10.4	14.6	1.5	6.4	11.3
Epistar	0.9	-	0.6	7.1	(2.3)	200.0	0.6	5.7	0.1
Lextar Electronics	0.3	65.9	0.7	4.3	1.1	28.1	-	3.8	2.6

Source: Bloomberg, Shinhan Investment Corp.

## Relative share performance vs. major LED peers



Source: Bloomberg, Shinhan Investment Corp.

## PER and ROE trend

(x, %)	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
PER (high)	31.5	155.9	307.2	73.1	(429.4)	78.3	29.0	48.5	26.8	35.6
PER (low)	21.5	64.0	210.6	38.5	(125.6)	43.0	20.6	21.1	14.9	34.3
PER (average)	26.1	106.0	241.4	55.9	(292.5)	60.1	23.9	31.0	19.5	30.1
ROE	18.3	2.9	0.9	6.3	(1.2)	3.0	6.1	6.7	9.9	5.7

Source: QuantilWise, Shinhan Investment Corp.

### 12-month forward PBR band



Source: QuantilWise, Shinhan Investment Corp.

### Earnings forecast revision

(bn KRW)	2019F			2020F		
	Previous	Revised	Change (%)	Previous	Revised	Change (%)
Sales	1,298.0	1,231.9	(5.1)	1,409.0	1,306.0	(7.3)
OP	117.2	112.5	(4.0)	125.5	126.4	0.7
NP	86.3	76.4	(11.4)	93.7	85.3	(8.9)
OPM (%)	9.0	9.1		8.9	9.7	
NPM (%)	6.6	6.2		6.7	6.5	

Source: Shinhan Investment Corp.

### 1Q19 preliminary results

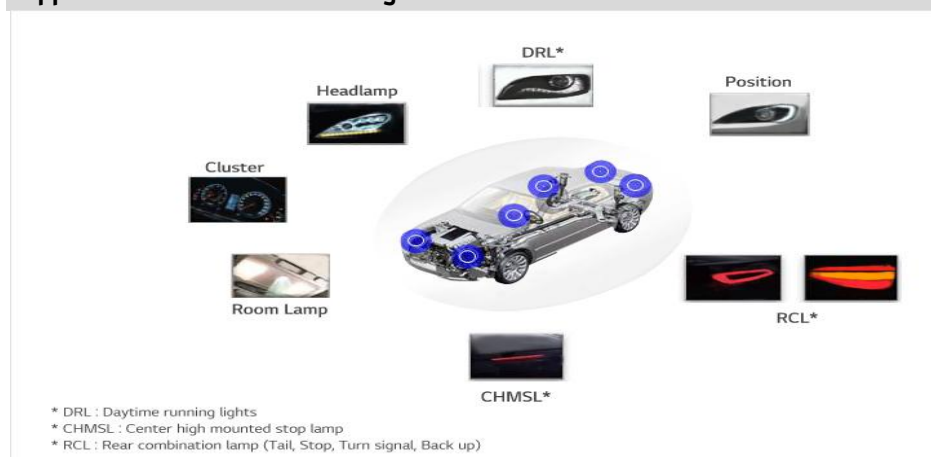
(bn KRW)	1Q19P	4Q18	QoQ (%)	1Q18	YoY (%)	Consensus	Gap (%)	Previous	Gap (%)
Sales	281.9	300.6	(6.2)	283.0	(0.4)	289.6	(2.7)	292.0	(3.5)
OP	17.1	36.4	(53.1)	17.2	(0.9)	22.6	(24.4)	20.4	(16.4)
NP	13.6	24.2	(43.8)	11.3	TB	13.8	(1.4)	14.6	(6.5)
OPM (%)	6.1	12.1		6.1		7.8		7.0	
NPM (%)	4.8	8.1		4.0		4.8		5.0	

Source: Shinhan Investment Corp

Earnings trend and outlook														
(bn KRW, %)	1Q18	2Q18	3Q18	4Q18	1Q19P	2Q19F	3Q19F	4Q19F	2016	2017	2018	2019F	2020F	2021F
Sales	283.0	290.3	320.3	300.6	281.9	294.0	334.0	322.0	953.8	1,110.4	1,194.2	1,231.9	1,306.0	1,388.0
Lighting/automotive	157.0	163.0	159.0	155.0	142.0	156.0	171.0	167.0	542.0	564.3	634.0	636.0	691.0	760.0
TV	45.0	58.0	73.0	75.0	70.9	70.0	85.0	83.0	192.0	199.0	251.0	308.9	338.0	345.0
NBPC/MNT	35.0	37.0	45.0	39.0	39.0	39.0	45.0	41.0	43.0	138.0	156.0	164.0	162.0	174.0
Mobile/tablet	46.0	32.3	43.3	31.6	30.0	29.0	33.0	31.0	176.8	209.1	153.2	123.0	115.0	109.0
Gross profit	70.0	75.8	89.7	87.8	64.2	72.0	95.2	95.0	233.7	284.4	323.4	326.4	359.5	389.1
SG&A	52.8	58.2	61.6	51.4	47.1	52.3	58.1	56.4	176.2	186.3	224.0	213.9	233.1	242.9
OP	17.2	17.6	28.1	36.4	17.1	19.7	37.1	38.6	57.5	98.1	99.4	112.5	126.4	146.2
Pre-tax profit	15.1	20.7	21.1	21.4	20.6	18.2	35.6	27.5	49.6	70.5	78.4	101.9	116.9	137.4
NP	11.3	13.5	13.7	24.2	13.6	12.2	27.6	23.0	37.5	46.4	62.6	76.4	85.3	100.3
EBITDA	46.1	45.0	55.5	63.4	45.1	47.7	65.1	66.6	170.7	211.3	210.0	224.5	242.4	266.2
Sales share														
Lighting/automotive	55.5	56.1	49.6	51.6	50.4	53.1	51.2	51.9	56.8	50.8	53.1	51.6	52.9	54.8
TV	15.9	20.0	22.8	25.0	25.2	23.8	25.4	25.8	20.1	17.9	21.0	25.1	25.9	24.9
NBPC/MNT	12.4	12.7	14.0	13.0	13.8	13.3	13.5	12.7	4.5	12.4	13.1	13.3	12.4	12.5
Mobile/tablet	16.3	11.1	13.5	10.5	10.6	9.9	9.9	9.6	18.5	18.8	12.8	10.0	8.8	7.9
Gross margin	24.7	26.1	28.0	29.2	22.8	24.5	28.5	29.5	24.5	25.6	27.1	26.5	27.5	28.0
SG&A ratio	18.7	20.1	19.2	17.1	16.7	17.8	17.4	17.5	18.5	16.8	18.8	17.4	17.8	17.5
OPM	6.1	6.1	8.8	12.1	6.1	6.7	11.1	12.0	6.0	8.8	8.3	9.1	9.7	10.5
Pre-tax margin	5.3	7.1	6.6	7.1	7.3	6.2	10.7	8.5	5.2	6.3	6.6	8.3	9.0	9.9
NPM	4.0	4.6	4.3	8.1	4.8	4.2	8.3	7.1	3.9	4.2	5.2	6.2	6.5	7.2
EBITDA margin	16.3	15.5	17.3	21.1	16.0	16.2	19.5	20.7	17.9	19.0	17.6	18.2	18.6	19.2

Source: Company data, Shinhan Investment Corp.

### Application of automotive LED lights



Source: LG Innotek, Shinhan Investment Corp.

## Statement of financial position

Year to December (bn KRW)	2017	2018	2019F	2020F	2021F
<b>Total assets</b>	<b>1,227.3</b>	<b>1,293.8</b>	<b>1,342.8</b>	<b>1,379.1</b>	<b>1,454.5</b>
Current assets	575.5	601.6	616.8	608.1	633.6
Cash and equivalents	47.2	21.7	75.7	61.0	74.5
Accounts receivable	303.4	339.6	342.0	345.0	350.0
Inventories	137.5	155.2	159.0	162.0	169.0
Non-current assets	651.9	692.2	726.0	771.0	821.0
Tangible assets	540.6	576.8	631.5	692.2	758.8
Intangible assets	61.5	56.3	39.6	22.9	6.2
Investment assets	9.6	8.7	11.0	12.0	12.0
Other financial assets	0.0	0.0	0.0	0.0	0.0
<b>Total liabilities</b>	<b>551.4</b>	<b>568.5</b>	<b>558.3</b>	<b>526.5</b>	<b>518.9</b>
Current liabilities	435.5	412.7	397.5	385.5	387.8
Short-term borrowings	32.4	41.0	36.0	26.0	16.0
Accounts payable	203.0	183.0	202.0	205.0	211.0
Current portion of long-term debt	27.5	39.3	10.0	0.0	0.0
Non-current liabilities	116.0	155.8	160.8	141.0	131.1
Bonds	0.0	0.0	0.0	0.0	0.0
Long-term borrowings	114.7	154.2	159.2	139.2	129.2
Other financial liabilities	0.0	0.0	0.0	0.0	0.0
<b>Total shareholders' equity</b>	<b>675.9</b>	<b>725.3</b>	<b>784.5</b>	<b>852.6</b>	<b>935.6</b>
Capital stock	29.2	29.2	29.2	29.2	29.2
Capital surplus	347.6	330.5	330.5	330.5	330.5
Other capital	(73.4)	(53.8)	(53.8)	(53.8)	(53.8)
Accumulated other comprehensive income	(7.5)	(6.9)	(6.9)	(6.9)	(6.9)
Retained earnings	298.6	349.6	409.0	477.4	560.8
<b>Controlling interest equity</b>	<b>594.5</b>	<b>648.5</b>	<b>708.0</b>	<b>776.3</b>	<b>859.6</b>
Non-controlling interest equity	81.4	76.8	76.5	76.3	76.0
*Total debt	232.9	265.6	237.3	199.2	181.3
*Net debt (cash)	155.3	243.8	161.4	138.1	106.8

## Statement of cash flow

Year to December (bn KRW)	2017	2018	2019F	2020F	2021F
<b>Cash flow from operations</b>	<b>167.3</b>	<b>103.6</b>	<b>229.7</b>	<b>203.1</b>	<b>220.1</b>
Net profit	46.4	62.6	76.4	85.3	100.3
Depreciation expense	96.8	90.4	95.3	99.3	103.3
Amortization expense	17.7	16.7	16.7	16.7	16.7
FX translation loss (gain)	9.5	(0.9)	0.0	0.0	0.0
Asset disposal loss (gain)	(4.0)	0.1	0.1	0.1	0.1
Equity method loss (gain)	0.1	0.2	0.2	0.2	0.2
Change in working capital	(7.5)	(75.7)	39.7	0.2	(1.7)
(Payment of income tax)	(18.0)	(24.3)	(25.5)	(31.6)	(37.1)
Others	26.3	34.5	26.8	32.9	38.3
<b>Cash flow from investments</b>	<b>(168.2)</b>	<b>(146.4)</b>	<b>(147.0)</b>	<b>(162.2)</b>	<b>(171.2)</b>
Increase in tangible assets	(158.8)	(144.9)	(150.0)	(160.0)	(170.0)
Decrease in tangible assets	10.8	3.0	0.0	0.0	0.0
Change in intangible assets	(27.2)	(18.4)	0.0	0.0	0.0
Change in investment assets	0.4	0.8	(3.7)	(2.4)	(1.4)
Others	6.6	13.1	6.7	0.2	0.2
<b>Free cash flow</b>	<b>46.9</b>	<b>(59.8)</b>	<b>103.2</b>	<b>48.3</b>	<b>54.7</b>
<b>Cash flow from financing</b>	<b>17.5</b>	<b>17.1</b>	<b>(28.4)</b>	<b>(55.3)</b>	<b>(35.1)</b>
Change in borrowings	1.8	58.1	(28.4)	(38.1)	(17.9)
Change in treasury stock	8.0	0.1	0.0	0.0	0.0
Dividends	(4.7)	(13.0)	0.0	(17.2)	(17.2)
Others	12.4	(28.1)	0.0	0.0	(0.0)
Other cash flow	0.0	0.0	(0.4)	(0.3)	(0.4)
Change in consolidated scope	0.0	0.0	0.0	0.0	0.0
Change in FX rates	(1.8)	0.3	0.0	0.0	0.0
<b>Change in total cash</b>	<b>14.7</b>	<b>(25.5)</b>	<b>53.9</b>	<b>(14.6)</b>	<b>13.5</b>
Beginning cash	32.4	47.2	21.7	75.6	61.0
Ending cash	47.2	21.7	75.6	61.0	74.4

Source: Company data, Shinhan Investment Corp.

## Statement of comprehensive income

Year to December (bn KRW)	2017	2018	2019F	2020F	2021F
<b>Sales</b>	<b>1,110.4</b>	<b>1,194.2</b>	<b>1,231.9</b>	<b>1,306.0</b>	<b>1,388.0</b>
Growth (%)	16.4	7.5	3.2	6.0	6.3
<b>COGS</b>	<b>826.1</b>	<b>871.0</b>	<b>905.5</b>	<b>946.5</b>	<b>998.9</b>
<b>Gross profit</b>	<b>284.3</b>	<b>323.2</b>	<b>326.4</b>	<b>359.5</b>	<b>389.1</b>
GPM (%)	25.6	27.1	26.5	27.5	28.0
<b>SG&amp;A</b>	<b>186.1</b>	<b>228.3</b>	<b>213.9</b>	<b>233.1</b>	<b>242.9</b>
<b>Operating profit</b>	<b>98.3</b>	<b>94.9</b>	<b>112.5</b>	<b>126.4</b>	<b>146.2</b>
Growth (%)	70.8	(3.4)	18.6	12.4	15.6
OPM (%)	8.8	7.9	9.1	9.7	10.5
<b>Non-operating profit</b>	<b>(27.8)</b>	<b>(16.5)</b>	<b>(10.6)</b>	<b>(9.5)</b>	<b>(8.9)</b>
Financial profit	(28.0)	(3.8)	(1.8)	(0.7)	(0.0)
Other non-operating profit	0.4	(12.7)	(8.8)	(8.8)	(8.8)
Equity method gain (loss)	(0.1)	(0.0)	(0.0)	(0.0)	(0.0)
<b>Pre-tax profit</b>	<b>70.5</b>	<b>78.4</b>	<b>101.9</b>	<b>116.9</b>	<b>137.4</b>
Income tax	24.1	15.8	25.5	31.6	37.1
Continuing operations	46.4	62.6	76.4	85.3	100.3
Discontinued operations	0.0	0.0	0.0	0.0	0.0
<b>Net profit</b>	<b>46.4</b>	<b>62.6</b>	<b>76.4</b>	<b>85.3</b>	<b>100.3</b>
Growth (%)	23.5	35.0	22.1	11.7	17.5
NPM (%)	4.2	5.2	6.2	6.5	7.2
Controlling interest	40.3	62.8	76.7	85.6	100.6
Non-controlling interest	6.1	(0.2)	(0.2)	(0.3)	(0.3)
<b>Comprehensive income</b>	<b>38.6</b>	<b>62.8</b>	<b>76.4</b>	<b>85.3</b>	<b>100.3</b>
Controlling interest	32.9	62.8	76.5	85.4	100.4
Non-controlling interest	5.7	(0.1)	(0.1)	(0.1)	(0.1)
<b>EBITDA</b>	<b>212.8</b>	<b>201.9</b>	<b>224.5</b>	<b>242.4</b>	<b>266.2</b>
Growth (%)	24.7	(5.1)	11.2	8.0	9.8
EBITDA margin (%)	19.2	16.9	18.2	18.6	19.2

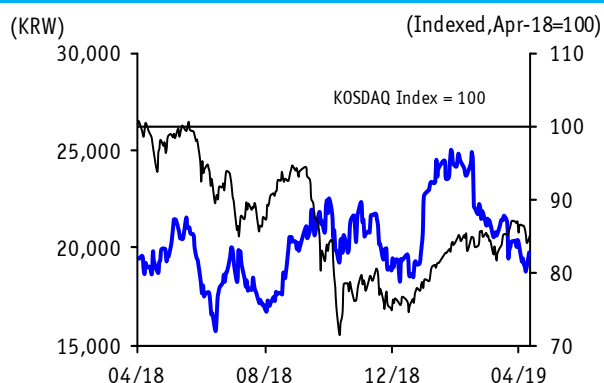
## Key ratios

Year to December	2017	2018	2019F	2020F	2021F
EPS (KRW)	795	1,074	1,311	1,464	1,720
EPS of controlling interest (KRW)	692	1,077	1,315	1,468	1,725
BPS (KRW)	11,593	12,439	13,454	14,623	16,047
BPS of controlling interest (KRW)	10,196	11,122	12,142	13,314	14,744
DPS (KRW)	183	284	300	300	300
PER (x)	35.0	18.0	15.1	13.5	11.5
PER of controlling interest (x)	40.3	18.0	15.0	13.5	11.4
PBR (x)	2.4	1.6	1.5	1.4	1.2
PBR of controlling interest (x)	2.7	1.7	1.6	1.5	1.3
EV/EBITDA (x)	8.7	7.2	6.2	5.6	5.0
Dividend payout ratio (%)	26.0	0.0	22.5	20.1	17.1
Dividend yield (%)	0.7	1.5	1.5	1.5	1.5
<b>Profitability</b>					
EBITDA margin (%)	19.2	16.9	18.2	18.6	19.2
OPM (%)	8.8	7.9	9.1	9.7	10.5
NPM (%)	4.2	5.2	6.2	6.5	7.2
ROA (%)	4.0	5.0	5.8	6.3	7.1
ROE (%)	6.7	10.1	11.3	11.5	12.3
ROIC (%)	8.5	7.8	10.1	10.1	11.1
<b>Stability</b>					
Debt to equity ratio (%)	81.6	78.4	71.2	61.8	55.5
Net debt ratio (%)	23.0	33.6	20.6	16.2	11.4
Cash ratio (%)	10.8	5.3	19.0	15.8	19.2
Interest coverage ratio (x)	22.6	15.6	18.4	23.8	31.5
<b>Activity (%)</b>					
Working capital turnover (times)	5.7	5.1	4.9	5.8	6.2
Inventory turnover (days)	40.4	44.7	46.5	44.9	43.5
Receivable turnover (days)	93.6	98.3	101.0	96.0	91.4

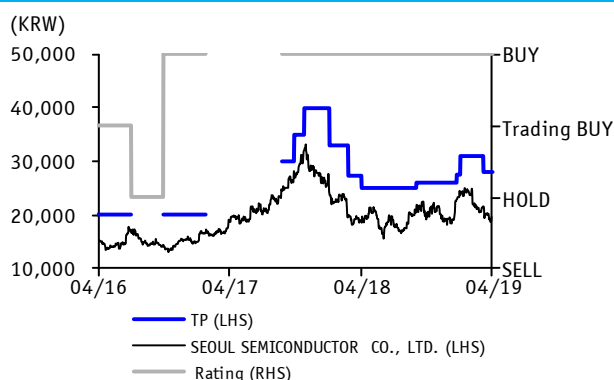
Source: Company data, Shinhan Investment Corp.

### Seoul Semiconductor (046890 KS)

#### Share price performance



#### Target price



Date	Rating	Target price (KRW)	Target price gap (%)	
			Average	Max/Min
2015.07.14	Trading BUY	20,000	(19.4)	3.5
2016.07.16		6M later	(14.5)	(10.5)
2016.07.31	HOLD	-	-	-
2016.10.28	BUY	20,000	(24.2)	(13.0)
2017.02.23	No Coverage	-	-	-
2017.09.22	BUY	30,000	(12.6)	(6.0)
2017.10.26	BUY	35,000	(16.1)	(8.6)
2017.11.23	BUY	40,000	(30.1)	(17.1)
2018.02.01	BUY	33,000	(30.6)	(27.4)
2018.03.25	BUY	27,300	(29.5)	(26.4)
2018.05.01	BUY	25,000	(24.5)	(13.8)
2018.09.30	BUY	26,000	(21.2)	(12.9)
2019.01.20	BUY	27,500	(15.7)	(14.7)
2019.01.30	BUY	31,000	(26.2)	(19.2)
2019.04.04	BUY	28,000	-	-

Note: Calculation of target price gap based on past 6 months

#### Rating Distribution - SHIC Universe (as of 26 April 2019)

BUY (BUY)	97.63%	Trading BUY (HOLD)	0.95%	HOLD (HOLD)	1.42%	SELL (SELL)	0%
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#### SHIC Ratings (as of 1 April 2017)

Stock	Sector
<ul style="list-style-type: none"> <li>◆ <b>BUY:</b> Expected 6-month gain of 10% or more</li> <li>◆ <b>Trading BUY:</b> Expected 6-month gain of 10% to loss of 10%</li> <li>◆ <b>HOLD:</b> Expected 6-month loss of 10% to 20%</li> <li>◆ <b>SELL:</b> Expected 6-month loss of 20% or more</li> </ul>	<ul style="list-style-type: none"> <li>◆ <b>OVERWEIGHT:</b> Based on market cap, largest share of sector stocks under coverage is rated BUY</li> <li>◆ <b>NEUTRAL:</b> Based on market cap, largest share of sector stocks under coverage is rated Trading BUY or HOLD</li> <li>◆ <b>UNDERWEIGHT:</b> Based on market cap, largest share of sector stocks under coverage is rated SELL</li> </ul>

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