

DBS Group Research . Equity

28 Aug 2018

**BUY, KRW12,050** KOSPI: 2,299.3

(Closing price as of 27/8/18)

Price Target 12-mth: KRW15,000

**Reason for Report:** Update**Potential catalyst:** Growing materials demand from downstream industries**Where we differ:** We are more optimistic than the market on positive impact of capacity expansion**Analyst**Regional Research Team  
equityresearch@dbs.com**Price Relative****Forecasts and Valuation**

FY Dec (KRW bn)	2017A	2018F	2019F	2020F
Revenue	248.8	280.9	372.9	456.3
EBITDA	60.8	68.0	115.7	144.6
Operating profit	35.5	48.7	81.5	102.5
Pre-tax Profit	33.3	47.1	82.1	103.2
Net Profit	28.2	35.5	64.0	80.5
Net Pft (Pre Ex.)	28.2	35.5	64.0	80.5
Net Pft Attributable to				
Controlling Interest	29.5	36.1	64.0	80.5
EPS (KRW)	319	390	693	871
EPS Pre Ex. (KRW)	305	384	693	871
EPS Gth (%)	-51.5	22.3	77.4	25.8
EPS Gth Pre Ex (%)	-57.3	25.8	80.3	25.8
Diluted EPS (KRW)	319	390	693	871
Net DPS (KRW)	0	0	0	0
BV Per Share (KRW)	1,872	2,273	2,959	3,824
PE (X)	31.8	30.9	17.4	13.8
PE Pre Ex. (X)	33.2	31.4	17.4	13.8
P/Cash Flow (X)	14.8	23.9	11.3	9.1
EV/EBITDA (X)	15.9	17.6	10.2	7.9
Net Div Yield (%)	n/a	n/a	n/a	n/a
P/Book Value (X)	5.4	5.3	4.1	3.2
Net Debt/Equity (X)	0.1	0.3	0.2	0.1
ROE (%)	17.4	18.2	26.0	25.3
<b>Earnings Rev (%)</b>		0.0	0.0	0.0
<b>Consensus EPS (KRW):</b>		395	532	659
<b>Other Broker Recs:</b>		B : 3	S : 0	H : 0

**ICB Industry:** Materials**ICB Sector:** Materials**Principal Business:** Foosung Co., Ltd. manufactures and sells chemical compounds and also car accessories such as car mats.

Source of all data: Company, DBS Bank, Bloomberg Finance L.P.

**Harvest season ahead**

- **Clear earnings visibility in 2019 on long-term supply contract for semiconductor materials**
- **Strongest earnings potential among materials companies**
- **Shares likely to re-rate on capacity expansion**
- **Retain BUY, KRW15,000 TP**

**Semiconductor materials demand growing especially for WF6 and C4F6.**

With increasing investments in expanding wafer production capacity and materials required per wafer sheet climbing, demand for chemical compounds WF6 and C4F6 is growing gradually. Foosung is expected to see a KRW50bn increase in annual revenue from C4F6, backed by its capacity expansion in 4Q18 (80t -> 180t) and long-term contract effective from 1Q19. The company's WF6 capacity is estimated at 400t for 4Q18. Given the new semiconductor fab operation schedules of its customers, Foosung is likely to embark on WF6 capacity expansion soon.

**To benefit from growth of Chinese secondary cell market on joint electrolyte capacity expansion with Chinese customer.**

Foosung's LiPF6 production capacity stands at 2,400t and it plans to grow capacity to 5,800t over the mid to long term starting in 4Q18. Losses from its Chinese subsidiary that began in 2Q17 should also narrow from 4Q18.

**Top pick in materials sector, in light of strongest growth potential.**

While Foosung's top line growth should slow down in 2018 due to limited capacity, its OPM should improve significantly (14.3% -> 17.3%) thanks to better product mix and gains from carbon credit trading. In 2019, the company should see strong earnings momentum with massive capacity expansion for semiconductor/secondary cell materials to be completed in 4Q18. It should deliver the steepest earnings growth (its 2019F EPS growth estimated at 77%) among materials players. We expect its shares to re-rate in 2019, as it saw a re-rating in 2017 following a huge capacity expansion. We maintain our BUY call and KRW15,000 TP (pegged to 2019F PE of 22x) for Foosung and retain it as our top pick.

**At A Glance**

Issued Capital (m shrs)	92.61
Mkt. Cap (KRWbn/US\$m)	1,116/1,002
Major Shareholders	
Kim Yong-min and 8 others (%)	49.6
Free Float (%)	44.7
Avg. Daily Vol. ('000)	1,632

## Company Focus

### Foosung

#### Earnings forecasts

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
	Unit: KRW bn, %							
Revenue	161	192	249	281	373	456	525	588
OP	15	36	35	49	82	103	122	140
EBITDA	30	55	61	68	116	145	167	188
NP	14	61	28	36	64	81	95	110
Total assets	261	311	316	391	454	517	595	687
Total equity	98	159	209	247	311	392	487	597
Net debt	107	76	31	81	67	24	(35)	(109)
Revenue growth	(13.8)	19.2	29.6	12.9	32.8	22.4	15.0	12.0
OP margin	9.4	19.0	14.3	17.3	21.9	22.5	23.2	23.8
Net margin	8.5	32.0	11.3	12.6	17.2	17.6	18.2	18.7
EPS growth	TTB	320.8	(51.5)	22.3	77.4	25.8	18.5	14.9
ROE	20.2	52.7	17.4	18.2	26.0	25.3	23.5	21.6

Source: DBS Bank

1. Earnings and valuation

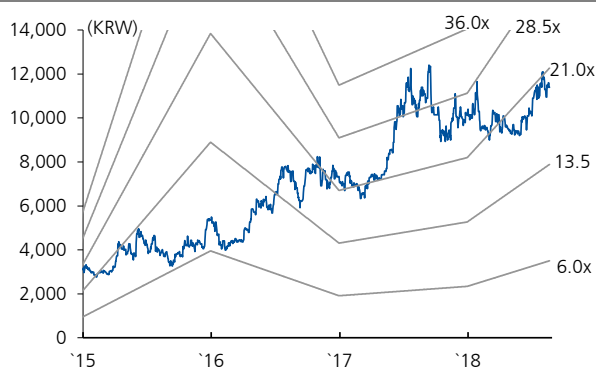
In 2018, we estimate revenue of KRW280.9bn (+12.9% y-o-y) and OP of KRW48.7bn (+37.3% y-o-y) for Foosung. Due to limited capacity, its top line growth should slow down but OPM is likely to improve significantly from 14.3% to 17.3%, backed by better product mix and gains from carbon credit trading.

In 2019, Foosung is expected to see strong earnings momentum on the back of substantial capacity expansion, and deliver the steepest earnings growth among materials manufacturers. In 4Q18, its capacity expansion for

semiconductor and secondary cell materials should be completed, and this should lead to a sharp earnings improvement in 1Q19 onwards. Its 2019F EPS growth is estimated at 77%.

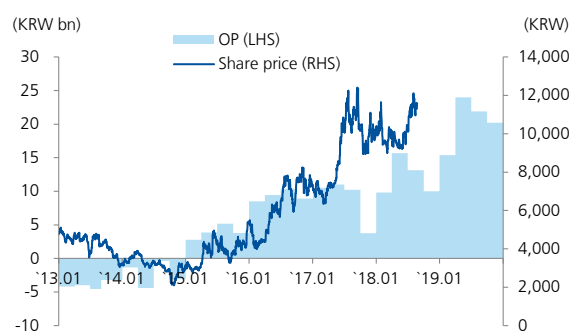
We believe that its long-term supply contract should prop up the company's growth potential for 2019. It is trading at 2019F PE of 16x, whereas specialty gas manufacturers' average 12-month forward PE is between 17x-20x. Given Foosung's capacity expansion schedule, its earnings are likely to improve over the medium to long term at least until 2020. In view of this, we anticipate a re-rating for Foosung's shares.

Foosung: 12-month forward PE band



Source: DBS Bank

Foosung: Five-year share price and OP trend



Source: DBS Bank

## Company Focus

### Foosung

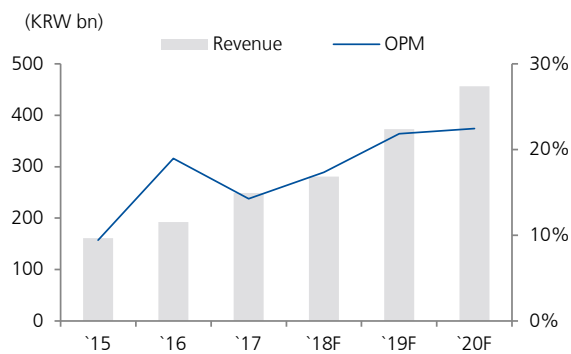
#### Foosung: Quarterly earnings estimates

(KRW bn)	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18F	4Q18F	1Q19F	2Q19F	3Q19F	4Q19F	2016A	2017A	2018F	2019F
<b>Revenue</b>																
Total	59.5	65.7	65.8	57.8	69.5	70.7	74.4	66.3	83.7	94.2	100.2	94.8	215.8	248.9	280.9	372.9
Fluorine compounds	59.5	65.7	65.8	57.8	69.5	70.7	74.4	66.3	83.7	94.2	100.2	94.8	189.9	248.9	280.9	372.9
YoY	25%	43%	29%	27%	17%	8%	13%	15%	21%	33%	35%	43%	17.8%	31.1%	12.9%	32.8%
QoQ	31%	11%	0%	-12%	20%	2%	5%	-11%	26%	12%	6%	-5%				
<b>OP</b>																
Total	10.5	11.0	10.2	3.8	9.8	15.7	13.2	10.0	15.4	24.0	21.9	20.2	37.2	35.6	48.7	81.4
OPM	18%	17%	16%	7%	14%	22%	18%	15%	18%	25%	22%	21%	19%	14.3%	17.3%	22%

Note: Based on consolidated K-IFRS

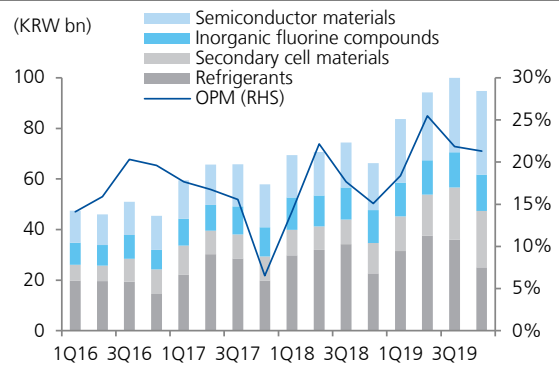
Source: Foosung, DBS Bank

#### Foosung: Earnings outlook



Source: Foosung, DBS Bank

#### Foosung: Earnings by division



Source: Foosung, DBS Bank

2. Major revenue streams

**Semiconductor materials: No. 1 in the global C4F6 market, no. 2 in the WF6 market**

Demand for chemical compounds WF6 and C4F6 is growing c.30% annually. With the downstream industries expanding their wafer production capacity, the supply-demand dynamics for semiconductor materials are tight. In 4Q18, Foosung's massive capacity expansion for C4F6 should be completed. As its long-term supply contract will be effective from 1Q19, the company is expected to generate additional revenue of KRW50bn annually. Furthermore, the profitability of its semiconductor materials division is likely to improve thanks to the recent stabilisation of hydrofluoric acid prices.

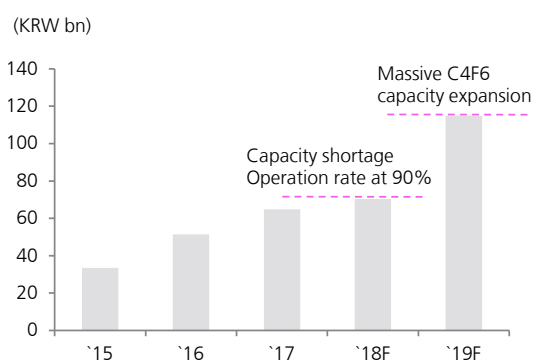
**Electrolyte: Turnaround likely, supported by large-scale capacity expansion and business normalisation in 2019**

Since Foosung's joint venture (JV) partner for the China market changed from German's BASF to a local Chinese company (49% stake in the JV transferred) in 2Q18, the Chinese subsidiary has been posting losses while its peers have been delivering 10% OPM. However, as its Chinese operations are expected to normalise, a turnaround is likely for the electrolyte division.

**Refrigerants: Foosung dominant in Korea. With air conditioner installations increasing, stable growth likely**

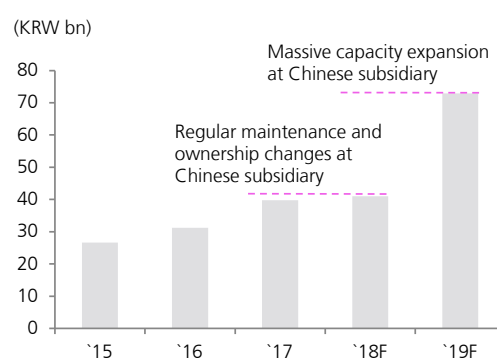
Due to global warming, air conditioner installations and their operation are increasing. Foosung's ASP is also trending upwards on the back of the introduction of eco-friendly refrigerants.

**Foosung: Semiconductor materials revenue**



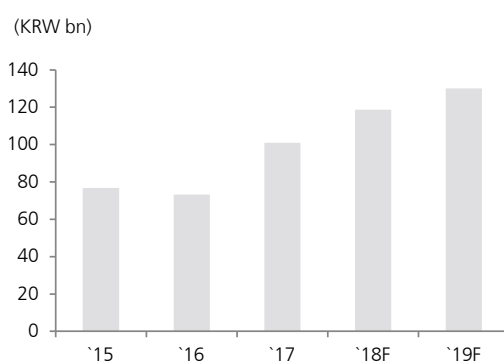
Source: Foosung, DBS Bank

**Foosung: Electrolyte revenue**



Source: Foosung, DBS Bank

**Foosung: Refrigerant revenue**



Source: Foosung, DBS Bank

## Company Focus

### Foosung

#### 3. Capacity expansion

##### Massive capacity expansion for semiconductor and secondary cell materials -> long-term supply contract -> mid/long-term earnings improvement

Semiconductor materials: Foosung plans to expand its C4F6 production capacity from 80t to 180t by 4Q18. The long-term contract to supply C4F6 should take effect in 1Q19. Considering the downstream semiconductor industry's new fab operation schedules, we expect Foosung to embark on WF6 capacity expansion soon.

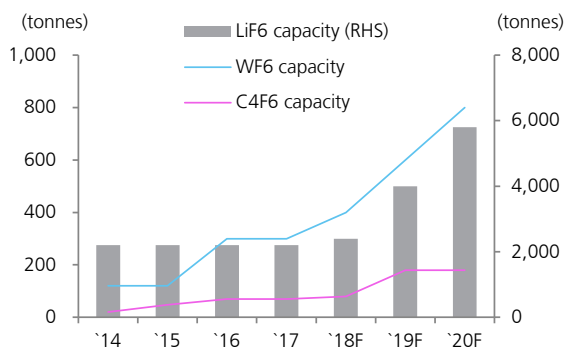
Secondary cell materials: Foosung's electrolyte production capacity currently stands at 2,400t. In collaboration with a

Chinese customer, the company plans to increase its capacity up to 5,800t from 4Q18.

##### Overall margins to improve over the long term, benefiting from growth of high-margin semiconductor materials sales and turnaround in its secondary cell materials division

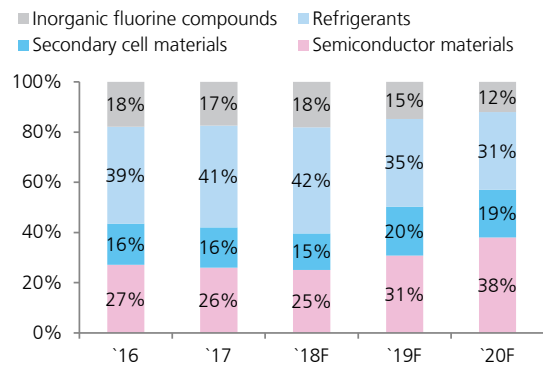
Revenue contribution from high-margin semiconductor materials is projected to increase from 25% in 2018 to 38% by 2020. Of note, its rivals' OPM hovers around 30-40%. Meanwhile, its secondary cell materials division, which saw operating losses of KRW3bn in 1Q-2Q18 on a consolidated basis due to the regular maintenance works at its Chinese subsidiary, is likely to see narrower losses beginning in 4Q18.

Foosung: Capacity expansion trends



Source: Foosung, DBS Bank

Foosung: Revenue breakdown by division



Source: Foosung, DBS Bank

Major customers' investment schedules vs. Foosung's revenue and capex

	1Q16	2Q16	3Q16	4Q16	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	
<b>Samsung Electronics</b>																	
Pyeongtaek #1				1st floor (N 100K)				2nd floor (D 40K, N 30K)					2nd floor (D 20K)		2nd floor (D 20K, N 30K)		
Xian 2															N 30K		
Line 18															System 30K		
Pyeongtaek #2																	
<b>SK Hynix</b>																	
M14				D 30K, N 40K				2nd floor (D 40K, N 15K)									
M15											N 30K					N 30K	
Wuxi												D 40K					
<b>Samsung Display</b>																	
A3				6G OLED 105K													
A4							6G OLED 30K										
A5																	
<b>LG Display</b>																	
GP 3 P1													8G OLED 60K				
GP 3 P2													8G OLED 30K				
P9 E6-1							6G OLED 15K										
P9 E6-2								6G OLED 15K									
<b>Revenue</b>	60.2	59.2	51.0	45.4	59.5	65.7	65.8	57.8	69.5	70.7	74.4	66.3	83.7	94.2	100.2	94.8	
<b>Capacity (tonnes)</b>																	
WF6	320	320	320	320	330	340	350	360	380	400	400	400	400	400	500	600	
C4F6	70	70	70	70	72	74	76	78	80	80	80	180	180	180	180	180	
LiPF6	2,200	2,200	2,200	2,200	2,200	2,250	2,300	2,300	2,350	2,400	2,400	3,000	3,300	3,600	3,800	4,000	
<b>CAPEX</b>	2.3	3.3	2.5	1.7	5.7	6.3	7.1	10.5	18.0	34.0	23.0	15.0	15.0	23.0	20.0	18.0	

Source: Foosung, DBS Bank

## Company Focus

### Foosung

#### BALANCE SHEET

(Unit:KRWbn)	2016	2017	2018F	2019F	2020F
Current Assets	123.2	107.3	111.9	145.8	185.2
Cash & Short-term investment	26.9	43.2	24.8	25.9	43.5
Accounts Receivable	34.8	35.6	45.8	65.4	78.5
Inventories	21.7	26.1	30.3	43.3	52.0
Fixed assets	187.7	208.8	279.3	307.9	331.8
Investment Assets	24.5	43.3	45.0	46.8	48.7
Tangible Assets	159.5	162.0	230.0	256.3	277.6
Intangible Assets	3.6	3.5	4.2	4.8	5.4
<b>Total Assets</b>	<b>310.9</b>	<b>316.1</b>	<b>391.2</b>	<b>453.7</b>	<b>517.0</b>
Current Liabilities	81.7	47.3	52.9	61.1	63.7
Accounts Payable	19.7	22.3	26.1	37.3	44.8
Short-term Debts	39.7	20.8	21.7	18.7	13.7
Non-current Liabilities	70.0	59.9	91.0	81.3	61.6
Long-term Debts	62.7	53.7	84.2	74.2	54.2
<b>Total Liabilities</b>	<b>151.7</b>	<b>107.2</b>	<b>143.9</b>	<b>142.4</b>	<b>125.2</b>
Capital Stock	46.2	46.2	46.2	46.2	46.2
Capital Surplus	53.4	53.4	53.4	53.4	53.4
Earned Surplus	42.5	72.0	108.3	172.3	252.8
Capital Adjustment	5.2	4.9	6.4	6.4	6.4
Treasury Stock	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)
<b>Total Equity</b>	<b>159.2</b>	<b>208.9</b>	<b>247.3</b>	<b>311.3</b>	<b>391.8</b>
Invested capital	219.6	204.7	292.1	340.6	376.9
Net debt / (cash)	75.5	31.2	81.1	67.1	24.4
ROA	21.5	9.0	10.0	15.2	16.6
ROE	52.7	17.4	18.2	26.0	25.3
ROIC	12.9	14.2	14.8	20.1	22.3

#### CASH FLOW

(Unit:KRWbn)	2016	2017	2018F	2019F	2020F
<b>Operating cash flow</b>	<b>34.9</b>	<b>51.9</b>	<b>44.4</b>	<b>76.9</b>	<b>108.5</b>
Net Profit	61.4	28.2	35.5	64.0	80.5
Depr. & Amort.	18.3	25.4	19.3	34.2	42.1
Chg in Working Capital	(19.6)	(8.0)	(1.8)	(21.5)	(14.3)
Chg in Accounts Receivable	(6.1)	(9.0)	0.1	(19.7)	(13.1)
Chg in inventories	(4.8)	(4.4)	(0.5)	(13.0)	(8.7)
Chg in Accounts Payable	(9.5)	7.2	(0.2)	11.2	7.5
<b>Investing cash flow</b>	<b>(13.3)</b>	<b>(31.6)</b>	<b>(91.3)</b>	<b>(62.9)</b>	<b>(65.9)</b>
Chg in Short-term Investments	(2.5)	4.9	1.2	(0.0)	(0.0)
Chg in Long-term Investment Securities	0.0	(6.7)	(1.1)	(1.5)	(1.5)
Capex	(9.8)	(29.6)	(89.9)	(60.0)	(63.0)
Disposal of Tangible & Intangible Assets	0.4	0.1	(1.0)	(1.0)	(1.0)
<b>Financing cash flow</b>	<b>(6.8)</b>	<b>(4.2)</b>	<b>35.5</b>	<b>(13.0)</b>	<b>(25.0)</b>
Chg in debt	(7.8)	(27.6)	35.5	(13.0)	(25.0)
Chg in Equity	0.0	23.4	(0.0)	0.0	0.0
Dividend Payout	0.0	0.0	0.0	0.0	0.0
Chg in Cash	7.9	14.5	(10.6)	1.0	17.6
<b>Gross cash flow</b>	<b>58.5</b>	<b>63.4</b>	<b>46.5</b>	<b>98.5</b>	<b>122.9</b>
(-) Chg in WC	18.0	(16.8)	18.4	21.5	14.3
(-) Capex	9.8	29.6	89.9	60.0	63.0
(+) Disposal of Assets	0.4	0.1	(1.0)	(1.0)	(1.0)
Free Cash Flow	31.1	50.7	(62.8)	15.9	44.5
(-) Other Investments	0.0	6.7	1.1	1.5	1.5
Free Cash	31.1	44.0	(63.9)	14.4	43.0

Source: DBS Bank

Note: Results are consolidated

\* Asset = Equity + Debt, P/E is derived by using diluted EPS.

#### INCOME STATEMENT

(Unit:KRWbn)	2016	2017	2018F	2019F	2020F
<b>Revenue</b>	<b>192.1</b>	<b>248.8</b>	<b>280.9</b>	<b>372.9</b>	<b>456.3</b>
Growth (%)	19.2	29.6	12.9	32.8	22.4
<b>Operating Profit</b>	<b>36.4</b>	<b>35.5</b>	<b>48.7</b>	<b>81.5</b>	<b>102.5</b>
Growth (%)	139.6	(2.6)	37.3	67.3	25.8
EBITDA	54.7	60.8	68.0	115.7	144.6
<b>Non-operating Gains/Losses</b>	<b>23.0</b>	<b>(2.2)</b>	<b>(1.7)</b>	<b>0.6</b>	<b>0.7</b>
Net Interest Income	(3.5)	(2.2)	0.3	0.6	0.7
Foreign Currency Gains	0.4	(0.8)	0.0	0.0	0.0
Equity Method Gains	0.1	0.5	(0.4)	0.0	0.0
<b>Pre-tax Profit</b>	<b>59.4</b>	<b>33.3</b>	<b>47.1</b>	<b>82.1</b>	<b>103.2</b>
<b>Net Profit</b>	<b>61.4</b>	<b>28.2</b>	<b>35.5</b>	<b>64.0</b>	<b>80.5</b>
Net profit attributable to controlling interest	60.9	29.5	36.1	64.0	80.5
Growth (%)	347.8	(54.1)	25.8	80.3	25.8
<b>NOPLAT</b>	<b>26.4</b>	<b>30.1</b>	<b>36.8</b>	<b>63.6</b>	<b>80.0</b>
(+) Dep	18.3	25.4	19.3	34.2	42.1
(-) Wc	18.0	(16.8)	18.4	21.5	14.3
(-) Capex	9.8	29.6	89.9	60.0	63.0
OpFCF	16.9	42.6	(52.3)	16.2	44.7
<b>3 Yr CAGR &amp; Margins</b>					
Revenue growth(3Yr)	(1.9)	10.0	20.3	24.7	22.4
OP growth(3Yr)	n/a	n/a	47.4	30.8	42.4
EBITDA growth(3Yr)	76.0	69.3	32.0	28.3	33.4
NP growth(3Yr)	n/a	n/a	37.3	1.4	41.8
OP margin (%)	19.0	14.3	17.3	21.9	22.5
EBITDA margin (%)	28.5	24.5	24.2	31.0	31.7
NP margin (%)	32.0	11.3	12.6	17.2	17.6

#### KEY INDICATOR

(Unit:KRW,x,%)	2016	2017	2018F	2019F	2020F
<b>Per share Data (w)</b>					
EPS	659	319	390	693	871
BPS	1,554	1,872	2,273	2,959	3,824
DPS	0	0	0	0	0
<b>Valuation (x,%)</b>					
PER	11.1	31.8	30.9	17.4	13.8
PBR	4.7	5.4	5.3	4.1	3.2
EV/EBITDA	13.8	15.9	17.6	10.2	7.9
Dividend yield	0.0	0.0	n/a	n/a	n/a
PCR	11.6	14.8	23.9	11.3	9.1
PSR	3.5	3.8	4.0	3.0	2.4
<b>Stabilities (%)</b>					
Liabilities Ratio	95.3	51.3	58.2	45.8	32.0
Net debt/Equity	47.4	14.9	32.8	21.5	6.2
Net debt/EBITDA	138.0	51.3	119.3	58.0	16.9
Current ratio	150.8	226.9	211.7	238.4	291.0
Interest coverage ratio	10.4	15.8	n/a	n/a	n/a
Interest/revenue	1.9	1.0	n/a	n/a	n/a
<b>Asset Structure</b>					
IC	81.0	70.3	80.7	82.4	80.3
Cash + IC (%)	19.0	29.7	19.3	17.6	19.7
<b>Capital Structure</b>					
Debt/Asset	39.1	26.3	30.0	23.0	14.8
Equity/Asset	60.9	73.7	70.0	77.0	85.2

**Stock Ratings**

The stock investment opinion below is based on the expected return of the recommended stock over the next 12 months relative to the closing price of the day it is recommended.

**STRONG BUY:** Expected to produce a return of at least 50% from the closing price of the day the stock is recommended

**BUY:** Expected to produce a return between 15% and 50% from the closing price of the day the stock is recommended

**HOLD:** Expected to produce a return between -5% and 15% from the closing price of the day the stock is recommended

**REDUCE:** Expected to produce a return of less than -5% from the closing price of the day the stock is recommended

**RATING UNDER REVIEW:** Temporary suspension of recommendation when there is material uncertainty in corporate value. TP is not provided.

The investment opinion presented in this report is based on the industry's outperformance relative to the market, and may differ from that of an individual stock.

**Overweight:** The industry's return is expected to outperform the average total return of the KOSPI over the next 12 months.

**Neutral:** The industry's return is expected to be in line with the average total return of KOSPI, over the next 12 months.

**Underweight:** The industry's return is expected to underperform the average total return of KOSPI, over the next 12 months.

Notes) The industry's return is on a risk-adjusted basis

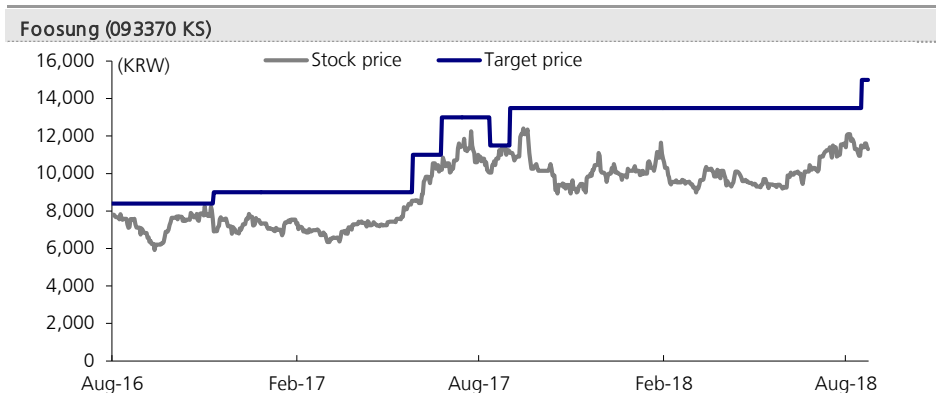
**Recent 2yr. Rating and TP Change**

Foosung (093370 KS)						
Date	2016.06.20	2016.11.15	2017.05.31	2017.07.03	2017.08.16	2017.09.01
Rating	BUY	BUY	BUY	BUY	BUY	BUY
TP	8,400	9,000	11,000	13,000	11,500	13,500
-----						
Date	2018.8.16					
Rating	BUY					
TP	15,000					

Source: DBS Bank

Analyst Name: Regional Research Team

**Recent 2yr. TP Change**



Source: DBS Bank

Analyst Name: Regional Research Team

## Company Focus

### Foosung

---

Completed Date: 28 Aug 2018 11:42:30 (HKT)  
Dissemination Date: 28 Aug 2018 16:39:34 (HKT)

Sources for all charts and tables are DBS Bank unless otherwise specified

#### GENERAL DISCLOSURE/DISCLAIMER

**This report is prepared by DBS Bank.** This report is solely intended for the clients of DBS Bank Ltd, its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS Bank.

The research set out in this report is based on information obtained from sources believed to be reliable, but we (which collectively refers to DBS Bank Ltd, its respective connected and associated corporations, affiliates and their respective directors, officers, employees and agents (collectively, the "DBS Group") have not conducted due diligence on any of the companies, verified any information or sources or taken into account any other factors which we may consider to be relevant or appropriate in preparing the research. Accordingly, we do not make any representation or warranty as to the accuracy, completeness or correctness of the research set out in this report. Opinions expressed are subject to change without notice. This research is prepared for general circulation. Any recommendation contained in this document does not have regard to the specific investment objectives, financial situation and the particular needs of any specific addressee. This document is for the information of addressees only and is not to be taken in substitution for the exercise of judgement by addressees, who should obtain separate independent legal or financial advice. The DBS Group accepts no liability whatsoever for any direct, indirect and/or consequential loss (including any claims for loss of profit) arising from any use of and/or reliance upon this document and/or further communication given in relation to this document. This document is not to be construed as an offer or a solicitation of an offer to buy or sell any securities. The DBS Group, along with its affiliates and/or persons associated with any of them may from time to time have interests in the securities mentioned in this document. The DBS Group, may have positions in, and may effect transactions in securities mentioned herein and may also perform or seek to perform broking, investment banking and other banking services for these companies.

Any valuations, opinions, estimates, forecasts, ratings or risk assessments herein constitutes a judgment as of the date of this report, and there can be no assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments. The information in this document is subject to change without notice, its accuracy is not guaranteed, it may be incomplete or condensed, it may not contain all material information concerning the company (or companies) referred to in this report and the DBS Group is under no obligation to update the information in this report.

This publication has not been reviewed or authorized by any regulatory authority in Singapore, Hong Kong or elsewhere. There is no planned schedule or frequency for updating research publication relating to any issuer.

The valuations, opinions, estimates, forecasts, ratings or risk assessments described in this report were based upon a number of estimates and assumptions and are inherently subject to significant uncertainties and contingencies. It can be expected that one or more of the estimates on which the valuations, opinions, estimates, forecasts, ratings or risk assessments were based will not materialize or will vary significantly from actual results. Therefore, the inclusion of the valuations, opinions, estimates, forecasts, ratings or risk assessments described herein IS NOT TO BE RELIED UPON as a representation and/or warranty by the DBS Group (and/or any persons associated with the aforesaid entities), that:

- (a) such valuations, opinions, estimates, forecasts, ratings or risk assessments or their underlying assumptions will be achieved, and
- (b) there is any assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments stated therein.

Please contact the primary analyst for valuation methodologies and assumptions associated with the covered companies or price targets.

Any assumptions made in this report that refers to commodities, are for the purposes of making forecasts for the company (or companies) mentioned herein. They are not to be construed as recommendations to trade in the physical commodity or in the futures contract relating to the commodity referred to in this report.

DBSVUSA, a US-registered broker-dealer, does not have its own investment banking or research department, has not participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months and does not engage in market-making.

**ANALYST CERTIFICATION**

The research analyst(s) primarily responsible for the content of this research report, in part or in whole, certifies that the views about the companies and their securities expressed in this report accurately reflect his/her personal views. The analyst(s) also certifies that no part of his/her compensation was, is, or will be, directly or indirectly, related to specific recommendations or views expressed in the report. The research analyst(s) primarily responsible for the content of this research report, in part or in whole, certifies that he or his associate<sup>1</sup> does not serve as an officer of the issuer or the new listing applicant (which includes in the case of a real estate investment trust, an officer of the management company of the real estate investment trust; and in the case of any other entity, an officer or its equivalent counterparty of the entity who is responsible for the management of the issuer or the new listing applicant) and the research analyst(s) primarily responsible for the content of this research report or his associate does not have financial interests<sup>2</sup> in relation to an issuer or a new listing applicant that the analyst reviews. DBS Group has procedures in place to eliminate, avoid and manage any potential conflicts of interests that may arise in connection with the production of research reports. The research analyst(s) responsible for this report operates as part of a separate and independent team to the investment banking function of the DBS Group and procedures are in place to ensure that confidential information held by either the research or investment banking function is handled appropriately. There is no direct link of DBS Group's compensation to any specific investment banking function of the DBS Group.

**COMPANY-SPECIFIC / REGULATORY DISCLOSURES**

1. DBS Bank Ltd., DBS HK, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS") or their subsidiaries and/or other affiliates do not have a proprietary position in the securities recommended in this report as of 31 Jul 2018.
2. Neither DBS Bank Ltd nor DBS HK market makes in equity securities of the issuer(s) or company(ies) mentioned in this Research Report.

**Compensation for investment banking services:**

3. DBSVUSA does not have its own investment banking or research department, nor has it participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months. Any US persons wishing to obtain further information, including any clarification on disclosures in this disclaimer, or to effect a transaction in any security discussed in this document should contact DBSVUSA exclusively.

**Disclosure of previous investment recommendation produced:**

4. DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"), their subsidiaries and/or other affiliates may have published other investment recommendations in respect of the same securities / instruments recommended in this research report during the preceding 12 months. Please contact the primary analyst listed in the first page of this report to view previous investment recommendations published by DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"), their subsidiaries and/or other affiliates in the preceding 12 months.


<sup>1</sup> An associate is defined as (i) the spouse, or any minor child (natural or adopted) or minor step-child, of the analyst; (ii) the trustee of a trust of which the analyst, his spouse, minor child (natural or adopted) or minor step-child, is a beneficiary or discretionary object; or (iii) another person accustomed or obliged to act in accordance with the directions or instructions of the analyst.

<sup>2</sup> Financial interest is defined as interests that are commonly known financial interest, such as investment in the securities in respect of an issuer or a new listing applicant, or financial accommodation arrangement between the issuer or the new listing applicant and the firm or analysis. This term does not include commercial lending conducted at arm's length, or investments in any collective investment scheme other than an issuer or new listing applicant notwithstanding the fact that the scheme has investments in securities in respect of an issuer or a new listing applicant.

## Company Focus

### Foosung

#### RESTRICTIONS ON DISTRIBUTION

<b>General</b>	This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation.
<b>Australia</b>	<p>This report is being distributed in Australia by DBS Bank Ltd. ("DBS") or DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"). DBS holds Australian Financial Services Licence no. 475946.</p> <p>DBSVS is exempted from the requirement to hold an Australian Financial Services Licence under the Corporation Act 2001 ("CA") in respect of financial services provided to the recipients. DBSVS is regulated by the Monetary Authority of Singapore under the laws of Singapore, which differ from Australian laws.</p> <p>Distribution of this report is intended only for "wholesale investors" within the meaning of the CA.</p>
<b>Hong Kong</b>	<p>This report has been prepared by an entity which is not licensed by the Hong Kong Securities and Futures Commission to carry on the regulated activity of advising on securities in Hong Kong pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). This report is being distributed in Hong Kong and is attributable to DBS Bank (Hong Kong) Limited, a registered institution registered with the Hong Kong Securities and Futures Commission to carry on the regulated activity of advising on securities pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong).</p> <p>For any query regarding the materials herein, please contact Carol Wu (Reg No. AH 8283) at <a href="mailto:equityresearch@dbs.com">equityresearch@dbs.com</a>.</p>
<b>Indonesia</b>	This report is being distributed in Indonesia by PT DBS Vickers Sekuritas Indonesia.
<b>Malaysia</b>	<p>This report is distributed in Malaysia by AllianceDBS Research Sdn Bhd ("ADBSR"). Recipients of this report, received from ADBSR are to contact the undersigned at 603-2604 3333 in respect of any matters arising from or in connection with this report. In addition to the General Disclosure/Disclaimer found at the preceding page, recipients of this report are advised that ADBSR (the preparer of this report), its holding company Alliance Investment Bank Berhad, their respective connected and associated corporations, affiliates, their directors, officers, employees, agents and parties related or associated with any of them may have positions in, and may effect transactions in the securities mentioned herein and may also perform or seek to perform broking, investment banking/corporate advisory and other services for the subject companies. They may also have received compensation and/or seek to obtain compensation for broking, investment banking/corporate advisory and other services from the subject companies.</p> <p style="text-align: right;"> Wong Ming Tek, Executive Director, ADBSR</p>
<b>Singapore</b>	This report is distributed in Singapore by DBS Bank Ltd (Company Regn. No. 196800306E) or DBSVS (Company Regn No. 198600294G), both of which are Exempt Financial Advisers as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. DBS Bank Ltd and/or DBSVS, may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, DBS Bank Ltd accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact DBS Bank Ltd at 6327 2288 for matters arising from, or in connection with the report.
<b>Thailand</b>	This report is being distributed in Thailand by DBS Vickers Securities (Thailand) Co Ltd.

<b>United Kingdom</b>	<p>This report is produced by DBS Bank Ltd which is regulated by the Monetary Authority of Singapore.</p> <p>This report is disseminated in the United Kingdom by DBS Vickers Securities (UK) Ltd, ("DBSVUK"). DBSVUK is authorised and regulated by the Financial Conduct Authority in the United Kingdom.</p> <p>In respect of the United Kingdom, this report is solely intended for the clients of DBSVUK, its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBSVUK. This communication is directed at persons having professional experience in matters relating to investments. Any investment activity following from this communication will only be engaged in with such persons. Persons who do not have professional experience in matters relating to investments should not rely on this communication.</p>
<b>Dubai International Financial Centre</b>	<p>This research report is being distributed by DBS Bank Ltd., (DIFC Branch) having its office at PO Box 506538, 3rd Floor, Building 3, East Wing, Gate Precinct, Dubai International Financial Centre (DIFC), Dubai, United Arab Emirates. DBS Bank Ltd., (DIFC Branch) is regulated by The Dubai Financial Services Authority. This research report is intended only for professional clients (as defined in the DFSA rulebook) and no other person may act upon it.</p>
<b>United Arab Emirates</b>	<p>This report is provided by DBS Bank Ltd (Company Regn. No. 196800306E) which is an Exempt Financial Adviser as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. This report is for information purposes only and should not be relied upon or acted on by the recipient or considered as a solicitation or inducement to buy or sell any financial product. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situation, or needs of individual clients. You should contact your relationship manager or investment adviser if you need advice on the merits of buying, selling or holding a particular investment. You should note that the information in this report may be out of date and it is not represented or warranted to be accurate, timely or complete. This report or any portion thereof may not be reprinted, sold or redistributed without our written consent.</p>
<b>United States</b>	<p>This report was prepared by DBS Bank Limited. DBSVUSA did not participate in its preparation. The research analyst(s) named on this report are not registered as research analysts with FINRA and are not associated persons of DBSVUSA. The research analyst(s) are not subject to FINRA Rule 2241 restrictions on analyst compensation, communications with a subject company, public appearances and trading securities held by a research analyst. This report is being distributed in the United States by DBSVUSA, which accepts responsibility for its contents. This report may only be distributed to Major U.S. Institutional Investors (as defined in SEC Rule 15a-6) and to such other institutional investors and qualified persons as DBSVUSA may authorize. Any U.S. person receiving this report who wishes to effect transactions in any securities referred to herein should contact DBSVUSA directly and not its affiliate.</p>
<b>Other jurisdictions</b>	<p>In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is intended only for qualified, professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions.</p>

**DBS Bank Ltd.**

12 Marina Boulevard, Marina Bay Financial Centre Tower 3

Singapore 018982

Tel. 65-6878 8888

e-mail: equityresearch@dbs.com

Company Regn. No. 196800306E

## Company Focus

### Foosung

---

#### DBS Regional Research Offices

---

##### HONG KONG

DBS Bank (Hong Kong) Ltd  
Contact: Carol Wu  
18th Floor Man Yee Building  
68 Des Voeux Road Central  
Central, Hong Kong  
Tel: 852 28204888  
Fax: 852 2521 1812  
e-mail: dbsvhk@dbs.com

##### MALAYSIA

AllianceDBS Research Sdn Bhd  
Contact: Wong Ming Tek (128540 U)  
19th Floor, Menara Multi-Purpose,  
Capital Square,  
8 Jalan Munshi Abdullah 50100  
Kuala Lumpur, Malaysia.  
Tel.: 603 2604 3333  
Fax: 603 2604 3921  
e-mail: general@alliancedbs.com

##### SINGAPORE

DBS Bank Ltd  
Contact: Janice Chua  
12 Marina Boulevard,  
Marina Bay Financial Centre Tower 3  
Singapore 018982  
Tel: 65 6878 8888  
Fax: 65 65353 418  
e-mail: equityresearch@dbs.com  
Company Regn. No. 196800306E

##### INDONESIA

PT DBS Vickers Sekuritas (Indonesia)  
Contact: Maynard Priajaya Arif  
DBS Bank Tower  
Ciputra World 1, 32/F  
Jl. Prof. Dr. Satrio Kav. 3-5  
Jakarta 12940, Indonesia  
Tel: 62 21 3003 4900  
Fax: 6221 3003 4943  
e-mail: research@id.dbsvickers.com

##### THAILAND

DBS Vickers Securities (Thailand) Co Ltd  
Contact: Chanpen Sirithanarattanukul  
989 Siam Piwat Tower Building,  
9th, 14th-15th Floor  
Rama 1 Road, Pathumwan,  
Bangkok Thailand 10330  
Tel. 66 2 857 7831  
Fax: 66 2 658 1269  
e-mail: research@th.dbs.com  
Company Regn. No 0105539127012  
Securities and Exchange Commission, Thailand