Goldman Sachs

COMPANY UPDATE

Ryanair (RYA.I)

Neutral

Equity Research

Updating estimates post 1Q17 results; remain Neutral

What's changed

1Q17 revenue/seat (constant FX) declined by 5%, driven by a 200bp load factor improvement and a 7% decline in fares, we estimate, as capacity grew by 9%. Management now expects 1H17 fares to decline by 8% (vs. 6% previously), driven by FX and lower demand post recent disruptions and the UK's decision to leave the EU. However, FY17 net income guidance of €1,375-1,425 mn (company-compiled consensus: €1,400 mn) is unchanged given higher volume growth expectations (10% yoy vs. 9% previously), while the company continues to expect 2H17 fares to decline by 10% to 12%.

Implications

We make minor changes to our FY17-19 estimates. We forecast FY17 net income of €1,300 mn (7% below the midpoint of guidance) based on our expectation of a 10% decline in fares (-7% at constant FX). Medium term, we believe Ryanair will continue to capitalise on its strong cost position and take market share. We forecast a capacity CAGR of 7% over CY16-19 and increasing capex (exercising of 100 B737MAX options and higher € costs). We forecast free cash flow of €787 mn pa on average over CY16-19 (5.8% yield) and continue to expect €1 bn pa of share buybacks (6.7% of market cap), supported by Ryanair's strong balance sheet (CY17E adj. net debt/EBITDAR of 0.4x).

Valuation

We view the current valuation as more balanced with the stock trading at a CY17E P/E of 12x, which we see as consistent with its strong returns (CY17E CROCI: 21.6%) and an 8% EPS CAGR (CY16-19E), mainly driven by buybacks. Our new 12-month return on capital-based price target is €14.0 (vs. €14.2 previously), reflecting our estimate changes.

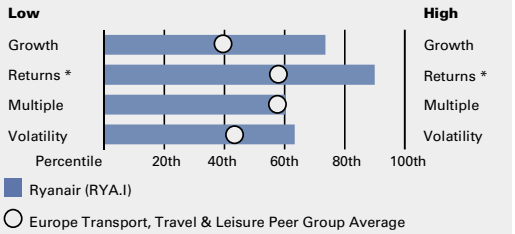
Key risks

Worse/stronger-than-expected demand, weaker/stronger-than-expected intra-European capacity reactivation, fuel and FX volatility.

INVESTMENT LIST MEMBERSHIP
Neutral
GS SUSTAIN Focus List

Coverage View: Neutral

Investment Profile



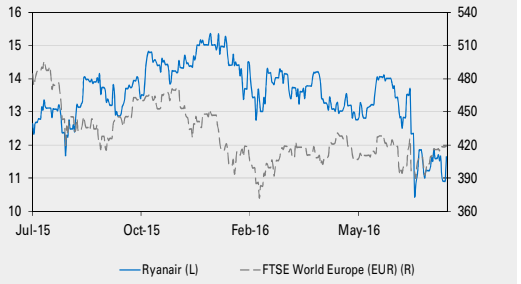
* Returns = Return on Capital

For a complete description of the investment profile measures please refer to the disclosure section of this document.

Key data	Current
Price (€)	11.64
12 month price target (€)	14.00
Upside/(downside) (%)	20
Market cap (€ mn)	16,772.0
Enterprise value (€ mn)	15,981.4

	3/16	3/17E	3/18E	3/19E
Revenue (€ mn) New	**6,535.8**	**6,703.8**	**6,827.8**	**7,442.8**
Revenue revision (%)	0.0	(0.6)	(0.7)	(0.7)
EBIT (€ mn) New	**1,457.6**	**1,515.3**	**1,420.9**	**1,580.0**
EBIT revision (%)	0.0	(0.1)	(1.4)	3.7
EPS (€) New	**0.93**	**1.01**	**1.00**	**1.18**
EPS (€) Old	0.93	1.01	1.02	1.14
EV/EBITDA (X)	9.7	8.1	8.0	7.0
P/E (X)	14.3	11.5	11.6	9.9
Dividend yield (%)	2.2	0.0	0.0	0.0
FCF yield (%)	5.8	4.2	5.5	7.6
CROCI (%)	24.7	24.3	20.8	20.5

Price performance chart



Share price performance (%)	3 month	6 month	12 month
Absolute	(11.0)	(17.4)	(7.9)
Rel. to FTSE World Europe (EUR)	(9.6)	(19.0)	6.5

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 7/25/2016 close.

Alexia Dogani
+44(20)7552-2834 alexia.dogani@gs.com Goldman Sachs International

Shashank Reddy
(212) 934-7432 shashank.reddy@gs.com Goldman Sachs India SPL

Hilary Burke
+44(20)7552-5993 hilary.burke@gs.com Goldman Sachs International

Goldman Sachs does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. For Reg AC certification and other important disclosures, see the Disclosure Appendix, or go to www.gs.com/research/hedge.html. Analysts employed by non-US affiliates are not registered/qualified as research analysts with FINRA in the U.S.

Ryanair: Summary Financials

Profit model (€ mn)	3/16	3/17E	3/18E	3/19E
Total revenue	6,535.8	6,703.8	6,827.8	7,442.8
Operating costs	(4,533.3)	(4,578.3)	(4,729.5)	(5,142.3)
R&D	0.0	0.0	0.0	0.0
Lease payments	(115.1)	(141.3)	(163.0)	(173.4)
Other operating profit/(expense)	(2.5)	0.0	0.0	0.0
EBITDA	**1,884.9**	**1,984.1**	**1,935.2**	**2,127.2**
Depreciation & amortisation	(427.3)	(468.8)	(514.3)	(547.1)
EBIT	**1,457.6**	**1,515.3**	**1,420.9**	**1,580.0**
Net interest income/(expense)	(53.2)	(44.9)	(45.5)	(49.3)
Associates	0.0	0.0	0.0	0.0
Profit/(loss) on disposals	0.0	0.0	0.0	0.0
Others (recurring)	0.0	0.0	0.0	0.0
Pretax profits	**1,404.4**	**1,470.5**	**1,375.4**	**1,530.8**
Income tax	(162.8)	(170.5)	(159.4)	(177.4)
Tax rate (%)	11.6	11.6	11.6	11.6
Minorities	0.0	0.0	0.0	0.0
Preferred dividends	0.0	0.0	0.0	0.0
Net income (pre-exceptionals)	**1,241.6**	**1,300.0**	**1,215.9**	**1,353.3**
Other non-recurring items post tax	317.5	0.0	0.0	0.0
Net income	**1,559.1**	**1,300.0**	**1,215.9**	**1,353.3**
EPS (underlying) (€)	**0.93**	**1.01**	**1.00**	**1.18**
EPS (basic, reported) (€)	1.16	1.01	1.00	1.18
Weighted shares outstanding (mn)	1,341.0	1,283.3	1,213.1	1,146.2
Common dividends declared	398.1	0.0	0.0	0.0
DPS (€)	0.30	0.00	0.00	0.00
Dividend payout ratio (%)	32.1	0.0	0.0	0.0
Dividend cover (X)	3.1	NM	NM	NM

Growth & margins (%)	3/16	3/17E	3/18E	3/19E
Revenue growth	15.6	2.6	1.8	9.0
EBITDA growth	33.1	5.3	(2.5)	9.9
EBIT growth	40.3	4.0	(6.2)	11.2
Net income growth	79.9	(16.6)	(6.5)	11.3
EPS growth	44.2	9.4	(1.1)	17.8
DPS growth	(22.9)	(100.0)	--	--
EBITDA margin	28.8	29.6	28.3	28.6
EBIT margin	22.3	22.6	20.8	21.2

Cash flow statement (€ mn)	3/16	3/17E	3/18E	3/19E
Net income	1,241.6	1,300.0	1,215.9	1,353.3
D&A add-back (incl. ESO)	427.3	468.8	514.3	547.1
Minority interest add-back	0.0	0.0	0.0	0.0
Net (inc)/dec working capital	135.6	55.8	77.0	177.6
Other operating cash flow	37.8	36.8	34.4	38.3
Cash flow from operations	**1,842.3**	**1,861.3**	**1,841.7**	**2,116.3**
Capital expenditures	(819.6)	(1,233.5)	(1,066.0)	(1,098.1)
Acquisitions	0.0	0.0	0.0	0.0
Divestitures	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0
Cash flow from investing	**(819.6)**	**(1,233.5)**	**(1,066.0)**	**(1,098.1)**
Dividends paid (common & pref)	(398.1)	0.0	0.0	0.0
Inc/(dec) in debt	(408.6)	3.1	554.3	196.3
Other financing cash flows	(705.9)	(1,000.0)	(1,000.0)	(1,000.0)
Cash flow from financing	**(1,512.6)**	**(996.9)**	**(445.7)**	**(803.7)**
Total cash flow	**(485.1)**	**(369.0)**	**330.0**	**214.5**
Capex/D&A (%)	191.8	263.1	207.3	200.7
Reinvestment rate (%)	48.0	68.3	60.4	56.6
Cash flow cover of dividends (X)	4.3	NM	NM	NM
Free cash flow cover of dividends (X)	2.6	--	--	--

Balance sheet (€ mn)	3/16	3/17E	3/18E	3/19E
Cash & equivalents	4,334.5	3,965.5	4,295.5	4,510.0
Accounts receivable	214.6	236.7	241.0	262.8
Inventory	3.3	3.3	3.3	3.3
Other current assets	269.1	269.1	269.1	269.1
Total current assets	**4,821.5**	**4,474.6**	**4,808.9**	**5,045.2**
Net PP&E	6,396.8	7,161.5	7,713.2	8,264.1
Net intangibles	0.0	0.0	0.0	0.0
Total investments	0.0	0.0	0.0	0.0
Other long-term assets	0.0	0.0	0.0	0.0
Total assets	**11,218.3**	**11,636.0**	**12,522.1**	**13,309.3**
Accounts payable	230.6	230.6	230.6	230.6
Short-term debt	449.9	449.9	449.9	449.9
Other current liabilities	2,145.2	2,223.0	2,304.5	2,503.8
Total current liabilities	**2,825.7**	**2,903.5**	**2,985.0**	**3,184.3**
Long-term debt	3,573.1	3,576.2	4,130.5	4,326.8
Other long-term liabilities	1,222.7	1,259.5	1,293.8	1,332.1
Total long-term liabilities	**4,795.8**	**4,835.7**	**5,424.4**	**5,658.9**
Total liabilities	**7,621.5**	**7,739.2**	**8,409.3**	**8,843.2**
Preferred shares	**0.0**	**0.0**	**0.0**	**0.0**
Total common equity	**3,596.8**	**3,896.8**	**4,112.8**	**4,466.1**
Minority interest	**0.0**	**0.0**	**0.0**	**0.0**
Total liabilities & equity	**11,218.3**	**11,636.0**	**12,522.1**	**13,309.3**
Capitalised leases	805.7	989.2	1,141.0	1,213.7
Capital employed	**7,619.8**	**7,922.9**	**8,693.2**	**9,242.8**
Adj for unfunded pensions & GW	0.0	0.0	0.0	0.0
Adj capital employed	**7,619.8**	**7,922.9**	**8,693.2**	**9,242.8**
Gross cash invested	**7,418.1**	**8,779.3**	**9,920.0**	**10,913.2**

Ratios	3/16	3/17E	3/18E	3/19E
CROCI (%)	24.7	24.3	20.8	20.5
CROCI/WACC (X)	3.1	3.0	2.6	2.5
ROIC (%)	15.6	16.7	14.8	15.1
ROIC/WACC (X)	1.9	2.1	1.8	1.9
ROA (%)	11.1	11.9	10.6	11.0
WACC (%)	8.1	8.1	8.1	8.1
Inventory days	0.2	0.2	0.2	0.2
Asset turnover (X)	1.0	1.0	0.9	0.9
Net debt/equity (%)	(8.7)	1.6	6.9	6.0
EBITDA interest cover (X)	35.4	44.2	42.5	43.2

Valuation	3/16	3/17E	3/18E	3/19E
EV/sales (X)	2.8	2.4	2.3	2.0
EV/EBITDAR (X)	9.1	7.5	7.4	6.4
EV/EBITDA (X)	9.3	7.6	7.4	6.4
EV/EBIT (X)	11.6	9.6	9.8	8.5
P/E (X)	14.3	11.5	11.6	9.9
Dividend yield (%)	2.2	0.0	0.0	0.0
FCF yield (%)	5.8	4.2	5.5	7.6
EV/GCI (X)	2.6	1.9	1.7	1.5
EV/adj. capital employed (X)	5.6	4.0	3.5	3.1
Price/book (X)	5.3	3.8	3.4	3.0

Note: Ratios are adjusted for leases where appropriate. Only separately disclosed where significant and ongoing.

Note: Last actual year may include reported and estimated data.

Source: Company data, Goldman Sachs Research estimates.

Analyst Contributors

Alexia Dogani
alexia.dogani@gs.com

Shashank Reddy
shashank.reddy@gs.com

Hilary Burke
hilary.burke@gs.com

Disclosure Appendix

Reg AC

We, Alexia Dogani, Shashank Reddy and Hilary Burke, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

Investment Profile

The Goldman Sachs Investment Profile provides investment context for a security by comparing key attributes of that security to its peer group and market. The four key attributes depicted are: growth, returns, multiple and volatility. Growth, returns and multiple are indexed based on composites of several methodologies to determine the stocks percentile ranking within the region's coverage universe.

The precise calculation of each metric may vary depending on the fiscal year, industry and region but the standard approach is as follows:

Growth is a composite of next year's estimate over current year's estimate, e.g. EPS, EBITDA, Revenue. **Return** is a year one prospective aggregate of various return on capital measures, e.g. CROCI, ROACE, and ROE. **Multiple** is a composite of one-year forward valuation ratios, e.g. P/E, dividend yield, EV/FCF, EV/EBITDA, EV/DACF, Price/Book. **Volatility** is measured as trailing twelve-month volatility adjusted for dividends.

Quantum

Quantum is Goldman Sachs' proprietary database providing access to detailed financial statement histories, forecasts and ratios. It can be used for in-depth analysis of a single company, or to make comparisons between companies in different sectors and markets.

GS SUSTAIN

GS SUSTAIN is a global investment strategy aimed at long-term, long-only performance with a low turnover of ideas. The GS SUSTAIN focus list includes leaders our analysis shows to be well positioned to deliver long term outperformance through sustained competitive advantage and superior returns on capital relative to their global industry peers. Leaders are identified based on quantifiable analysis of three aspects of corporate performance: cash return on cash invested, industry positioning and management quality (the effectiveness of companies' management of the environmental, social and governance issues facing their industry).

Disclosures

Coverage group(s) of stocks by primary analyst(s)

Alexia Dogani: Europe-Transport, Europe-Travel & Leisure.

Europe-Transport: Abertis Infraestructuras, Aena SA, Aeroports de Paris, Atlantia, DSV, Eiffage, Ferrovial SA, FirstGroup, Flughafen Zurich, Fraport AG, Go-ahead, Groupe Eurotunnel SA, National Express, Stagecoach, Vinci.

Europe-Travel & Leisure: A.P. Moeller-Maersk, AA Plc, Accor, Air France-KLM, BBA Aviation Plc, Dufry, Easyjet, Europcar Group, Hapag-Lloyd AG, InterContinental Hotels Group, International Airlines Group, Kuehne & Nagel, Ladbrokes, Lufthansa, Merlin Entertainments Group, Paddy Power Betfair Plc, Panalpina, Ryanair, SSP Group, Thomas Cook Group, TUI AG, Whitbread, William Hill.

Company-specific regulatory disclosures

The following disclosures relate to relationships between The Goldman Sachs Group, Inc. (with its affiliates, "Goldman Sachs") and companies covered by the Global Investment Research Division of Goldman Sachs and referred to in this research.

Goldman Sachs expects to receive or intends to seek compensation for investment banking services in the next 3 months: Ryanair (€11.64)

Goldman Sachs had an investment banking services client relationship during the past 12 months with: Ryanair (€11.64)

Goldman Sachs had a non-investment banking securities-related services client relationship during the past 12 months with: Ryanair (€11.64)

Goldman Sachs had a non-securities services client relationship during the past 12 months with: Ryanair (€11.64)

Goldman Sachs makes a market in the securities or derivatives thereof: Ryanair (€11.64)

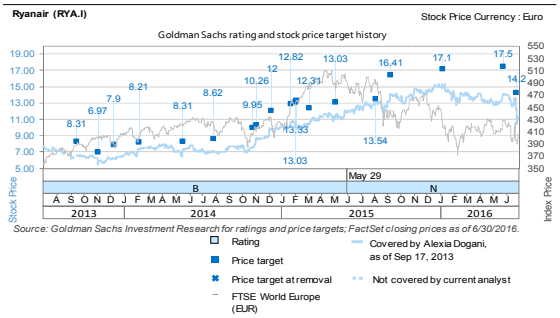
Distribution of ratings/investment banking relationships

Goldman Sachs Investment Research global Equity coverage universe

	Rating Distribution			Investment Banking Relationships		
	Buy	Hold	Sell	Buy	Hold	Sell
Global	31%	54%	15%	66%	60%	50%

As of July 1, 2016, Goldman Sachs Global Investment Research had investment ratings on 2,963 equity securities. Goldman Sachs assigns stocks as Buys and Sells on various regional Investment Lists; stocks not so assigned are deemed Neutral. Such assignments equate to Buy, Hold and Sell for the purposes of the above disclosure required by the FINRA Rules. See 'Ratings, Coverage groups and views and related definitions' below. The Investment Banking Relationships chart reflects the percentage of subject companies within each rating category for whom Goldman Sachs has provided investment banking services within the previous twelve months.

Price target and rating history chart(s)



The price targets show n should be considered in the context of all prior published Goldman Sachs research, which may or may not have included price targets, as w ell as developments relating to the company, its industry and financial markets.

Regulatory disclosures

Disclosures required by United States laws and regulations

See company-specific regulatory disclosures above for any of the following disclosures required as to companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; for equity securities, market making and/or specialist role. Goldman Sachs trades or may trade as a principal in debt securities (or in related derivatives) of issuers discussed in this report.

The following are additional required disclosures: **Ownership and material conflicts of interest:** Goldman Sachs policy prohibits its analysts, professionals reporting to analysts and members of their households from owning securities of any company in the analyst's area of coverage. **Analyst compensation:** Analysts are paid in part based on the profitability of Goldman Sachs, which includes investment banking revenues. **Analyst as officer or director:** Goldman Sachs policy prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director, advisory board member or employee of any company in the analyst's area of coverage. **Non-U.S. Analysts:** Non-U.S. analysts may not be associated persons of Goldman, Sachs & Co. and therefore may not be subject to FINRA Rule 2241 or FINRA Rule 2242 restrictions on communications with subject company, public appearances and trading securities held by the analysts.

Distribution of ratings: See the distribution of ratings disclosure above. **Price chart:** See the price chart, with changes of ratings and price targets in prior periods, above, or, if electronic format or if with respect to multiple companies which are the subject of this report, on the Goldman Sachs website at http://www.gs.com/research/hedge.html.

Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, except to the extent already made above pursuant to United States laws and regulations. **Australia:** Goldman Sachs Australia Pty Ltd and its affiliates are not authorised deposit-taking institutions (as that term is defined in the Banking Act 1959 (Cth)) in Australia and do not provide banking services, nor carry on a banking business, in Australia. This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act, unless otherwise agreed by Goldman Sachs. In producing research reports, members of the Global Investment Research Division of Goldman Sachs Australia may attend site visits and other meetings hosted by the issuers the subject of its research reports. In some instances the costs of such site visits or meetings may be met in part or in whole by the issuers concerned if Goldman Sachs Australia considers it is appropriate and reasonable in the specific circumstances relating to the site visit or meeting. **Brazil:** Disclosure information in relation to CVM Instruction 483 is available at http://www.gs.com/worldwide/brazil/area/gir/index.html. Where applicable, the Brazil-registered analyst primarily responsible for the content of this research report, as defined in Article 16 of CVM Instruction 483, is the first author named at the beginning of this report, unless indicated otherwise at the end of the text. **Canada:** Goldman Sachs Canada Inc. is an affiliate of The Goldman Sachs Group Inc. and therefore is included in the company specific disclosures relating to Goldman Sachs (as defined above). Goldman Sachs Canada Inc. has approved of, and agreed to take responsibility for, this research report in Canada if and to the extent that Goldman Sachs Canada Inc. disseminates this research report to its clients. **Hong Kong:** Further information on the securities of covered companies referred to in this research may be obtained on request from Goldman Sachs (Asia) L.L.C. **India:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (India) Securities Private Limited, Research Analyst - SEBI Registration Number INH000001493, 951-A, Rational House, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India, Corporate Identity Number U74140MH2006FTC160634, Phone +91 22 6616 9000, Fax +91 22 6616 9001. Goldman Sachs may beneficially own 1% or more of the securities (as such term is defined in clause 2 (h) the Indian Securities Contracts (Regulation) Act, 1956) of the subject company or companies referred to in this research report. **Japan:** See below. **Korea:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (Asia) L.L.C., Seoul Branch. **New Zealand:** Goldman Sachs New Zealand Limited and its affiliates are neither "registered banks" nor "deposit takers" (as defined in the Reserve Bank of New Zealand Act 1989) in New Zealand. This research, and any access to it, is intended for "wholesale clients" (as defined in the Financial Advisers Act 2008) unless otherwise agreed by Goldman Sachs. **Russia:** Research reports distributed in the Russian Federation are not advertising as defined in the Russian legislation, but are information and analysis not having product promotion as their main purpose and do not provide appraisal within the meaning of the Russian legislation on appraisal activity. **Singapore:** Further information on the covered companies referred to in this research may be obtained from Goldman Sachs (Singapore) Pte. (Company Number: 198602165W). **Taiwan:** This material is for reference only and must not be reprinted without permission. Investors should carefully consider their own investment risk. Investment results are the responsibility of the individual investor. **United Kingdom:** Persons who would be categorized as retail clients in the United Kingdom, as such term is defined in the rules of the Financial Conduct Authority, should read this research in conjunction with prior Goldman Sachs research on the covered companies referred to herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risks warnings, and a glossary of certain financial terms used in this report, are available from Goldman Sachs International on request.

European Union: Disclosure information in relation to Article 4 (1) (d) and Article 6 (2) of the European Commission Directive 2003/125/EC is available at http://www.gs.com/disclosures/europeanpolicy.html which states the European Policy for Managing Conflicts of Interest in Connection with Investment Research.

Japan: Goldman Sachs Japan Co., Ltd. is a Financial Instrument Dealer registered with the Kanto Financial Bureau under registration number Kinsho 69, and a member of Japan Securities Dealers Association, Financial Futures Association of Japan and Type II Financial Instruments Firms

Association. Sales and purchase of equities are subject to commission pre-determined with clients plus consumption tax. See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

Ratings, coverage groups and views and related definitions

Buy (B), Neutral (N), Sell (S) -Analysts recommend stocks as Buys or Sells for inclusion on various regional Investment Lists. Being assigned a Buy or Sell on an Investment List is determined by a stock's return potential relative to its coverage group as described below. Any stock not assigned as a Buy or a Sell on an Investment List is deemed Neutral. Each regional Investment Review Committee manages various regional Investment Lists to a global guideline of 25%-35% of stocks as Buy and 10%-15% of stocks as Sell; however, the distribution of Buys and Sells in any particular coverage group may vary as determined by the regional Investment Review Committee. Regional Conviction Buy and Sell lists represent investment recommendations focused on either the size of the potential return or the likelihood of the realization of the return.

Return potential represents the price differential between the current share price and the price target expected during the time horizon associated with the price target. Price targets are required for all covered stocks. The return potential, price target and associated time horizon are stated in each report adding or reiterating an Investment List membership.

Coverage groups and views: A list of all stocks in each coverage group is available by primary analyst, stock and coverage group at http://www.gs.com/research/hedge.html. The analyst assigns one of the following coverage views which represents the analyst's investment outlook on the coverage group relative to the group's historical fundamentals and/or valuation. **Attractive (A).** The investment outlook over the following 12 months is favorable relative to the coverage group's historical fundamentals and/or valuation. **Neutral (N).** The investment outlook over the following 12 months is neutral relative to the coverage group's historical fundamentals and/or valuation. **Cautious (C).** The investment outlook over the following 12 months is unfavorable relative to the coverage group's historical fundamentals and/or valuation.

Not Rated (NR). The investment rating and target price have been removed pursuant to Goldman Sachs policy when Goldman Sachs is acting in an advisory capacity in a merger or strategic transaction involving this company and in certain other circumstances. **Rating Suspended (RS).** Goldman Sachs Research has suspended the investment rating and price target for this stock, because there is not a sufficient fundamental basis for determining, or there are legal, regulatory or policy constraints around publishing, an investment rating or target. The previous investment rating and price target, if any, are no longer in effect for this stock and should not be relied upon. **Coverage Suspended (CS).** Goldman Sachs has suspended coverage of this company. **Not Covered (NC).** Goldman Sachs does not cover this company. **Not Available or Not Applicable (NA).** The information is not available for display or is not applicable. **Not Meaningful (NM).** The information is not meaningful and is therefore excluded.

Global product; distributing entities

The Global Investment Research Division of Goldman Sachs produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce equity research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; in Canada by either Goldman Sachs Canada Inc. or Goldman, Sachs & Co.; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman, Sachs & Co. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom and European Union.

European Union: Goldman Sachs International authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, has approved this research in connection with its distribution in the European Union and United Kingdom; Goldman Sachs AG and Goldman Sachs International Zweigniederlassung Frankfurt, regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht, may also distribute research in Germany.

General disclosures

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. The information, opinions, estimates and forecasts contained herein are as of the date hereof and are subject to change without prior notification. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by our Global Investment Research Division. Goldman, Sachs & Co., the United States broker dealer, is a member of SIPC (http://www.sipc.org).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, principal trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

The analysts named in this report may have from time to time discussed with our clients, including Goldman Sachs salespersons and traders, or may discuss in this report, trading strategies that reference catalysts or events that may have a near-term impact on the market price of the equity securities discussed in this report, which impact may be directionally counter to the analyst's published price target expectations for such stocks. Any such trading strategies are distinct from and do not affect the analyst's fundamental equity rating for such stocks, which rating reflects a stock's return potential relative to its coverage group as described herein.

We and our affiliates, officers, directors, and employees, excluding equity and credit analysts, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research.

The views attributed to third party presenters at Goldman Sachs arranged conferences, including individuals from other parts of Goldman Sachs, do not necessarily reflect those of Global Investment Research and are not an official view of Goldman Sachs.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them



may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options disclosure documents which are available from Goldman Sachs sales representatives or at http://www.theocc.com/about/publications/character-risks.jsp. Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For research, models or other data available on a particular security, please contact your sales representative or go to http://360.gs.com.

Disclosure information is also available at http://www.gs.com/research/hedge.html or from Research Compliance, 200 West Street, New York, NY 10282.

© 2016 Goldman Sachs.

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 The Goldman Sachs Group, Inc.

