

2016. 12. 5

Company Update



Eunkyung Park
Analyst
eunkyung44.park@samsung.com
822 2020 7850

AT A GLANCE

SELL HOLD **BUY**

Target price KRW115,000 (35.1%)

Current price KRW85,100

Market cap	KRW6.5t/USD5.5b
Shares (float)	76,380,513 (65.2%)
52-week high/low	KRW113,000/KRW81,300
Avg daily trading value (60-day)	KRW17.4b/ USD14.9m

ONE-YEAR PERFORMANCE

	1M	6M	12M
Coway (%)	-4.2	-21.2	0.7
Vs Kospi (%pts)	-3.8	-20.6	2.7

KEY CHANGES

(KRW)	New	Old	Diff
Recommend.	BUY	BUY	
Target price	115,000	135,000	-14.8%
2016E EPS	3,371	3,393	-0.6%
2017E EPS	5,109	5,220	-2.1%

SAMSUNG vs THE STREET

No of estimates	11
Target price	115,700
Recommendation	3.8

BUY★★: 5 / BUY: 4 / HOLD: 3 / SELL: 2 / SELL★★: 1

Coway (021240)

Impressing both shareholders and customers

- Coway will retire treasury stock and spend KRW70b to buy back shares, its second such move in less than three months. We believe the actions aim to rebuild investor confidence after a scandal involving water purifiers containing nickel. Efforts to boost shareholder value should shore up the shares, particularly with the market wondering how the scandal would impact shareholder returns this year.
- We lower our target price for Coway to KRW115,000, applying a higher discount rate in our DCF valuation to reflect sharp fluctuations in macroeconomic variables.

WHAT'S THE STORY?

Returning value: Coway will cancel 771,749 treasury shares (or 1% of outstanding) and buy back KRW70b of shares (1.1% based on the current price). The move is the second such in less than three months, and we believe is aimed at regaining the confidence of shareholders after a scandal involving water purifiers containing nickel. Efforts to boost shareholder value should shore up the shares, particularly with the market wondering how the scandal would impact shareholder returns this year. All in all, we do not expect one-off costs this year to impact Coway's dividend, expecting the company to distribute the same as it did last year (KRW2,800), for a 3.3% yield based on the current share price.

Trimming forecasts to reflect promotion: We trim our 2016 and 2017 EPS forecasts by 0.6% and 2.10%, respectively, to reflect Coway's offer of three rent-free months for new customers. The promotion appears to be paying off—we believe rental-service operations have returned to pre-scandal levels and its sales network has stabilized. We now expect Coway's sales to grow 7.3% to KRW2.56t in 2017, and its operating profit to rise 49% to KRW522.5b (or 10% if one-off costs in 2016 are excluded).

Lowering target but maintaining BUY: We lower our 12-month target price for Coway from KRW135,000 to KRW115,000 to reflect our 2017 EPS forecast change, and fluctuations in macroeconomic variables that prompt us to adopt a higher discount rate in our DCF valuation. Our target assumes a WACC of 6.7% and terminal growth of 1.0%, offers 30% upside, and equates to 22.5x 2017 P/E—a 15% premium to Coway's five-year average that we believe is justified by the aggressive shareholder returns provided since 2014. We maintain BUY on Coway, expecting: 1) its operating profit to grow at a double-digit rate in 2017 as its business normalizes; and 2) additional growth drivers to emerge as Chinese operations take off. We believe the shares will find support from last week's announcement and an attractive dividend, and will re-rate as growth takes off in 2Q17.

SUMMARY FINANCIAL DATA

	2015	2016E	2017E	2018E
Revenue (KRWb)	2,315	2,385	2,560	2,765
Net profit (adj) (KRWb)	343	250	386	421
EPS (adj) (KRW)	4,492	3,371	5,109	5,565
EPS (adj) growth (% y-y)	39.3	(24.9)	51.5	8.9
EBITDA margin (%)	29.8	24.5	30.4	30.8
ROE (%)	30.1	19.9	28.2	27.1
P/E (adj) (x)	18.9	25.2	16.7	15.3
P/B (x)	5.5	5.3	4.5	4.0
EV/EBITDA (x)	9.4	11.1	8.1	7.3
Dividend yield (%)	3.3	3.3	3.8	4.1

Source: Company data, Samsung Securities estimates

Results and forecasts

	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16	3Q16	4Q16E	2015P	2016E	2017E	2018E
Earnings summary												
(KRWb)												
Sales	548.2	555.3	580.4	631.3	623.7	555.0	583.5	622.7	2,315.2	2,384.9	2,559.9	2,764.9
Gross profit	373.0	384.7	402.3	426.4	416.6	355.9	391.0	412.9	1,586.4	1,576.4	1,753.5	1,893.9
Operating profit	100.3	110.5	123.9	128.6	123.6	11.8	107.0	107.4	463.3	349.8	522.5	567.4
Pre-tax profit	101.1	108.9	121.7	122.7	125.3	5.2	90.0	113.4	454.5	334.0	514.9	561.2
Net profit	77.6	82.7	92.4	90.5	95.2	2.8	67.7	84.8	343.1	250.5	386.2	420.9
Margins (%)												
Gross profit	68.0	69.3	69.3	67.5	66.8	64.1	67.0	66.3	68.5	66.1	68.5	68.5
Operating profit	18.3	19.9	21.4	20.4	19.8	2.1	18.3	17.2	20.0	14.7	20.4	20.5
Pre-tax profit	18.4	19.6	21.0	19.4	20.1	0.9	15.4	18.2	19.6	14.0	20.1	20.3
Net profit	14.1	14.9	15.9	14.3	15.3	0.5	11.6	13.6	14.8	10.5	15.1	15.2
Chg (% y-y)												
Sales	2.5	(0.3)	10.4	16.3	13.8	(0.1)	0.5	(1.4)	7.2	3.0	7.3	8.0
Gross profit	5.8	4.3	12.6	20.2	11.7	(7.5)	(2.8)	(3.2)	10.6	(0.6)	11.2	8.0
Operating profit	11.1	13.7	30.1	57.4	23.2	(89.3)	(13.7)	(16.5)	27.1	(24.5)	49.4	8.6
Pre-tax profit	14.3	25.9	41.6	71.5	23.9	(95.2)	(26.0)	(7.6)	36.7	(26.5)	54.2	9.0
Net profit	17.4	24.8	44.5	69.6	22.7	(96.6)	(26.7)	(6.3)	37.4	(27.0)	54.2	9.0
Chg (% q-q)												
Sales	1.0	1.3	4.5	8.8	(1.2)	(11.0)	5.1	6.7				
Gross profit	5.2	3.1	4.6	6.0	(2.3)	(14.6)	9.9	5.6				
Operating profit	22.8	10.1	12.2	3.8	(3.9)	(90.4)	804.2	0.4				
Pre-tax profit	41.3	7.8	11.7	0.8	2.1	(95.8)	1,620.4	26.0				
Net profit	45.4	6.6	11.7	(2.0)	5.2	(97.1)	2,339.7	25.3				
Sales breakdown												
Household electronics	439.3	457.9	481.3	504.3	495.0	441.4	478.7	489.5	1,882.9	1,904.5	2,002.5	2,118.8
Outright sales	30.0	41.4	45.6	54.2	50.5	54.1	42.6	57.4	171.2	204.5	232.5	262.6
Rental	363.3	371.2	376.4	380.2	380.1	316.2	367.0	363.5	1,491.1	1,426.8	1,481.2	1,555.3
Membership	46.0	45.4	44.5	43.7	42.9	42.5	42.1	41.4	179.6	168.9	168.9	168.9
Financial lease			14.8	26.1	21.5	28.6	27.0	27.3	40.9	104.3	120.0	132.0
Exports	33.0	39.0	35.8	41.4	56.7	59.8	48.1	51.8	149.3	216.5	270.6	324.7
Cosmetics	23.1	21.1	18.6	20.2	20.1	17.3	18.1	19.2	83.1	74.8	82.2	90.5
Other (water treatment)	10.6	9.4	10.0	16.1	5.8	4.5	5.6	7.1	46.1	23.0	23.0	23.0
Consolidated other	42.1	27.9	34.7	49.3	46.1	32.1	33.0	55.0	194.9	166.1	181.5	207.9
Chg (% y-y)												
Household electronics	6.2	6.5	11.6	16.6	12.7	(3.6)	(0.5)	(2.9)	10.3	1.2	5.1	5.8
Outright sales	8.8	10.7	43.5	102.9	68.2	30.6	(6.6)	5.8	38.6	19.4	13.7	12.9
Rental	6.1	7.0	6.7	6.0	4.6	(14.8)	(2.5)	(4.4)	6.5	(4.3)	3.8	5.0
Membership	4.9	(0.8)	(5.0)	(6.7)	(6.8)	(6.4)	(5.4)	(5.4)	(2.0)	(6.0)	0.0	0.0
Financial lease							81.9	4.5			15.0	10.0
Exports	(27.0)	(30.0)	8.5	23.9	71.8	53.3	34.4	25.0	(10.8)	45.0	25.0	20.0
Cosmetics	10.5	(5.3)	8.3	1.1	(13.1)	(17.9)	(2.5)	(5.1)	3.3	(10.0)	10.0	10.0
Other (water treatment)	(28.2)	(38.6)	(31.7)	18.1	(45.3)	(52.1)	(43.4)	(56.0)	(21.0)	(50.0)	0.0	0.0
Consolidated other	4.7	(17.1)	17.7	13.6	9.4	15.1	(4.9)	11.7	32.9	(14.7)	9.3	14.5
Portion of total sales (%)												
Household electronics	80.1	82.5	82.9	79.9	79.4	79.5	82.0	78.6	79.9	79.9	78.2	76.6
Outright sales	5.5	7.5	7.9	8.6	8.1	9.7	7.3	9.2	7.3	8.6	9.1	9.5
Rental	66.3	66.8	64.9	60.2	60.9	57.0	62.9	58.4	63.3	59.8	57.9	56.3
Membership	8.4	8.2	7.7	6.9	6.9	7.7	7.2	6.6	7.6	7.1	6.6	6.1
Financial lease			2.6	4.1	3.4	5.2	4.6	4.4	1.7	4.4	4.7	4.8
Exports	6.0	7.0	6.2	6.6	9.1	10.8	8.2	8.3	6.3	9.1	10.6	11.7
Cosmetics	4.2	3.8	3.2	3.2	3.2	3.1	3.1	3.1	3.5	3.1	3.2	3.3
Other (water treatment)	1.9	1.7	1.7	2.5	0.9	0.8	1.0	1.1	2.0	1.0	0.9	0.8
Consolidated other	7.7	5.0	6.0	7.8	7.4	5.8	5.7	8.8	8.3	7.0	7.1	7.5

Source: Company data, Samsung Securities estimates

Accounts overview

('000)	1Q14	2Q14	3Q14	4Q14	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16	3Q16
Number of accounts											
Total	5,469	5,539	5,571	5,617	5,661	5,714	5,730	5,771	5,794	5,846	5,732
Chg (% y-y)	3.5	3.2	2.8	2.8	3.5	3.2	2.8	2.8	2.4	2.3	0.0
Rental account	4,455	4,487	4,538	4,601	4,666	4,747	4,780	4,832	4,861	4,921	4,823
Chg (% y-y)	(2.0)	(8.1)	(8.1)	(7.6)	4.7	5.8	5.3	5.0	4.2	3.7	0.9
Membership	1,014	1,052	1,034	1,016	994	967	950	939	933	924	908
Chg (% y-y)	7.5	(0.1)	8.7	8.4	(2.0)	(8.1)	(8.1)	(7.6)	(6.2)	(4.4)	(4.5)
Rental cancellations	129	139	130	130	134	143	151	138	146	148	224
Monthly churn (%)	0.1	1.3	21.5	95.9	3.2	2.7	16.2	6.9	9.1	4.0	47.8
Rental account additions	317	371	311	332	341	371	338	359	351	385	285
Chg (% y-y)	1.0	1.0	1.1	1.0	7.5	(0.1)	8.7	8.4	2.9	3.7	(15.6)
Outright sales account additions	40	60	52	32	40	60	63	63	66	68	54
Chg (% y-y)	4.7	5.8	5.3	5.0	0.1	1.3	21.5	95.9	67.2	12.2	(14.8)

Source: Company data, Samsung Securities estimates

Full-year forecast revisions

(KRWb)	2015	New		Old		Chg (%)	
		2016E	2017E	2016E	2017E	2016E	2017E
Sales	2,315	2,385	2,560	2,406	2,649	(0.9)	(3.4)
Operating profit	463	350	522	353	541	(0.9)	(3.4)
Pre-tax profit	454	334	515	337	533	(0.9)	(3.4)
Net profit	343	250	386	253	400	(0.9)	(3.4)
EBITDA	691	585	779	588	798	(0.5)	(2.3)
EPS (KRW)	4,492	3,371	5,109	3,393	5,220	(0.6)	(2.1)

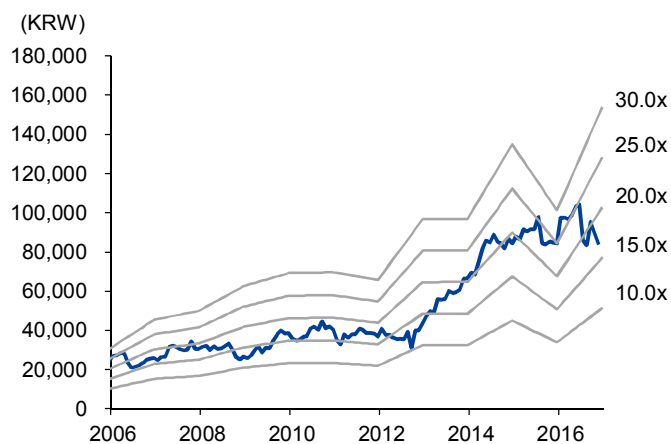
Source: Company data, Samsung Securities estimates

Valuation summary

Year-end	Sales	Op prof	Pre-tax prof	Net prof	EPS	Chg	P/E	P/B	ROE	EV/EBITDA	Net debt
Dec 31	(KRWb)	(KRWb)	(KRWb)	(KRWb)	(KRW)	(% y-y)	(x)	(x)	(%)	(x)	(KRWb)
2013	2,118	339	327	245	3,222	47.5	26.4	7.6	28.4	12.1	83
2014	2,160	364	332	250	3,225	0.1	26.4	6.6	25.2	11.2	12
2015	2,315	463	454	343	4,492	39.3	18.9	5.5	30.1	9.4	(38)
2016E	2,385	350	334	250	3,371	(24.9)	25.2	5.3	19.9	11.1	1
2017E	2,560	522	515	386	5,109	51.5	16.7	4.5	28.2	8.1	(86)
2018E	2,765	567	561	421	5,565	8.9	15.3	4.0	27.1	7.3	(205)

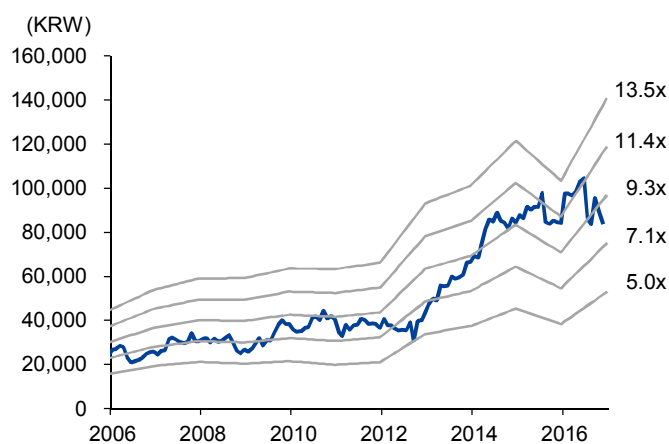
Source: Company data, Samsung Securities estimates

Forward P/E



Source: Company data, Samsung Securities estimates

Forward EV/EBITDA



Source: Company data, Samsung Securities estimates

DCF valuation

(KRWb)	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
EBIT	463	350	522	567	618	677	711	746	783	823	864
Tax	114	94	163	179	184	209	219	230	241	253	266
Capex	329	342	356	356	356	356	360	363	367	371	374
Change in working capital	54	-7	15	18	20	22	22	23	23	23	23
Depreciation	220	227	249	275	304	315	318	322	325	328	331
Amortization	8	8	8	8	8	8	8	8	8	8	8
Free cash flow	195	155	245	297	370	413	436	460	485	511	539
Terminal value	9,749										
Terminal growth (%)	1.0%										
NPV of FCF	2,648										
Present value of terminal value	5,151										
Enterprise value	7,798										
Equity value (adjusted)**	8,165										
Shares outstanding	75,609										
Fair value per share (KRW)	114,597										
Current share price (KRW)*	85,100										
Upside (%)	34.7%										

Note: * As of Dec 2 close; ** reflects a one-month adjustment to end-2016 discount rate

Source: Company data, Samsung Securities estimates

Income statement

Year-end Dec 31(KRWb)	2014	2015	2016E	2017E	2018E
Sales	2,160	2,315	2,385	2,560	2,765
Cost of goods sold	727	729	808	806	871
Gross profit	1,434	1,586	1,576	1,754	1,894
Gross margin (%)	66.4	68.5	66.1	68.5	68.5
SG&A expenses	1,069	1,123	1,227	1,231	1,327
Operating profit	364	463	350	522	567
Operating margin (%)	16.9	20.0	14.7	20.4	20.5
Non-operating gains (losses)	(32)	(9)	(16)	(8)	(6)
Financial profit	3	1	1	2	2
Financial costs	12	4	4	4	3
Equity-method gains (losses)	0	0	0	0	0
Other	(23)	(6)	(13)	(5)	(5)
Pre-tax profit	332	454	334	515	561
Taxes	83	111	83	129	140
Effective tax rate (%)	24.9	24.5	25.0	25.0	25.0
Profit from continuing operations	250	343	250	386	421
Profit from discontinued operations	0	0	0	0	0
Net profit	250	343	250	386	421
Net margin (%)	11.6	14.8	10.5	15.1	15.2
Net profit (controlling interests)	250	343	250	386	421
Net profit (non-controlling interests)	(0)	(0)	(0)	(0)	(0)
EBITDA	578	691	585	779	850
EBITDA margin (%)	26.8	29.8	24.5	30.4	30.8
EPS (parent-based) (KRW)	3,237	4,449	3,256	5,071	5,527
EPS (consolidated) (KRW)	3,237	4,449	3,256	5,071	5,527
Adjusted EPS (KRW)*	3,225	4,492	3,371	5,109	5,565

Cash flow statement

Year-end Dec 31(KRWb)	2014	2015	2016E	2017E	2018E
Cash flow from operations	537	513	513	650	708
Net profit	250	343	250	386	421
Non-cash profit and expenses	240	231	271	286	313
Depreciation	206	220	227	249	275
Amortization	8	8	8	8	8
Other	27	3	36	29	30
Changes in A/L from operating activities	47	(61)	(9)	(22)	(26)
Cash flow from investments	(299)	(329)	(342)	(356)	(356)
Change in tangible assets	(296)	(317)	(342)	(356)	(356)
Change in financial assets	0	1	0	0	0
Other	(3)	(13)	0	0	0
Cash flow from financing	(328)	(213)	(170)	(243)	(232)
Change in debt	(163)	(77)	38	(37)	1
Change in equity	0	0	(0)	(0)	0
Dividends	(124)	(148)	(208)	(206)	(233)
Other	(42)	12	0	(0)	0
Change in cash	(91)	(31)	0	50	120
Cash at beginning of year	239	147	116	116	166
Cash at end of year	147	116	116	166	286
Gross cash flow	490	574	521	672	734
Free cash flow	211	182	136	266	322

Note: * Excluding one off items, ** Fully diluted, excluding one-off items

*** From companies subject to equity-method valuation

Source: Company data, Samsung Securities estimates

Balance sheet

Year-end Dec 31(KRWb)	2014	2015	2016E	2017E	2018E
Current assets	597	653	650	720	864
Cash & equivalents	147	116	116	166	286
Accounts receivable	229	283	292	313	338
Inventories	62	70	72	77	83
Other current assets	158	184	170	163	156
Fixed assets	1,025	1,122	1,207	1,284	1,335
Investment assets	81	78	78	78	78
Tangible assets	675	700	785	862	913
Intangible assets	171	169	169	169	169
Other long-term assets	98	176	176	176	176
Total assets	1,622	1,775	1,858	2,005	2,199
Current liabilities	526	473	513	481	487
Accounts payable	59	60	62	66	71
Short-term debt	16	8	12	8	8
Other current liabilities	451	405	440	407	408
Long-term liabilities	56	64	64	64	64
Bonds & long-term debt	1	8	8	8	8
Other long-term liabilities	55	56	56	56	56
Total liabilities	582	537	577	545	552
Owners of parent equity	1,039	1,237	1,279	1,459	1,646
Capital stock	41	41	40	40	40
Capital surplus	126	127	127	127	127
Retained earnings	986	1,177	1,219	1,399	1,587
Other	(114)	(108)	(108)	(108)	(108)
Non-controlling interests' equity	1	1	1	1	1
Total equity	1,039	1,238	1,280	1,460	1,647
Net debt	12	(38)	1	(86)	(205)

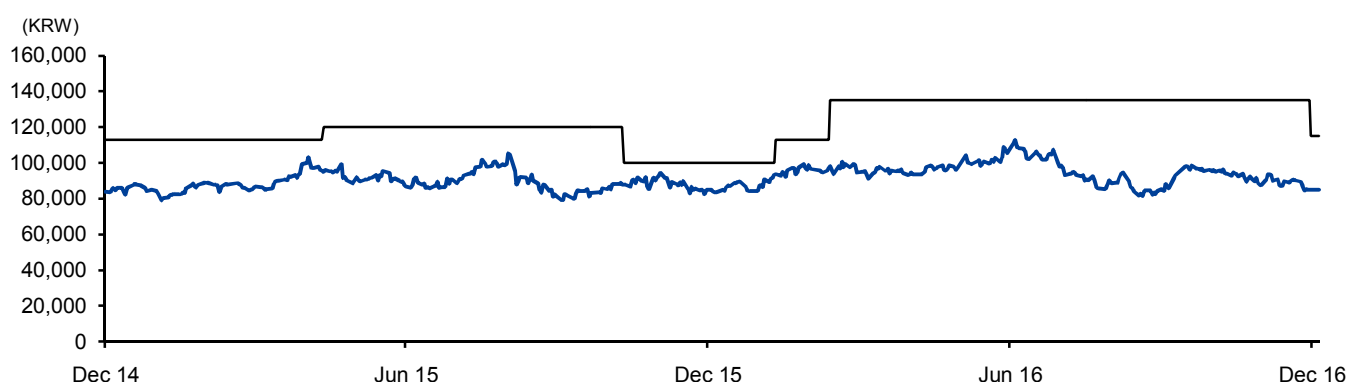
Financial ratios

Year-end Dec 31	2014	2015	2016E	2017E	2018E
Growth (%)					
Sales	2.0	7.2	3.0	7.3	8.0
Operating profit	7.5	27.1	(24.5)	49.4	8.6
Net profit	11.6	14.8	10.5	15.1	15.2
Adjusted EPS**	0.1	39.3	(24.9)	51.5	8.9
Per-share data (KRW)					
EPS (parent-based)	3,237	4,449	3,256	5,071	5,527
EPS (consolidated)	3,237	4,449	3,256	5,071	5,527
Adjusted EPS**	3,225	4,492	3,371	5,109	5,565
BVPS	12,934	15,465	16,167	18,705	21,186
DPS (common)	2,000	2,800	2,800	3,200	3,500
Valuations (x)					
P/E***	26.4	18.9	25.2	16.7	15.3
P/B***	6.6	5.5	5.3	4.5	4.0
EV/EBITDA	11.2	9.4	11.1	8.1	7.3
Ratios (%)					
ROE	25.2	30.1	19.9	28.2	27.1
ROA	15.2	20.2	13.8	20.0	20.0
ROIC	22.8	31.1	20.5	29.5	30.2
Payout ratio	59.4	60.6	82.4	60.4	60.6
Dividend yield (common)	2.4	3.3	3.3	3.8	4.1
Net debt to equity	1.1	(3.0)	0.1	(5.9)	(12.4)
Interest coverage (x)	31.6	106.8	95.3	141.4	183.6

Compliance notice

- As of Dec 2, 2016, the covering analyst(s) did not own any shares, or debt instruments convertible into shares, of any company covered in this report.
- As of Dec 2, 2016, Samsung Securities' holdings of shares and debt instruments convertible into shares of each company covered in this report would not, if such debt instruments were converted, exceed 1% of each company's outstanding shares.
- This report has been prepared without any undue external influence or interference, and accurately reflects the views of the analyst(s) covering the company or companies herein.
- All material presented in this report, unless specifically indicated otherwise, is under copyright to Samsung Securities.
- Neither the material nor its content (including copies) may be altered in any form, or by any means transmitted, copied, or distributed to another party, without prior express written permission from Samsung Securities.
- This memorandum is based upon information available to the public. While we have taken all reasonable care to ensure its reliability, we do not guarantee its accuracy or completeness. This memorandum is not intended to be an offer, or a solicitation of any offer, to buy or sell the securities mentioned herein. Samsung Securities shall not be liable whatsoever for any loss, direct or consequential, arising from the use of this memorandum or its contents. Statements made regarding affiliates of Samsung Securities are also based upon publicly available information and do not necessarily represent the views of management at such affiliates.
- This material has not been distributed to institutional investors or other third parties prior to its publication.

Target price changes in past two years



Rating changes in past two years

Date	2014/12/5	2015/4/16	10/15	2016/1/15	2/17	12/4
Recommendation	BUY	BUY	BUY	BUY	BUY	BUY
Target price (KRW)	113,000	120,000	100,000	113,000	135,000	115,000

Samsung Securities uses the following investment ratings.

Company

BUY★★★	Expected to increase in value by 30% or more within 12 months and is highly attractive within sector
BUY	Expected to increase in value by 10% or more within 12 months
HOLD	Expected to increase/decrease in value by less than 10% within 12 months
SELL	Expected to decrease in value by 10% or more within 12 months
SELL★★★	Expected to decrease in value by 30% or more within 12 months

Industry

OVERWEIGHT	Expected to outperform market by 5% or more within 12 months
NEUTRAL	Expected to outperform/underperform market by less than 5% within 12 months
UNDERWEIGHT	Expected to underperform market by 5% or more within 12 months

Percentage of ratings in 12 months prior to Sep 30, 2016

BUY (76%) | HOLD (24%) | SELL (0%)

Global Disclosures & Disclaimers

General

This research report is for information purposes only. It is not and should not be construed as an offer or solicitation of an offer to purchase or sell any securities or other financial instruments or to participate in any trading strategy. This report does not provide individually tailored investment advice. This report does not take into account individual client circumstances, objectives, or needs and is not intended as recommendations of particular securities, financial instruments or strategies to any particular client. The securities and other financial instruments discussed in this report may not be suitable for all investors. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein and investors should seek the advice of a financial adviser.

This report may not be altered, reproduced, distributed, transmitted or published in whole or in part for any purpose. References to "Samsung Securities" are references to any company in the Samsung Securities, Co., Ltd. group of companies.

Samsung Securities and/or other affiliated companies, its and their directors, officers, representatives, or employees may have long or short positions in any of the securities or other financial instruments mentioned in this report or of issuers described herein and may purchase and/or sell, or offer to purchase and/or sell, at any time, such securities or other financial instruments in the open market or otherwise, as either a principal or agent. Any pricing of securities or other financial instrument contained herein is as of the close of market for such day, unless otherwise stated. Opinions and estimates contained herein constitute our judgment as of the date of this report and are subject to change without notice.

The information provided in this report is provided "AS IS". Although the information contained herein has been obtained from sources believed to be reliable, no representation or warranty, either expressed or implied, is provided by Samsung Securities in relation to the accuracy, completeness or reliability of such information or that such information was provided for any particular purpose and Samsung Securities expressly disclaims any warranties of merchantability or fitness for a particular purpose. Furthermore, this report is not intended to be a complete statement or summary of the securities, markets or developments referred to herein.

Samsung Securities does not undertake that investors will obtain any profits, nor will it share with investors any investment profits. Samsung Securities, its affiliates, or any of its and their affiliates, directors, officers, employees or agents disclaim any and all responsibility or liability whatsoever for any loss (direct or consequential) or damage arising out of the use of all or any part of this report or its contents or otherwise arising in connection therewith. Information and opinions contained herein are subject to change without notice. Past performance is not indicative of future results. Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. For investment advice, trade execution or other enquiries, clients should contact their local sales representative. Any opinions expressed in this report are subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of Samsung Securities. Any analysis contained herein is based on numerous assumptions. Different assumptions may result in materially different results. Samsung Securities is under no obligation to update or keep current the information contained herein. Samsung Securities relies on information barriers to control the flow of information contained in one or more areas or groups within Samsung Securities into other areas or groups of Samsung Securities. Any prices stated in this report are for information purposes only and do not represent valuations for individual securities or other financial instruments. Samsung Securities makes no representation that any transaction can or could have been effected at those prices and any prices contained herein may not reflect Samsung Securities' internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions by Samsung Securities or any other source may yield substantially different results. Additional information is available upon request.

For reports to be distributed to US:

Securities research is prepared, issued and exclusively distributed by Samsung Securities Co., Ltd., an organization licensed with the Financial Supervisory Service of South Korea. This research may be distributed in the United States only to major institutional investors as defined in Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended, and may not be circulated to any other person otherwise. All transactions by U.S. investors involving securities discussed in this report must be effected through Samsung Securities (America) Inc., a broker-dealer registered with the U.S. Securities & Exchange Commission and a member of the Financial Industry Regulatory Authority/SIPC, and not through any non-U.S. affiliate thereof. The analysts listed [on the front of this report] are employees of Samsung Securities Co., Ltd., or a non-U.S. affiliate thereof, and are not registered/qualified as research analysts under applicable U.S. rules and regulations and may not be subject to U.S. restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

For reports to be distributed to UK:

This report is not an invitation nor is it intended to be an inducement to engage in investment activity for the purpose of section 21 of the Financial Services and Markets Act 2000 of the United Kingdom ("FSMA"). To the extent that this report does constitute such an invitation or inducement, it is directed only at (i) persons who are investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2001 (as amended) of the United Kingdom (the "Financial Promotion Order"); (ii) persons who fall within Articles 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order; and (iii) any other persons to whom this report can, for the purposes of section 21 of FSMA, otherwise lawfully be made (all such persons together being referred to as "relevant persons").

Any investment or investment activity to which this report relates is available only to relevant persons and will be engaged in only with relevant persons. Persons who are not relevant persons must not act or rely on this report.

For reports to be distributed to Korea:

This report is for private circulation only, not for sale, and is issued and distributed only to persons permitted under the laws and regulations of Korea.

For reports to be distributed to Singapore:

This report is provided pursuant to the financial advisory licensing exemption under Regulation 27(1)(e) of the Financial Advisers Regulation of Singapore and accordingly may only be provided to persons in Singapore who are "institutional investors" as defined in Section 4A of the Securities and Futures Act, Chapter 289 of Singapore. This report is intended only for the person to whom Samsung Securities has provided this report and such person may not send, forward or transmit in any way this report or any copy of this report to any other person.

Analyst certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of such analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research report. The analyst(s) principally responsible for the preparation of this research report receives compensation based on determination by research management and senior management (not including investment banking), based on the overall revenues, including investment banking revenues of Samsung Securities Co., Ltd. and its related entities and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.

Copyright © 2010 Samsung Securities Co., Ltd.. All rights reserved. This report or any portion hereof may not be reprinted, sold or redistributed without the prior written consent of Samsung Securities America Inc.