

Increasing TP to \$121

Baricitinib CRL Improves Filgotinib Positioning

We are increasing our Target Price for GLPG to \$121 from \$87. We view baricitinib's CRL (April 14) as a positive for GLPG, which will ultimately improve filgotinib's opportunity in the competitive RA market.

- Baricitinib (LLY/INCY) CRL May Limit First-Mover Advantage vs. Filgotinib.** We now anticipate at least a 1-year delay in baricitinib's approval, slimming the potential lead time on US market over filgotinib. Filgotinib top-line P3 RA results YE18. Additionally, baricitinib CRL-related dose/safety questions may impair the product label and marketing efforts. We now estimate filgotinib can more deeply penetrate the RA market; increasing market penetration in RA to 5% from previously 4%.
- Filgotinib's Higher Specificity May Confer Improved Risk/Benefit vs. Baricitinib.** Filgotinib's selective JAK1-inhibition may confer improved risk/benefit vs. baricitinib and tofacitinib. Xeljanz (tofacitinib), a marketed JAK1/3 inhibitor, remains limited by tolerability and mild efficacy. Baricitinib specificity (JAK2 and JAK1) demonstrated an improved safety profile compared to tofacitinib. We expect that the specific JAK1-inhibition of filgotinib will have lower off-target activity, resulting in an improved safety profile of filgotinib, particularly in combination.
- Filgotinib's FINCH Phase 3 Program Includes a Larger Database in Combination with Widely Used MTX.** The FINCH program for filgotinib in RA incorporated 3,273 patients similar to baricitinib's RA P3 program (n=3,388). However, in contrast to baricitinib, filgotinib's program includes two studies that evaluate the combo of filgotinib (high and low dose) and MTX in a total number of 2,850 patients, providing a large safety database for this combo and across doses.
- Next Filgotinib Landscape Data Flow:** (1) ABT-494 Crohn's data in 210 pts (4-doses) with inadequate response to anti-TNFs in May 2017; (2) filgotinib's DARWIN3 LOE study is ongoing, top-line data at EULAR (Jun. 14-17); (3) data from CELG's ozanimod in CD, mongersen in UC 1H17.
- Increasing Target Price to \$121 from \$87.** We now anticipate a higher penetration into the Rheumatoid Arthritis market from 4% to 5% and raise our TP to \$121 from \$87. GLPG's CF triple combo program represents \$30/share.

Instinet, LLC, Equity Research

17 April 2017

Rating Remains	Buy
Target Price Increased from 87.00	USD 121.00
Closing price 13 April 2017	USD 89.96
Potential upside	+34.5%

Research analysts

Americas Biotech

Christopher Marai, PhD - ILLC
Christopher.Marai@Instinet.com
+ 1 212-310-5466

Tahel Noy, PhD - ILLC
tahel.noy@instinet.com
+1 212-310-5469

Michelle Gilson - ILLC
michelle.gilson@instinet.com
+1 212-310-5465

Summary of Financials (€ths except per share)

	2016A	2017E	2018E
Total Revenues	€ 151,612	€ 166,055	€ 199,836
Operating Expense	€ 163,103	€ 385,451	€ 426,043
Operating Income	(€ 11,491)	(€ 219,396)	(€ 226,207)
Net Income, (GAAP)	€54,012	(€211,373)	(€226,442)
Diluted EPS, (GAAP)	€1.14	(€4.35)	(€4.68)
Cash (mn)	€973	€831	€637
Diluted Shares Outstanding (th)	47,308	48,624	48,434

Source: Company data, Instinet estimates

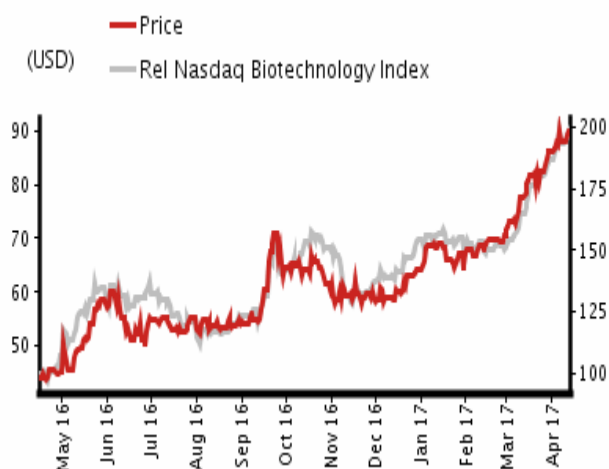
Key company data: See next page for company data and detailed price/index chart.

Key data on Galapagos NV

Rating

Stock	Buy
Sector	Not rated

Relative performance chart



Source: Thomson Reuters, Instinet research

Performance

(%)	1M	3M	12M
Absolute	15.2	30.0	107.3
Relative to Nasdaq Biotechnology Index	18.5	26.1	103.8

Stock price data

Current stock price (\$)	89.96
Market cap (\$ - mn)	4,161.2
52-week low (\$)	43.20
52-week high (\$)	90.46
Shares outstanding (mn)	46.26

Source: Thomson Reuters, Instinet research

Company Description

Galapagos NV is a clinical-stage biotechnology company focused on the discovery and development of small-molecule therapeutics in an area of disease with a considerable unmet need. The company's lead asset, filgotinib, is a JAK1-specific inhibitor for the treatment of inflammatory diseases. Filgotinib is being studied in three Phase 3 studies for the treatment of rheumatoid arthritis and two Phase 3 studies in inflammatory bowel disease. In addition, the company is developing a triple-combination therapy for the treatment of cystic fibrosis. One of the components of this combo demonstrated positive results in a Phase 2 study. The two additional compounds are in Phase 2 and 1 studies. Galapagos plans to initiate a triple-combo study in patients during 2H17.

Valuation

We change our valuation to top-line revenue multiple from DCF, a method widely used in early-stage biotechnology valuation. We also increase filgotinib peak penetration into the RA market to 5% from previously 4%, due to the delayed approval of baricitinib in this indication. We arrive at our target price of \$121 by using a 6x multiple for EU profit share on filgotinib across inflammatory indications and a 16x multiple for US royalties on filgotinib. In filgotinib for RA we apply a 15% discount rate, reflecting a lower development risk as the target, JAK, is already validated by an approved drug in RA. In filgotinib in UC and Crohn's, we apply at 20% discount rate, reflecting a slightly higher risk for these indications for which no JAK inhibitor is approved. For the Cystic Fibrosis program we use an 18x multiple, reflecting a higher value for the higher-margin orphan program and a 25% discount that reflects a higher development risk.

Fig. 1: Top-Line Revenue Valuation

Drug/Indication	Expected Launch	Peak Sales/Royalty Est (\$MM)	Valuation Year Sales	Multiple	Discounted Asset Value	Value / Share	Discount Rate	Partner
Filgotinib - Profit Split EU Big 5								
RA	2021	\$306	2025	6	\$690	\$14	15%	Gilead
Crohns	2022	\$76	2025	6	\$127	\$3	20%	Gilead
UC	2023	\$34	2025	6	\$57	\$1	20%	Gilead
<i>Sub Total</i>		\$416			\$874	\$18		
Filgotinib - US Royalties								
RA	2020	\$275	2025	16	\$1,654	\$34	15%	Gilead
Crohns	2021	\$192	2025	16	\$857	\$18	20%	Gilead
UC	2022	\$28	2025	16	\$125	\$3	20%	Gilead
<i>Sub Total</i>		\$495			\$2,636	\$54		
CF Triple Combo	2021	\$370	2025	18	\$1,477	\$30	25%	Abbvie
Pipeline Value					\$4,988	\$103		
Net Cash (YE:2017)					\$831	\$18		
Total Equity Value						\$121		
Diluted Shares Outstanding Used for Valuation (MM)							48.6	

Numbers may not add up due to rounding.

Source: Company reports, Instinet estimates

Upcoming Catalysts

Fig. 2: Potential Upcoming Catalysts

Date	Program	Indication	Impact	Event Description
1H17	Filgotinib	RA	+++	Competitor: Baricitinib PDUFA date. Interested in whether baricitinib will receive the same label as tofacitinib
1H17	Mongersen	UC	++	Competitor: Potential Phase 2 study results in UC
1H17	Ozanimod	CD	++	Competitor: Potential Phase 2 study results in CD
1H17	Otezla	CD	++	Competitor: Potential Phase 2 study results in UC
1H17	filgotinib	RA	++	Interim analysis of the LTE study in RA will be presented at the EULAR,
1H17	Filgotinib	CD	+	Additional data presentation from the FITZROY studies at the DDW conference
1H17/ACR	GLPG1972	Osteoarthritis	+	Data from first in humans study will disclose cartilage breakdown and target
1H17	GLPG1972	Osteoarthritis	+	US IND and initiation of a Phase 1b study
1H17	ABT-494	CD	++	Competitor: Phase 2 readout from AbbVie's ABT-494 in CD at DDW (May 6-7)
1H17	VX-661	CF	++	Competitor: Vertex results from a Phase 3 study with VX-661+rivacaftor
3Q17	Triple combo	CF	++	Initiation of a triple combo study in patients
2H17	2451+2222	CF	+++	Results of a combo study in healthy volunteers
2H17	Filgotinib	CD	+	Additional data presentation from the FITZROY studies at the UEGW conference
2H17	filgotinib	RA	+	Additional data presentation at the ACR conference
2H17	VX-440/VX-152	CF	++	Competitor: Vertex triple combo data from a Phase 2 study in CF patients
2H17	VX-659	CF	+	Competitor: Vertex triple combo data from a Phase 1 study in CF patients
2H17	2222	CF	+++	Results of Phase 2 in patients study in combination with Kalydeco
2H17	2451	CF	++	Results from a FIH study
3Q17	Triple combo	CF	+++	Results of the triple combo in healthy volunteers
1Q18	Triple combo	CF	+++	Results of the in patients study with the triple combo
Early2018	Filgotinib	UC	+++	Interim analysis of the Phase 2/3 study
2H18	Mongersen	CD	+++	Competitor: Phase 3 study results
2H18	Ozanimod	UC	+++	Competitor: Phase 3 study results

Source: Company reports, Instinet research

Fig. 3: Income statement

GLPG Income Statement												
(€1000s, except per share data) [FY - Dec]	2015	1Q16	2Q16	3Q16	4Q16A	2016A	1Q17	2Q17	3Q17	4Q17	2017E	2018E
US Filgotinib Sales (RA Only)	0	0	0	0	0	0	0	0	0	0	0	0
Intl Filgotinib Sales (RA Only)	0	0	0	0	0	0	0	0	0	0	0	0
US Filgotinib Sales (Crohn's)	0	0	0	0	0	0	0	0	0	0	0	0
Intl Filgotinib Sales (Crohn's)	0	0	0	0	0	0	0	0	0	0	0	0
US Filgotinib Sales (UC only)	0	0	0	0	0	0	0	0	0	0	0	0
Intl Filgotinib Sales (UC only)	0	0	0	0	0	0	0	0	0	0	0	0
Total Filgotinib Royalties	0	0	0	0	0	0	0	0	0	0	0	0
US GLPG- Triple Combo Royalties (CF)	0	0	0	0	0	0	0	0	0	0	0	0
Intl GLPG-Triple Combo Royalties (CF)	0	0	0	0	0	0	0	0	0	0	0	0
Total GLPG1837+Corrector Royalties	0	0	0	0	0	0	0	0	0	0	0	0
R&D revenue	39,563	10,121	28,674	11,214	79,510	129,519	22,274	28,956	37,643	48,935	137,807	151,588
Other Income	21,017	4,696	5,273	5,062	7,062	22,093	7,062	7,062	7,062	7,062	28,248	48,248
Total Revenues	60,579	14,817	33,947	16,276	86,572	151,612	29,336	36,018	44,705	55,997	166,055	199,836
Costs & Expenses:												
Cost of Goods Sold	0	0	0	0	0	0	0	0	0	0	0	0
R&D	129,714	27,818	34,594	34,327	42,834	139,573	55,684	72,389	94,106	122,338	344,518	378,970
SG&A	19,127	3,972	5,854	5,685	8,018	23,529	8,820	9,702	10,672	11,739	40,933	47,073
Restructuring and integration costs	1,182	422	454	396			0	0	0	0	0	0
Total Operating Expenses	150,023	32,212	40,902	40,408	50,852	163,103	64,504	82,091	104,778	134,077	385,451	426,043
Operating Income	(89,444)	(17,395)	(6,955)	(24,132)	35,720	(11,491)	(35,168)	(46,073)	(60,074)	(78,080)	(219,396)	(226,207)
Interest and Other Income (Expense), net	(30,632)	57,479	0	0	0	57,479	0	0	0	0	0	0
Pretax Income (Loss)	(119,627)	35,950	(4,371)	(23,439)	46,106	54,246	(33,104)	(44,009)	(58,009)	(76,016)	(211,138)	(226,207)
Income tax expense (Benefit)	1,218	0	24	(95)	(164)	(235)	(59)	(59)	(59)	(59)	(235)	(235)
Net Income (Loss) as reported	(118,410)	35,950	(3,721)	(24,091)	45,874	54,012	(33,163)	(44,068)	(58,068)	(76,074)	(211,373)	(226,442)
Stock option expense	5,036	1,092	3,150	2,959	3,833	11,034	3,225	4,105	5,239	6,704	19,273	29,823
Other	0	0	0	0	0	(1,605)	0	0	0	0	0	0
Net Income (Loss) Non-GAAP	(113,374)	37,042	(571)	(21,132)	49,707	63,441	(29,937)	(39,963)	(52,829)	(69,370)	(192,100)	(196,619)
Diluted Earnings Per Share Non-GAAP	(€2.90)	€0.83	(€0.01)	(€0.46)	€1.01	€1.34	(€0.62)	(€0.82)	(€1.07)	(€1.43)	(€3.95)	(€4.29)
Basic Earnings Per Share Non-GAAP	(€2.81)	€0.81	(€0.01)	(€0.44)	€1.07	€1.39	(€0.64)	(€0.87)	(€1.14)	(€1.52)	(€4.16)	(€4.29)
Diluted Earnings Per Share	(€3.03)	€0.81	(€0.10)	(€0.53)	€0.93	€1.14	(€0.69)	(€0.91)	(€1.18)	(€1.57)	(€4.35)	(€4.68)
Basic Earnings Per Share as reported	(€2.94)	€0.79	(€0.10)	(€0.52)	€0.99	€1.18	(€0.71)	(€0.96)	(€1.25)	(€1.66)	(€4.58)	(€4.94)
Basic Shares Outstanding (th)	39,076	44,425	45,229	45,527	46,450	45,696	46,496	45,742	46,543	45,787	46,142	45,833
Diluted Shares Outstanding (th)	40,308	45,492	46,756	48,328	49,251	47,308	48,023	48,542	49,344	48,588	48,624	48,434

Source: Company reports, Instinet estimates

Fig. 4: Balance Sheet

(€1000s, except per share data) [FY - Dec]	2015A	2016A	2017E	2018E
ASSETS				
Current assets:				
Cash and cash equivalents	340,314	973,241	831,362	637,430
Current restricted cash	6,857	6,570	6,570	6,570
Current R&D incentives receivables	9,161	10,154	10,154	10,154
Current financial assets from share subscription agreement	8,371	0		
Short term marketable securities	0		0	0
Trade & other receivables	3,931	9,728	2,918	2,918
Inventory	325	300	300	300
Prepaid expenses and other current assets	5,512	7,239	7,239	7,239
Total current assets	374,470	1,007,232	858,544	664,612
Property and equipment, net	13,782	14,961	17,908	23,461
Goodwill	0	0	0	0
Intangible assets	1,550	1,023	1,023	1,023
Deferred tax assets/receivables	1,726	1,957	1,957	1,957
Non-current R&D incentives receivables	49,384	54,188	54,188	54,188
Non-current restricted cash	1,046	1,098	1,098	1,098
Other non-current assets	557	2,880	2,879	2,879
Total assets	442,514	1,083,338	937,596	749,218
LIABILITIES AND STOCKHOLDER'S EQUITY				
Current liabilities:				
Trade and other payables	29,482	31,269	77,090	85,209
Current obligations under finance lease	52	54	54	54
Current tax payable	2,583	1,022	1,022	1,022
Accrued charges	490	619	1,156	1,278
Deferred income	39,806	70,827	70,827	70,827
Other current liabilities	0	0	0	0
Total current liabilities	72,412	103,791	150,150	158,390
Long term debt	0	0	0	0
Obligations under finance lease	63	9	9	9
Deferred Revenue	0	214,785	214,785	214,785
Provisions	55	63	63	63
Pension liabilities	2,693	3,520	3,520	3,520
Other liabilities	2,291	2,469	2,469	2,469
Total liabilities	77,515	324,637	370,996	379,236
Stockholders' equity:				
Common Stock	185,399	223,928	223,928	223,928
Additional paid in capital	357,402	649,135	649,135	649,135
Other reserves	(18)	(1,000)	(1,000)	(1,000)
Translation differences	(467)	(1,090)	(1,090)	(1,090)
Accumulated other comprehensive loss	0	0	0	0
Accumulated Deficit	(177,319)	(112,272)	(304,372)	(500,991)
Total stockholders' equity	364,999	758,701	566,601	369,982
Total liabilities and stockholders' equity	442,514	1,083,338	937,596	749,218

Source: Company reports, Instinet research

Fig. 5: Cash Flow Statement

(€1000s, except per share data) [FY - Dec]	2015A	2016A	2017E	2018E
CASH FLOWS FROM OPERATING ACTIVITIES				
Net Income (Loss)	(118,410)	54,012	(211,373)	(226,442)
Adjustments				
Tax income/expenses	(1,218)	235	0	0
Other net financial income	(448)	(8,258)	0	0
Fair value measurement of share subscription	30,632	(57,479)	0	0
Depreciation and amortization	3,402	4,182	3,740	4,477
Net realized loss for foreign exchange transaction	(398)	1,229	0	0
Stock based compensation	5,036	11,034	19,273	29,823
Other	0		0	0
Change in assets and liabilities:				
Increase/decrease in provisions	(125)	7	0	0
Increase pension liabilities	30	244	0	0
Gain on sale of fixed assets	(62)	(14)	0	0
Inventories	(44)	25	0	0
Account receivables	(7,220)	(12,978)	6,810	0
Prepaid expenses & other assets	0	0	0	0
Accounts payable and accrued expenses	(26,728)	2,102	46,359	8,240
Interest paid	(49)	(47)	0	0
Interest received	1,106	1,066	0	0
Income taxes paid/received	(94)	(1,763)	0	0
Current obligations under finance lease	0	2	0	0
Deferred revenues & other	0	245,806	0	0
Net cash provided by (used in) operating activities	(114,590)	239,405	(135,192)	(183,902)
CASH FLOWS FROM INVESTING ACTIVITIES				
Purchases of property and equipment	(6,100)	(4,458)	(6,687)	(10,031)
Purchase of and expenditure of intangible fixed assets	(565)	(332)	0	0
Proceeds from disposal of PPE	110	18	0	0
Increase/decrease in restricted cash	2,258	235	0	0
Investments, net	0	(2,750)	0	0
Other	0	0	0	0
Net cash used in investing activities	(4,297)	(7,287)	(6,687)	(10,031)
CASH FLOWS FROM FINANCING ACTIVITIES				
Proceeds from issuance of shares, net cost	271,413	391,784	0	0
Exercise of options	0	4,261	0	0
Repayment obligations under finance and other debt	(43)	(49)	0	0
Repurchase of common stock	0	0	0	0
Other	0		0	0
Net cash provided by financing activities	271,370	395,996	0	0
Effect of exchange rate on cash	118	4,816		
Net increase in cash and cash equivalents	152,483	632,927	(141,879)	(193,932)
Cash and cash equivalents at beginning of period	187,712	340,314	973,241	831,362
Cash and cash equivalents at end of period	340,314	973,241	831,362	637,430

Source: Company reports, Instinet research

Appendix A-1

Analyst Certification

I, Christopher Marai, hereby certify (1) that the views expressed in this Research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this Research report, (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this Research report and (3) no part of my compensation is tied to any specific investment banking transactions performed by Nomura Securities International, Inc., Nomura International plc or any other Nomura Group company.

Issuer Specific Regulatory Disclosures

The terms "Nomura" and "Nomura Group" used herein refers to Nomura Holdings, Inc. and its affiliates and subsidiaries, including Nomura Securities International, Inc. ('NSI') and Instinet, LLC('ILLC'), U. S. registered broker dealers and members of SIPC.

Materially mentioned issuers

Issuer	Ticker	Price	Price date	Stock rating	Sector rating	Disclosures
Galapagos NV	GLPG US	USD 89.96	13-Apr-2017	Buy	Not rated	A6

A6 The Nomura Group expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months.

Galapagos NV (GLPG US)

USD 89.96 (13-Apr-2017) Buy (Sector rating: Not rated)

Rating and target price chart (three year history)



For explanation of ratings refer to the stock rating keys located after chart(s)

Valuation Methodology We use top-line revenue multiple valuation, a method widely used in early-stage biotechnology valuation. We arrive at our target price of \$121 by using a 6x multiple for EU profit share on filgotinib across inflammatory indications and a 16x multiple for US royalties on filgotinib. In filgotinib for RA we apply a 15% discount rate, reflecting a lower development risk as the target, JAK, is already validated by an approved drug in RA. In filgotinib in UC and Crohn's we apply a 20% discount rate, reflecting a slightly higher risk for these indications for which no JAK inhibitor is approved. For the Cystic Fibrosis program we use a 18x multiple, reflecting a higher value for the higher-margin orphan program and a 25% discount that reflects a higher development risk.

Risks that may impede the achievement of the target price Regulatory risk: The FDA may require Galapagos to present data on the efficacy of the individual triple combo drugs in the target patient population, which would require Galapagos to conduct a large Phase 2 study. Enrollment of patients in these studies might be challenging due to the low expectation of efficacy from a single compound. For filgotinib, the FDA may issue a class label concerning the risk for serious infections and malignancies. This action will not prevent filgotinib from reaching the market, but it could create a negative perception of the drug among patients and physicians, which would affect commercial viability of the drug. Competitive risk: Baricitinib, a JAK 1/2 inhibitor, was expected to be approved by January 19, 2017. In clinical studies, the drug presented compelling efficacy, superior

to adalimumab. If baricitinib is found to be safe and approved without a black-box warning, it has the potential to take the lion's share of the market. Celgene's mongersen, a SMAD7 anti-sense RNA, showed compelling safety and efficacy profile in a Phase 2 study in CD patients. The compound is in a Phase 3 study and is set to report top-line data by 2H18. If approved, mongersen would have first-mover advantage as the only orally available DMT for Crohn's. Clinical risk: The Phase 2 study with filgotinib in CD used the CDAI as the primary outcome measure. The Phase 3 study is using the more traditional PRO as the primary outcome measure. This difference in design may result in a smaller efficacy difference between the placebo and treatment arms in the Phase 3 study.

Important Disclosures

Online availability of research and conflict-of-interest disclosures

Nomura Group research is available on www.nomuranow.com/research, Bloomberg, Capital IQ, Factset, MarkitHub, Reuters and ThomsonOne. Important disclosures may be read at <http://go.nomuranow.com/research/globalresearchportal/pages/disclosures/disclosures.aspx> or requested from Nomura Securities International, Inc., or Instinet, LLC on 1-877-865-5752. If you have any difficulties with the website, please email grpsupport@nomura.com for help.

The analysts responsible for preparing this report have received compensation based upon various factors including the firm's total revenues, a portion of which is generated by Investment Banking activities. Unless otherwise noted, the non-US analysts listed at the front of this report are not registered/qualified as research analysts under FINRA rules, may not be associated persons of NSI or ILLC, and may not be subject to FINRA Rule 2241 restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

Nomura Global Financial Products Inc. ("NGFP") Nomura Derivative Products Inc. ("NDPI") and Nomura International plc. ("NIplc") are registered with the Commodities Futures Trading Commission and the National Futures Association (NFA) as swap dealers. NGFP, NDPI, and NIplc are generally engaged in the trading of swaps and other derivative products, any of which may be the subject of this report.

Distribution of ratings (Nomura Group)

The distribution of all ratings published by Nomura Group Global Equity Research is as follows:

51% have been assigned a Buy rating which, for purposes of mandatory disclosures, are classified as a Buy rating; 37% of companies with this rating are investment banking clients of the Nomura Group*. 0% of companies (which are admitted to trading on a regulated market in the EEA) with this rating were supplied material services** by the Nomura Group.

41% have been assigned a Neutral rating which, for purposes of mandatory disclosures, is classified as a Hold rating; 51% of companies with this rating are investment banking clients of the Nomura Group*. 0% of companies (which are admitted to trading on a regulated market in the EEA) with this rating were supplied material services by the Nomura Group

8% have been assigned a Reduce rating which, for purposes of mandatory disclosures, are classified as a Sell rating; 7% of companies with this rating are investment banking clients of the Nomura Group*. 0% of companies (which are admitted to trading on a regulated market in the EEA) with this rating were supplied material services by the Nomura Group.

As at 31 March 2017.

*The Nomura Group as defined in the Disclaimer section at the end of this report.

** As defined by the EU Market Abuse Regulation

Distribution of ratings (Instinet, LLC)

The distribution of all ratings published by Instinet, LLC Equity Research is as follows:

53% have been assigned a Buy rating which, for purposes of mandatory disclosures, are classified as a Buy rating; Instinet LLC has provided investment banking services to 0% of companies with this rating within the previous 12 months.

41% have been assigned a Neutral rating which, for purposes of mandatory disclosures, is classified as a Hold rating; Instinet LLC has provided investment banking services to 0% of companies with this rating within the previous 12 months.

6% have been assigned a Reduce rating which, for purposes of mandatory disclosures, are classified as a Sell rating; Instinet LLC has provided investment banking services to 0% of companies with this rating within the previous 12 months.

Definition of Nomura Group's equity research rating system and sectors

The rating system is a relative system, indicating expected performance against a specific benchmark identified for each individual stock, subject to limited management discretion. An analyst's target price is an assessment of the current intrinsic fair value of the stock based on an appropriate valuation methodology determined by the analyst. Valuation methodologies include, but are not limited to, discounted cash flow analysis, expected return on equity and multiple analysis. Analysts may also indicate expected absolute upside/downside relative to the stated target price, defined as (target price - current price)/current price.

STOCKS

A rating of '**Buy**', indicates that the analyst expects the stock to outperform the Benchmark over the next 12 months. A rating of '**Neutral**', indicates that the analyst expects the stock to perform in line with the Benchmark over the next 12 months. A rating of '**Reduce**', indicates that the analyst expects the stock to underperform the Benchmark over the next 12 months. A rating of '**Suspended**', indicates that the rating, target price and estimates have been suspended temporarily to comply with applicable regulations and/or firm policies. Securities and/or companies that are labelled as '**Not rated**' or shown as '**No rating**' are not in regular research coverage. Investors should not expect continuing or additional information from Nomura relating to such securities and/or companies. Benchmarks are as follows: **United States/Europe/Asia ex-Japan**: please see valuation methodologies for explanations of relevant benchmarks for stocks, which can be accessed at: <http://go.nomuranow.com/research/globalresearchportal/pages/disclosures/disclosures.aspx>; **Global Emerging Markets (ex-Asia)**: MSCI Emerging Markets ex-Asia, unless otherwise stated in the valuation methodology; **Japan**: Russell/Nomura Large Cap.

SECTORS

A '**Bullish**' stance, indicates that the analyst expects the sector to outperform the Benchmark during the next 12 months. A '**Neutral**' stance, indicates that the analyst expects the sector to perform in line with the Benchmark during the next 12 months. A '**Bearish**' stance, indicates that the analyst expects the sector to underperform the Benchmark during the next 12 months. Sectors that are labelled as '**Not rated**' or shown as

'N/A' are not assigned ratings. Benchmarks are as follows: **United States:** S&P 500; **Europe:** Dow Jones STOXX 600; **Global Emerging Markets (ex-Asia):** MSCI Emerging Markets ex-Asia. **Japan/Asia ex-Japan:** Sector ratings are not assigned.

Target Price

A Target Price, if discussed, indicates the analyst's forecast for the share price with a 12-month time horizon, reflecting in part the analyst's estimates for the company's earnings. The achievement of any target price may be impeded by general market and macroeconomic trends, and by other risks related to the company or the market, and may not occur if the company's earnings differ from estimates.

Disclaimers

This publication contains material that has been prepared by the Nomura Group entity identified on page 1 and, if applicable, with the contributions of one or more Nomura Group entities whose employees and their respective affiliations are specified on page 1 or identified elsewhere in the publication. The term "Nomura Group" used herein refers to Nomura Holdings, Inc. and its affiliates and subsidiaries including: Nomura Securities Co., Ltd. ('NSC') Tokyo, Japan; Nomura International plc ('Nlplc'), UK; Nomura Securities International, Inc. ('NSI'), New York, US; Instinet, LLC ('ILLC'); Nomura International (Hong Kong) Ltd. ('NIHK'), Hong Kong; Nomura Financial Investment (Korea) Co., Ltd. ('NFIK'), Korea (Information on Nomura analysts registered with the Korea Financial Investment Association ('KOFIA') can be found on the KOFIA Intranet at <http://dis.kofia.or.kr>); Nomura Singapore Ltd. ('NSL'), Singapore (Registration number 197201440E, regulated by the Monetary Authority of Singapore); Nomura Australia Ltd. ('NAL'), Australia (ABN 48 003 032 513), regulated by the Australian Securities and Investment Commission ('ASIC') and holder of an Australian financial services licence number 246412; PT Nomura Sekuritas Indonesia ('PTNSI'); Nomura Securities Malaysia Sdn. Bhd. ('NSM'), Malaysia; NIHK, Taipei Branch ('NITB'), Taiwan; Nomura Financial Advisory and Securities (India) Private Limited ('NFASL'), Mumbai, India (Registered Address: Ceejay House, Level 11, Plot F, Shivsagar Estate, Dr. Annie Besant Road, Worli, Mumbai- 400 018, India; Tel: +91 22 4037 4037, Fax: +91 22 4037 4111; CIN No: U74140MH2007PTC169116, SEBI Registration No. for Stock Broking activities : BSE INB011299030, NSE INB231299034, INF231299034, INE 231299034, MCX: INE261299034; SEBI Registration No. for Merchant Banking : INM000011419; SEBI Registration No. for Research: INH00001014 and Nlplc, Madrid Branch ('Nlplc, Madrid'). 'CNS Thailand' next to an analyst's name on the front page of a research report indicates that the analyst is employed by Capital Nomura Securities Public Company Limited ('CNS') to provide research assistance services to NSL under an agreement between CNS and NSL. 'NSFSP' next to an employee's name on the front page of a research report indicates that the individual is employed by Nomura Structured Finance Services Private Limited to provide assistance to certain Nomura entities under inter-company agreements. The "BDO-NS" (which stands for "BDO Nomura Securities, Inc.") placed next to an analyst's name on the front page of a research report indicates that the analyst is employed by BDO Unibank Inc. ("BDO Unibank") who has been seconded to BDO-NS, to provide research assistance services to NSL under an agreement between BDO Unibank, NSL and BDO-NS. BDO-NS is a Philippines securities dealer, which is a joint venture between BDO Unibank and the Nomura Group.

THIS MATERIAL IS: (I) FOR YOUR PRIVATE INFORMATION, AND WE ARE NOT SOLICITING ANY ACTION BASED UPON IT; (II) NOT TO BE CONSTRUED AS AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY SECURITY IN ANY JURISDICTION WHERE SUCH OFFER OR SOLICITATION WOULD BE ILLEGAL; AND (III) OTHER THAN DISCLOSURES RELATING TO THE NOMURA GROUP, BASED UPON INFORMATION FROM SOURCES THAT WE CONSIDER RELIABLE, BUT HAS NOT BEEN INDEPENDENTLY VERIFIED BY NOMURA GROUP.

Other than disclosures relating to the Nomura Group, the Nomura Group does not warrant or represent that the document is accurate, complete, reliable, fit for any particular purpose or merchantable and does not accept liability for any act (or decision not to act) resulting from use of this document and related data. To the maximum extent permissible all warranties and other assurances by the Nomura Group are hereby excluded and the Nomura Group shall have no liability for the use, misuse, or distribution of this information.

Opinions or estimates expressed are current opinions as of the original publication date appearing on this material and the information, including the opinions and estimates contained herein, are subject to change without notice. The Nomura Group is under no duty to update this document. Any comments or statements made herein are those of the author(s) and may differ from views held by other parties within Nomura Group. Clients should consider whether any advice or recommendation in this report is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The Nomura Group does not provide tax advice.

The Nomura Group, and/or its officers, directors and employees, may, to the extent permitted by applicable law and/or regulation, deal as principal, agent, or otherwise, or have long or short positions in, or buy or sell, the securities, commodities or instruments, or options or other derivative instruments based thereon, of issuers or securities mentioned herein. The Nomura Group companies may also act as market maker or liquidity provider (within the meaning of applicable regulations in the UK) in the financial instruments of the issuer. Where the activity of market maker is carried out in accordance with the definition given to it by specific laws and regulations of the US or other jurisdictions, this will be separately disclosed within the specific issuer disclosures.

This document may contain information obtained from third parties, including ratings from credit ratings agencies such as Standard & Poor's. Reproduction and distribution of third-party content in any form is prohibited except with the prior written permission of the related third-party. Third-party content providers do not guarantee the accuracy, completeness, timeliness or availability of any information, including ratings, and are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, or for the results obtained from the use of such content. Third-party content providers give no express or implied warranties, including, but not limited to, any warranties of merchantability or fitness for a particular purpose or use. Third-party content providers shall not be liable for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including lost income or profits and opportunity costs) in connection with any use of their content, including ratings. Credit ratings are statements of opinions and are not statements of fact or recommendations to purchase hold or sell securities. They do not address the suitability of securities or the suitability of securities for investment purposes, and should not be relied on as investment advice.

Any MSCI sourced information in this document is the exclusive property of MSCI Inc. ('MSCI'). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, re-disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI and the MSCI indexes are services marks of MSCI and its affiliates.

The intellectual property rights and any other rights, in Russell/Nomura Japan Equity Index belong to Nomura Securities Co., Ltd. ("Nomura") and Frank Russell Company ("Russell"). Nomura and Russell do not guarantee accuracy, completeness, reliability, usefulness, marketability, merchantability or fitness of the Index, and do not account for business activities or services that any index user and/or its affiliates undertakes with the use of the Index.

Investors should consider this document as only a single factor in making their investment decision and, as such, the report should not be viewed as identifying or suggesting all risks, direct or indirect, that may be associated with any investment decision. Nomura Group produces a number of different types of research product including, among others, fundamental analysis and quantitative analysis; recommendations contained in one type of research product may differ from recommendations contained in other types of research product, whether as a result of differing time horizons, methodologies or otherwise. The Nomura Group publishes research product in a number of different ways including the posting of product on the Nomura Group portals and/or distribution directly to clients. Different groups of clients may receive different products and services from the research department depending on their individual requirements.

Figures presented herein may refer to past performance or simulations based on past performance which are not reliable indicators of future performance. Where the information contains an indication of future performance, such forecasts may not be a reliable indicator of future performance. Moreover, simulations are based on models and simplifying assumptions which may oversimplify and not reflect the future distribution of returns.

Certain securities are subject to fluctuations in exchange rates that could have an adverse effect on the value or price of, or income derived from, the investment.

With respect to Fixed Income Research: Recommendations fall into two categories: tactical, which typically last up to three months; or strategic, which typically last from 6-12 months. However, trade recommendations may be reviewed at any time as circumstances change. 'Stop loss' levels for trades are also provided; which, if hit, closes the trade recommendation automatically. Prices and yields shown in recommendations are taken at the time of submission for publication and are based on either indicative Bloomberg, Reuters or Nomura prices and yields at that time. The prices and yields shown are not necessarily those at which the trade recommendation can be implemented.

The securities described herein may not have been registered under the US Securities Act of 1933 (the '1933 Act'), and, in such case, may not be offered or sold in the US or to US persons unless they have been registered under the 1933 Act, or except in compliance with an exemption from the registration requirements of the 1933 Act. Unless governing law permits otherwise, any transaction should be executed via a Nomura entity in your home jurisdiction.

This document has been approved for distribution in the UK and European Economic Area as investment research by Nlplc. Nlplc is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Nlplc is a member of the London Stock Exchange. This document does not constitute a personal recommendation within the meaning of applicable regulations in the UK, or take into account the particular investment objectives, financial situations, or needs of individual investors. This document is intended only for investors who are 'eligible counterparties' or 'professional clients' for the purposes of applicable regulations in the UK, and may not, therefore, be redistributed to persons who are 'retail clients' for such purposes. This document has been approved by NIIHK, which is regulated by the Hong Kong Securities and Futures Commission, for distribution in Hong Kong by NIIHK. This document has been approved for distribution in Australia by NAL, which is authorized and regulated in Australia by the ASIC. This document has also been approved for distribution in Malaysia by NSM. In Singapore, this document has been distributed by NSL. NSL accepts legal responsibility for the content of this document, where it concerns securities, futures and foreign exchange, issued by their foreign affiliates in respect of recipients who are not accredited, expert or institutional investors as defined by the Securities and Futures Act (Chapter 289). Recipients of this document in Singapore should contact NSL in respect of matters arising from, or in connection with, this document. Unless prohibited by the provisions of Regulation S of the 1933 Act, this material is distributed in the US, by NSI, a US-registered broker-dealer, which accepts responsibility for its contents in accordance with the provisions of Rule 15a-6, under the US Securities Exchange Act of 1934. The entity that prepared this document permits its separately operated affiliates within the Nomura Group to make copies of such documents available to their clients.

This document has not been approved for distribution to persons other than 'Authorised Persons', 'Exempt Persons' or 'Institutions' (as defined by the Capital Markets Authority) in the Kingdom of Saudi Arabia ('Saudi Arabia') or 'professional clients' (as defined by the Dubai Financial Services Authority) in the United Arab Emirates ('UAE') or a 'Market Counterparty' or 'Business Customers' (as defined by the Qatar Financial Centre Regulatory Authority) in the State of Qatar ('Qatar') by Nomura Saudi Arabia, Nlplc or any other member of the Nomura Group, as the case may be. Neither this document nor any copy thereof may be taken or transmitted or distributed, directly or indirectly, by any person other than those authorised to do so into Saudi Arabia or in the UAE or in Qatar or to any person other than 'Authorised Persons', 'Exempt Persons' or 'Institutions' located in Saudi Arabia or 'professional clients' in the UAE or a 'Market Counterparty' or 'Business Customers' in Qatar. By accepting to receive this document, you represent that you are not located in Saudi Arabia or that you are an 'Authorised Person', an 'Exempt Person' or an 'Institution' in Saudi Arabia or that you are a 'professional client' in the UAE or a 'Market Counterparty' or 'Business Customers' in Qatar and agree to comply with these restrictions. Any failure to comply with these restrictions may constitute a violation of the laws of the UAE or Saudi Arabia or Qatar.

Notice to Canadian Investors: This research report is not a personal recommendation and does not take into account the investment objectives, financial situation or particular needs of any particular individual or account. It is made available to you in reliance on NI 31-103, section 8.25.

For report with reference of TAIWAN public companies or authored by Taiwan based research analyst:

THIS DOCUMENT IS SOLELY FOR REFERENCE ONLY. You should independently evaluate the investment risks and are solely responsible for your investment decisions. NO PORTION OF THE REPORT MAY BE REPRODUCED OR QUOTED BY THE PRESS OR ANY OTHER PERSON WITHOUT WRITTEN AUTHORIZATION FROM NOMURA GROUP. Pursuant to Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers and/or other applicable laws or regulations in Taiwan, you are prohibited to provide the reports to others (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities in connection with the reports which may involve conflicts of interests. INFORMATION ON SECURITIES / INSTRUMENTS NOT EXECUTABLE BY NOMURA INTERNATIONAL (HONG KONG) LTD., TAIPEI BRANCH IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT BE CONSTRUED AS A RECOMMENDATION OR A SOLICITATION TO TRADE IN SUCH SECURITIES / INSTRUMENTS.

NO PART OF THIS MATERIAL MAY BE (I) COPIED, PHOTOCOPIED, OR DUPLICATED IN ANY FORM, BY ANY MEANS; OR (II) REDISTRIBUTED WITHOUT THE PRIOR WRITTEN CONSENT OF A MEMBER OF THE NOMURA GROUP. If this document has been distributed by electronic transmission, such as e-mail, then such transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this document, which may arise as a result of electronic transmission. If verification is required, please request a hard-copy version.

The Nomura Group manages conflicts with respect to the production of research through its compliance policies and procedures (including, but not limited to, Conflicts of Interest, Chinese Wall and Confidentiality policies) as well as through the maintenance of Chinese walls and employee training.

Additional information regarding the methodologies or models used in the production of any investment recommendations contained within this document is available upon request by contacting the Research Analysts listed on the front page. Disclosures information is available upon request and disclosure information is available at the Nomura Disclosure web

page: <http://go.nomuranow.com/research/globalresearchportal/pages/disclosures/disclosures.aspx>

Copyright © 2017 Instinet Incorporated and/or its affiliates. All rights reserved.