

Studio Dragon (253450)

Expect Return to Growth This Year

Danny Lee Internet & Games / Media +82-2-6114-2960 drlee@kbfg.com Yonghyun Choi Research Associate +82-2-6114-2915 yonghyun,choi@kbfq,com

February 11, 2022

Maintain BUY but lower TP by 5.5% to KRW120,000

We maintain BUY on Studio Dragon but lower our TP by 5.5% to KRW120,000. Our TP was derived using the DCF model (7.74% COE; 7.74% WACC; 2.0% TGR) and represents 15.2x 12m fwd implied EV/EBITDA.

Positive revenue growth despite delayed Distribution revenue recognition

Studio Dragon posted 4Q21 revenue of KRW147.9bn (+7.4% YoY, +27.4% QoQ) and OP of KRW6.3bn (+37.6% YoY, -56.5% QoQ). While revenue exceeded the market consensus by 16.7%, OP missed by 33.6%. Massive growth in Programming revenue (+30.7% YoY) was attributable to scaling up to blockbuster series such as *Jirisan* (2021) and *Bulgasal: Immortal Souls* (2021). Meanwhile, Distribution revenue declined 7.5% YoY on delayed revenue recognition for some programs (incl. *Jirisan*), resulting in disappointing OP.

Biggest blockbuster planned for this year; shrinkage in captive demand no longer serious concern

This year's growth potential is high. Studio Dragon plans to broadcast 32 programs, which is seven more than last year. This will greatly expand OTT service, as 13 out of 32 planned are for OTT (19 for TV). In 2021, despite the thriving OTT market amid the pandemic, the no. of programs produced was below expectations. This year, however, is encouraging, as the company is set to expand services to Tving, Netflix, iQiyi and Apple TV. Additional contracts may be won from Japan and the U.S. this year. While CJ ENM's multi-studio strategy posed a potential risk, shrinkage in captive demand is no longer a serious concern, as Tving announced plans for aggressive investments.

High sales growth to bolster earnings

We forecast 2022 revenue of KRW651.1bn (+33.7% YoY) and OP of KRW90.0bn (+71.2%

45 1%

10.8%

54.9% 6.3%

12M

-19.1

-13.3

CJ ENM and 3 others

3M

-8.2

0.9

6M

-12.3

12.5

Buu Maintain

Target Price (Lowered)	KRW120,000
Dividend yield*	0.0%
Total return	50.2%
Current price (Feb 10)	KRW79,900
Consensus target price	KRW127,667
Market capitalization	USD2.0bn

incorporate Statement

* 12-month forward

Earnings Forecast & Valuation				
Fiscal year-end	2020A	2021E	2022E	2023E
Revenue (KRWbn)	526	590	651	755
OP (KRWbn)	49	55	90	110
NP to control. int. (KRWbn)	30	39	65	81
EPS (KRW)	1,044	1,294	2,169	2,707
EPS growth (%)	10.9	23.9	67.6	24.8
P/E (x)	88.7	70.3	36.8	29.5
EV/EBITDA (x)	16.3	15.2	10.2	9.6
P/B (x)	4.6	4.2	3.2	2.9
ROE (%)	5.7	6.2	9.3	10.2
Div. yield (%)	N/A	0.0	0.0	0.0

Trading Data

Foreign ownership

Major shareholders

Avg. T/O val. (3m, KRWbn)

Stock Price Performance (total return)

1M

-9,2

-0.6

Free float

(%)

Absolute

Relative

This report was prepared by KB Securities, Co., Ltd., a broker-dealer registered in the Republic of Korea and a member of the Korea Exchange. For analyst certifications and other important information, please see Disclosures at the end of the report.

Risk & Total Return (annualized over three years)



Stock Price & Relative Performance



Source(s): Company data, KB Securities

YoY). An increase in no. of productions and growing overseas demand should bolster total no. of programs and sales by 20.0% and 43.6%, respectively. High expectations for the company's content relative to peers bodes well for sales growth/profitability.

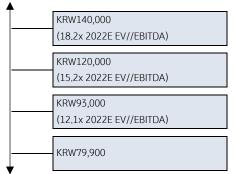
Investment Opinion & Risks

Bull-case scenario

Base-case scenario (target price)

Bear-case scenario

Current price



Base-case scenario: Catalysts

- 1) 2022E Distribution revenue +43.6% YoY
- 2) 2022E Programming with 32 works

Bull-case scenario: Upside risks

- 1) 2022E Distribution revenue over +50% YoY
- 2) 2022E Programming with over 35 works

Bear-case scenario: Downside risks

- 1) 2022E Distribution revenue under 30% YoY
- 2) 2022E Programming with under 27 works

Revised Earnings Estimates

(KRWbn, %)	Previo	us	Revis	sed	Change		
	2022E	2023E	2022E	2023E	2022E	2023E	
Revenue	630.3	657.0	651.1	755.1	3.3	14.9	
OP	91.1	109.0	90.0	109.7	-1.2	0.6	
NP (to control. int.)	70.4	83.0	65.0	81.2	-7.6	-2.2	

Source(s): KB Securities estimates

KB Estimates vs. Consensus

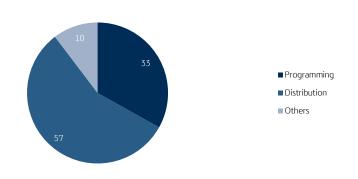
(KRWbn, %)	KB Estim	ates	Consen	sus	Difference		
	2022E	2023E	2022E	2023E	2022E	2023E	
Revenue	651.1	755.1	597.2	679.1	9.0	11.2	
OP	90.0	109.7	80.4	96.8	12.0	13.3	
NP (to control, int.)	65.0	81.2	67.0	80.2	-2.9	1.3	

Source(s): FnGuide, KB Securities estimates

Valuation & Target Price Calculation

- 1) Valuation method:
 Discounted cash flow model
- 2) Target price calculation: Target market cap of KRW3.5tn
- 3) Target price range: KRW93,000 - KRW140,000
- 4) Valuation at target price: 15.2x 2022E EV/EBITDAE

Revenue Composition (2022E)



Earnings Sensitivity Analysis

(%)	EPS Change				
	2022E	2023E			
+1pp in interest rate	+2.1	+2.1			
+1% in FX rate	+0.4	+0.4			

Source(s): KB Securities estimates

Peer Group Comparison

(KRWbn, x, %)	Market Cap	Fwd P/E	5y EPS CAGR	12m fwd P/B	12m fwd EV/EBITDA	5y EBITDA CAGR
Studio Dragon	2,398.1	34.7	N/A	3.2	9.9	N/A
Jcontentree	980.7	41.5	N/A	4.7	14.0	-0.8
CJ ENM	2,901.2	11.8	(11.8)	0.7	3.9	9.0
Netflix	219,032.8	33.6	90.4	8.9	21.3	73.1

Source(s): Bloomberg consensus, FnGuide, KB Securities estimates

³ ★ KB 증권

Table 1. 4Q21 Earnings (consolidated)

(KRWbn, %, pp)	4Q21P	3Q21	QoQ	4Q20	YoY	KB Estimates	Diff.	Consensus	Diff.
Revenue	147.9	116.1	27.4	137.7	7.4	150.2	(1.5)	126.7	16.7
OP	6.3	14.6	(56.5)	4.6	37.6	12.6	(49.5)	9.6	(33.6)
OPM	4.3	12.6	(8.3)	3.3	0.9	8.4	(4.1)	7.5	(3.3)
NP (to control. int.)	(8.0)	14.8	TTR	(2.9)	RR	12.8	TTR	7.8	TTR
NPM	(0.5)	12.8	(13.3)	(2.1)	1.6	8.5	(9.0)	6.1	(6.7)

Source(s): Quantiwise, KB Securities estimates Note: RR=remain in red, TTR=turn to red

Table 2. Earnings Forecast (consolidated)

(KRWbn)	1Q21	2Q21	3Q21	4Q21P	1Q22E	2Q22E	3Q22E	4Q22E	2020	2021P	2022E	2023E
Revenue	117.1	106.0	116.1	147.9	149.2	142.2	157.7	201.9	525.7	487.1	651.1	755.1
(% QoQ)	(15.0)	(9.5)	9.5	27.4	0.9	(4.7)	10.9	28.0	-	=	=	=
(% YoY)	(2.7)	(34.3)	9.2	7.5	27.4	34.1	35.9	36.5	12.2	(7.3)	33.7	16.0
Programming	43.8	28.2	36.2	53.2	52.5	33.2	41.7	66.2	197.0	161.3	193.6	228.6
Distribution	63.2	67.5	64.9	79.8	82.8	94.6	99.2	119.0	279.7	275.5	395.7	463.0
Other	10.1	10.3	15.0	14.9	13.9	14.4	16.8	16.7	49.0	50.3	61.7	63.6
Operating expenses	99.2	92.2	101.5	141.6	125.4	121.8	136.2	177.6	476.6	434.5	561.1	645.5
(% QoQ)	(25.4)	(7.1)	10.1	39.4	(11.4)	(2.9)	11.9	30.4	-		-	-
(% YoY)	(8.7)	(36.2)	12.5	6.4	26.4	32.0	34.2	25.5	8.3	(8.8)	29.1	15.0
Operating profit	17.9	13.8	14.6	6.3	23.7	20.4	21.5	24.3	49.1	52.6	90.0	109.7
(% QoQ)	287.6	(22.8)	5.6	(56.5)	274.3	(13.9)	5.3	12.8	-	=	=	=
(% YoY)	53.6	(18.2)	(9.0)	37.6	32.9	48.2	47.8	282.8	71.1	7.0	71.2	21.8
OPM (%)	15.3	13.0	12.6	4.3	15.9	14.4	13.6	12.0	9.3	10.8	13.8	14.5
NP (to control. int.)	15.6	9.5	14.8	(8.0)	18.4	16.3	18.0	12.3	29.6	39.0	65.0	81.2
(% QoQ)	TTB	(39.2)	56.4	TTR	TTB	(11.5)	10.3	(31.3)	-	-	_	_
(% YoY)	82.2	(29.1)	39.6	RR	18.4	72.1	21.3	TTB	12.1	31.8	66.5	24.8
NPM (%)	13.3	8.9	12.8	(0.5)	12.3	11.5	11.4	6.1	5.6	8.0	10.0	10.7

Source(s): Company data, KB Securities estimates

Note: RR=remain in red, TTB=turn to black, TTR=turn to red

Table 3. Earnings Estimate Revisions

(1/2)-/1 0/					2023E					
(KRWbn, %, pp)	Revised	Previous Change		Consensus	Diff.	Revised	Previous	Change	Consensus	Diff.
Revenue	651.1	630.3	3.3	597.2	9.0	755.1	657.0	14.9	679.1	11.2
OP	90.0	91.1	(1.2)	80.4	12.0	109.7	109.0	0.6	96.8	13.3
OPM	13.8	14.5	(0.6)	13.5	0.4	14.5	16.6	(2.1)	14.3	0.3
NP (to control. int.)	65.0	70.4	(7.6)	67.0	(2.9)	81.2	83.0	(2.2)	80.2	1.3
NPM	10.0	11.2	(1.2)	11.2	(1.2)	10.7	12.6	(1.9)	11.8	(1.1)

Source(s): Quantiwise, KB Securities estimates

¥⊌ KB증권

Table 4. Target Price Calculation: Discounted Cash Flow Model

(KRWbn, %,'000 shares, KRW)	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Cash flow projection										
Adj. FCF	153.4	169.5	219.1	211,4	220.2	228.0	233.9	237.2	241.0	218.3
FCFF	152.1	162.9	220.3	210.4	219.3	227.3	233.5	236.9	240.2	246.6
NOPLAT	67.5	82.3	91.9	99.7	106.7	112.2	115.4	118.9	122.5	126.1
(+) Depreciation & amortization	136.3	125.3	125.0	124.9	124.8	124.7	124.7	124.7	124.7	123.0
(-/+) Changes in working capital	110.1	147.8	143.1	156.0	166.9	175.2	180.4	185.8	191.3	197.0
(-) Capital expenditure	-6.0	-6.0	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-5.0
(-) Others	-155.8	-186.4	-135.3	-165.7	-174.6	-180.3	-182.5	-188.0	-193.7	-213.1
PV of cash flow										
WACC	7.74									
Discount	1.00	0.93	0.86	0.80	0.74	0.69	0.64	0.59	0.55	0.51
PV of cash flow	153.4	157.4	188.8	169.0	163.4	157.0	149.5	140.8	132.7	111.6
Terminal growth	2.0									
Terminal value	3,876.7							2031E	FCFF / (WA	CC - TGR)
PV of terminal value	1,981.5				7.749	% WACC (1.3	7% risk-free	rate; 7.16%	market risk	premium)
Valuation										
EV	3,505.0									
(-) Net debt	(64.6)									Net cash
Fair EV	3,570									
No. of shares	30,004									
Target price	120,000									
Current price	79,900								Feb	10, 2022
Upside	50.2									
Source(s): KB Securities estimates										

Source(s): KB Securities estimates

Table 5. Target Price Sensitivity to WACC & TGR

(KRW)			TGR (%)									
		1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8		
	7.14	120,727	123,182	125,814	128,644	131,693	134,989	138,563	142,452	146,700		
	7.34	117,076	119,337	121,756	124,349	127,137	130,141	133,388	136,910	140,741		
	7.54	113,654	115,741	117,969	120,352	122,907	125,653	128,613	131,812	135,282		
WACC (%)	7.74	110,440	112,370	114,427	116,622	118,970	121,487	124,193	127,109	130,261		
_	7.94	107,415	109,204	111,107	113,133	115,295	117,609	120,089	122,755	125,628		
	8.14	104,563	106,225	107,988	109,862	111,859	113,989	116,269	118,712	121,339		
	8.34	101,870	103,416	105,053	106,790	108,637	110,604	112,704	114,949	117,357		

Source(s): Quantiwise, KB Securities estimates

5 **米** KB증권

Table 6. WACC Revision

(KRWbn, %)	Previous (Aug 5, 2021)	Revised Feb 10, 2022)	Notes
COE (A) = a + b x c	7.41	7.74	
Risk-free rate (a)	0.79	1.37	Avg. 1y MSB yield (last three months)
Adj. beta (b)	0.90	0.89	Adj. beta
Risk premium (c = d - e)	7.36	7.16	
Market (d)	10.97	10.61	2001–21 annual avg. WMI500 total return
Risk-free rate (e)	3.61	3.45	2001–21 avg. 1y MSB total return
COD (B)	1.45	2.00	
Fair EV	Fair EV	3,570	Value of shares outstanding implied by TP
Debt	-90.0	-90.0	Net debt
Weight of equity (f)	100.00	100.00	As of 2021
Weight of debt (g)	0.00	0.00	
(KRWbn, %)	7.41	7.74	

Source(s): KB Securities estimates

Table 7. EV/EBITDA Valuation (Reference)

(KRWbn, %,'000 shares, KRW)	Value	Notes
2022E EBITDA	226.3	
Target EV/EBITDA (X)	15.2	A 20% discount to 2022E avg. EV/EBITDA of Netflix and Disney
EV	3,431	
(-) Net Cash	-64.60	Net Cash
Fair EV	3,495.3	
No. of shares	30,004	Fully diluted
Target price	120,000	
Current price	79,900	
Upside	50.2%	
Source(s): KB Securities estimates		

Fig 1. Revenue & OPM



Source(s): Company data, KB Securities estimates

₩ KB증권

Income Statement						Statement of Financial Position					
(KRWbn)	2019A	2020A	2021E	2022E	2023E	(KRWbn)	2019A	2020A	2021E	2022E	2023E
(Reporting standard)	(IFRS-C)	(IFRS-C)	(IFRS-C)	(IFRS-C)	(IFRS-C)	(Reporting standard)	(IFRS-C)	(IFRS-C)	(IFRS-C)	(IFRS-C)	(IFRS-C)
Revenue	469	526	590	651	755	Total assets	582	757	813	935	1,016
Cost of revenue	421	451	506	529	609	Current assets	245	228	275	310	402
Gross profit	48	75	84	123	146	Cash and cash equivalents	60	49	87	81	146
SG&A expenses	19	26	29	32	36	Current financial assets	57	52	58	16	16
Operating profit	29	49	55	90	110		84				189
EBITDA	146	165	170	226	235	Trade receivables	04	107	107	161 0	109
Non-operating accounts	4	-8	-4	-3	-1	Inventory Other surrent assets	44	21	23	51	51
Interest income	3	2	2	12	15	Other current assets					
Interest expenses	0	1	1	11	11	Non-current assets Investment assets	337	529 180	538 180	625 258	614 258
Profit on equity method	0	0	0	0	0		13	8			
Net other non-operating income	1	-9	-6	-5	-5	Property, plant and equipment	1		6	10	11
Profit before tax	33	42	51	87	108	Intangible assets	233	230	242	247 109	235 109
Income tax expense	7	12	12	22	27	Other non-current assets	89	111	111		
Net profit	26	30	39	65	81	Total liabilities	153	148	165	182	182
NP attributable to controlling interests	26	30	39	65	81	Current liabilities	145	132	148	169	169
						Trade payables	18	6	7	8	8
Adj. net profit	26	30	39	65	81	Short-term financial liabilities	2	2	3	5	5
0 " 5" " 5 0 "						Other current liabilities	125	124	139	156	156
Operating Statistics & Ratios	20101	20204	20245	20225	20275	Non-current liabilities	8	16	17	13	13
(%)	2019A	2020A	2021E	2022E	2023E	Non-current financial liabilities	8	8	8	10	10
Revenue growth	23.5	12,2	12,2	10.4	16.0	Other non-current liabilities	0	8	9	3	3
OP growth	-28.1	71.2	12,2	63.4	21.8	Total equity	428	609	648	753	834
EBITDA growth	26.4	13.6	3.1	32,8	3.8	Issued capital	14	15	15	15	15
NP growth of parent	-26.3	12,1	31,1	67.6	24.8	Share premium	322	470	470	470	470
GP margin	10,2	14,2	14,2	18.8	19.3	Other equity interest	0	0	0	0	0
OP margin	6.1	9.3	9.3	13.8	14.5	Accumulated other comprehensive income	-1	2	2	41	41
EBITDA margin	31,1	31.5	28.9	34.8	31.1	Retained earnings	94	123	162	227	308
EBT margin	7.1	7.9	8.6	13.3	14.4	Controlling interests	428	609	648	753	834
NP margin of parent	5.6	5.6	6.6	10.0	10.8	Non-controlling interests	0	0	0	0	0
Statement of Cash Flows						Key Ratios					
(KRWbn)	2019A	2020A	2021E	2022E	2023E	(x, %, KRW)	2019A	2020A	2021E	2022E	2023E
Cash flow from operating activities	-12	5	167	175	179	Multiples					
Net profit	26	30	39	65	81	P/E	85.9	88.7	70.3	36.8	29,5
Depreciation & amortization	117	116	115	136	125	P/B	5.3	4.6	4.2	3.2	2.9
Other non-cash adjustments	7	19	12	22	27	P/S	4.8	5.0	4.6	3.7	3.2
Investments in working capital	-143	-144	13	-27	-27	EV/EBITDA	14.9	16.3	15.2	10.2	9.6
Decrease(Increase) in receivables	-22	-31	0	-43	-27	EV/EBIT	75.5	54.7	47.1	25.7	20.5
Decrease(Increase) in inventory	1	0	0	0	0	Dividend yield, ordinary (%)	N/A	N/A	0.0	0.0	0.0
Increase(Decrease) in payables	9	-11	1	1	0	EPS	941	1,044	1,294	2,169	2,707
Investments in other working capital	-130	-101	13	15	0	BVPS	15,242	20,309	21,596	25,087	27,793
Other operating cash flow	-19	-15	-12	-22	-27	SPS	16,698	18,532	19,653	21,692	25,159
Cash flow from investing activities	-81	-16	-131	-136	-114	DPS (annual, ordinary)	0	0	0	0	0
Capital expenditure	0	-7	0	-6	-6	Cash dividends payout ratio (%)	0.0	0.0	0.0	0.0	0.0
Investments in intangibles	0	-1	-125	-108	-108	Operating performance					
Changes in investment assets	-57	-9	0	-10	0	ROE	6.4	5.7	6.2	9.3	10.2
Other investment cash flow	-23	1	-6	-12	0	ROA	4.8	4.4	4.9	7.5	8.3
Cash flow from financing activities	0	0	1	2	0	ROIC	5.7	6.9	6.7	9.6	10.2
Proceeds from (repayment of) debt	-1	-1	0	2	0	Financial structure (%)					
Changes in equity	1	1	0	0	0	Total liab./equity	35.8	24,3	25.5	24,1	21.8
Dividends paid	0	0	0	0	0	Net debt/equity	Net Cash	Net Cash	Net Cash	Net Cash	Net Cash
Other financing cash flow	0	1	1	0	0	Current ratio	1.7	1,7	1.9	1.8	2,4
Other cash flow	0	0	0	0	0	Interest coverage (x)	58.1	84.8	95.1	8.5	9.9
Increase/decrease in cash	-93	-11	38	40	65	Activity ratios					
Cash and cash equivalents at FYE	60	49	87	81	146	Asset turnover (x)	0.9	0.8	0.8	0.8	0.8
Free cash flow	-13	-2	167	169	173	Receivables turnover (x)	6.2	5,5	5.5	4.9	4.3
Net cash flow	-51	-16	44	-52	65	Payables turnover (x)	24.7	43,2	94.0	91,1	98.5

Source(s): Company data, KB Securities estimates

⊤ KB Securities

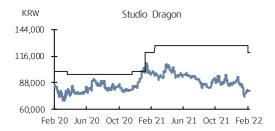
148 Inventory turnover (x)

134

82

0.0

Rating & Target Price Changes (Share price —, Target Price —)



Date	gon (253450 Rating	Analyst	TP Differential (%)			
			(KRW)	Avg.	Max/Min	
Jan-03-2020	Buy	Danny Lee	100,000	-16.00		
Feb-14-2020	Buy	Danny Lee	100,000	-23.50	-16.10	
Mar-30-2020	Buy	Danny Lee	97,000	-15.46	-4.64	
Nov-30-2020	Buy	Danny Lee	100,000	-9.63	3.70	
Jan-18-2021	Buy	Danny Lee	120,000	-15.59	-9.00	
Feb-23-2021	Buy	Danny Lee	127,000	-27.54	-14.96	
Feb-11-2022	Buy	Danny Lee	120,000			

Classification of Investment Ratings

Stock Ratings (based on expected 12m performance)

Buy: +15% or beyond Hold: Between 15% and -15% Sell: -15% or beyond Note: Classification revised from four ratings (Strong BUY, BUY, Marketperform, Underperform) to three

(Buy, Hold, Sell) as of Feb 23, 2017; Basis for ratings revised from expected 6m return to expected 12m return as of Feb 10, 2020

	, .	
Buy	Hold	Sell
82.2	17.8	=

Note: Based on recommendations in the last 12 months

Ratings Distribution (as of December 31, 2021)

Sector Ratings (based on expected 12m performance)

Positive.	Neutrat.	negative.				
To outperform market	To perform in line with market	To underperform market				
Note: Classification revised from Overweight/Neutral/Underweight to Positive/Neutral/Negative as of Jun						
28, 2017; Basis for ratings revised from expected 6m return to expected 12m return as of Eeb 10, 2020						

Notices & Disclaimers

This report has not been distributed to institutional investors or other third parties prior to its publication. The research analyst(s) responsible for the preparation of this report (or, if applicable, his/her spouse) does not have any beneficial interest in any security or issuer covered. This material 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.

This report is provided for information only and is not an offer or solicitation to trade in any security. Opinions in this report reflect the professional judgment of the research analyst(s) as of the date hereof and are based on information and data obtained from sources that KB Securities Co., Ltd. considers reliable. KB Securities Co., Ltd. makes no representation that the information and data are accurate or complete and the views presented in this report are subject to change without prior notification. Clients should independently consider their own particular circumstances and objectives and are solely responsible for their investment decisions. KB Securities Co., Ltd. shall not have liability for investments or results thereof.

These materials are the copyright of KB Securities Co., Ltd. and may not be reproduced, redistributed or modified without the prior written consent of KB Securities Co., Ltd. Comments and views in this report are of a general nature and intended for reference only and not authorized for use for any other purpose.

Analyst Certification

The research analyst(s) who prepared this report are registered with the Korea Financial Investment Association and are subject to Korean securities regulations. They are neither registered as research analyst(s) in any other jurisdiction nor subject to the laws or regulations thereof. The research analyst(s) responsible for the preparation of this research report certifies that all views expressed in this report accurately reflect the personal views of the analyst(s) and no part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the specific recommendations or views contained in this report.

Distribution

United States: This report is distributed in the U.S. by KBFG Securities America Inc., a member of FINRA/SIPC, to "major U.S. institutional investors" in reliance on the exemption from registration provided by Rule 15a-6(a)(2) under the U.S. Securities Exchange Act of 1934, as amended. All U.S. persons that receive this document by their acceptance hereof represent and warrant that they are a major U.S. institutional investor and have not received this report under any express or implied understanding that they will direct commission income to KB Securities Co., Ltd. or its affiliates. In compliance with SEC Rule 15a-6(a)(3), any U.S. recipient of this document wishing to effect a transaction in any securities discussed herein should contact and place orders with KBFG Securities America Inc., which accepts responsibility for the contents of this report in the U.S., subject to the terms hereof, to the extent that it is delivered to a U.S. person other than a major U.S. institutional investor. Under no circumstances should any recipient of this research report effect any transaction to buy or sell securities or related financial instruments through KB Securities Co., Ltd. The securities described in this report may not have been registered under the U.S. Securities Act of 1933, as amended, and, in such case, may not be offered or sold in the U.S. or to U.S. persons absent registration or an applicable exemption from the registration requirements.

Hong Kong: This report is distributed in Hong Kong by KB Securities Hong Kong Limited, regulated by the Securities and Futures Commission license with Type 1, 4, and 6. The contents of this report have not been reviewed by any regulatory authority in Hong Kong. This report is for distribution only to professional investors within the meaning of part I of Schedule 1 to the Securities and Futures Ordinance of Hong Kong (Cap. 571, Laws of Hong Kong) and any rules made thereunder and may not be redistributed in whole or in part in Hong Kong to any person. Information contained herein is for informative purposes only and does not constitute investment advice or solicitation to trade in any investment product(s). Investments are subject to risks, including possible loss of principal. KB Securities Hong Kong Limited does not bear responsibility for any loss occasioned by reliance placed upon the contents hereof. The recipient of this report should seek the advice of a financial adviser regarding the suitability or otherwise of the particular investment.

All other jurisdictions: Customers in all other countries who wish to effect a transaction in any securities referenced in this report should contact KB securities Co., Ltd. or its affiliates only if distribution to or use by such customer of this report would not violate applicable laws and regulations and not subject KB Securities Co., Ltd. and its affiliates to any registration or licensing requirement within such jurisdiction.