J.P.Morgan

Coherus

Takeaways from Management Meetings

We recently had the opportunity to meet with Coherus management including CEO Denny Lanfear and wanted to share our latest thoughts. With biosimilars increasingly in focus and with a highly experienced management team, we see Coherus as well-positioned within this emerging market. The company remains on track for several additional data read-outs in the near term and for important filings for biosimilar versions of Neulasta, Enbrel, and Humira over the next 6-12 months. Remain OW.

- Near-term biosimilar Neulasta filing represents significant opportunity. Coherus remains on track for a 1Q16 BLA filing for CHS-1701 based on the generally positive PK/PD results and upcoming immunogenicity data. We continue to see CHS-1701 as an attractive opportunity with a large market, relatively few competitors, a relatively straightforward patent landscape, and reasonable commercial footprint requirements. In particular, management highlighted that some competitors' progress appears to have stalled in recent months, which could benefit Coherus's competitive positioning.
- Biosimilar Humira opportunity depends on IPR on AbbVie's '135 patent. Coherus has filed an IPR petition on AbbVie's '135 Humira patent related to the method of treating rheumatoid arthritis. Recall that beyond the composition of matter patents that expire in December 2016 in the US, AbbVie has described a set of dosing patents that extend to the early 2020s. We see the IPR as a key step towards a potential launch and will be watching for any updates on this front (PTO decision whether to move forward expected in ~6 months). We note that the '135 patent is only related to the method of treating rheumatoid arthritis and are watching for potential IPR petitions on additional patents.
- Next up: Several data read-outs expected. Up next, we are watching for data from the CHS-1701 (biosimilar Neulasta) immunogenicity study, which (together with the PK/PD study) we expect to enable a BLA filing in 1Q16. We are also expecting data form the second phase III study for CHS-0214 (biosimilar Enbrel) in rheumatoid arthritis in 1Q16. Relative to CHS-1420 (biosimilar Humira), the company remains on track for a BLA in 2H16 and we are watching for any updates on the '135 IPR. Beyond these initial assets, we are also watching for any updates on additional molecules in development.

Overweight

CHRS, CHRS US Price: \$27.23

Price Target: \$37.00

Pharmaceuticals — Major & Specialty

Chris Schott, CFA AC

(1-212) 622-5676

christopher.t.schott@jpmorgan.com

Bloomberg JPMA SCHOTT <GO>

Wendy L Lin

(1-212) 622-5350

wendy.l.lin@jpmorgan.com

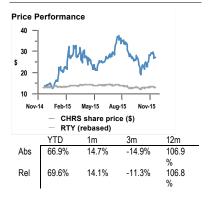
Aditi Singhania, PhD

(1-212) 622-1267

aditi.singhania@jpmorgan.com

Dana Flanders, CFA

(1-212) 622-1256 dana.c.flanders@jpmorgan.com J.P. Morgan Securities LLC



Coherus BioSciences, Inc. (CHRS:CHRS US)

FYE Dec	2012A	2013A	2014A	2015E	2016E	
EPS (\$)						
Q1 (Mar)	-	-	-	-	-	
Q2 (Jun)	-	-	-	-	-	
Q3 (Sep)	-	-	-	-	-	
Q4 (Dec)	-	-	-	-	-	
FY	(9.51)	(9.66)	(10.65)	(6.73)	(6.45)	
Bloomberg EPS FY (\$)	· ,	` -	`-4.21	-4.94	-4.98	
Source: Company data, Bloomb	erg, J.P. Morgan	estimates.				

Company Data	
Price (\$)	27.23
Date Of Price	18 Nov 15
52-week Range (\$)	38.10-12.38
Market Cap (\$ mn)	1,046.36
Fiscal Year End	Dec
Shares O/S (mn)	38
Price Target (\$)	37.00
Price Target End Date	31-Dec-16

See page 4 for analyst certification and important disclosures.

J.P. Morgan 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.

Investment Thesis, Valuation and Risks

Coherus (Overweight; Price Target: \$37.00)

Investment Thesis

Maintain Overweight rating. We expect a range of biosimilars will launch over the next 5-10 years with biologic products with ~\$100 billion in annual sales losing patent protection through 2020. Coherus is a pure-play on this opportunity with three lead biosimilar candidates (biosimilar versions of Humira, Enbrel, and Neulasta), all of which will have entered late-stage clinical development by early 2015. These products target several of the largest biologics currently on the market, with 2014 branded sales in Coherus's targeted markets expected to reach roughly \$20 billion. Assuming a modest biosimilar market share and 4-5 competitors per market, we see Coherus generating roughly \$666 million in revenue by 2020, growing to roughly \$1.3 billion by 2025.

Valuation

Dec 2016 price target of \$37. Using a risk-adjusted DCF analysis, we arrive at a December 2016 price target of \$37. We assume that Baxter launches CHS-0214 in Europe in 2017 and that Coherus launches CHS-1420 in the US and Europe in 2018, and CHS-1701 in the US in 2017 and in Europe in 2018.

We estimate a weighted average cost of capital (WACC) of 11%, which is consistent with WACC estimates for companies of Coherus's size and development stage due to the risk of the company's business model relative to more established branded pharma companies with commercialized products. We use a terminal growth rate of 0% past 2030. We also risk adjust our enterprise value with a 70% probability of success.

Risks to Rating and Price Target

Risks to the downside include 1) uncertainty surrounding the IP and patent resolution process, 2) biosimilars might not achieve the market penetration we have forecast, 3) Coherus could face more competitors and experience more price competition than anticipated, and 4) the company will need to raise additional capital or seek a partner for its products prior to commercialization.

Coherus: Summary of Financials

Income Statement - Annual	FY14A	FY15E	FY16E	FY17E	Income Statement - Quarterly	1Q15A	2Q15A	3Q15A	4Q15E
Revenues	31,106	28,468	37,500	192,337	Revenues	-	-	-	-
Cost of products sold	0	0	0	(23,226)	Cost of products sold	-	-	-	-
Gross profit	-	-	-	-	Gross profit	-	-	-	-
SG&A	(17,564)	(36,074)	(65,000)	(125,000)	SG&A	-	-	-	-
R&D	(78,224)	(236,629)	(240,000)	(200,000)	R&D	-	-	-	-
Operating income	(64,682)	(244, 235)	(267,500)	(155,889)	Operating income	-	-	-	-
Net interest (income) / expense	(3,900)	(33)	0	0	Net interest (income) / expense	-	-	-	-
Other income / (expense)	(18,595)	(4,465)	0	0	Other income / (expense)	-	-	-	-
Pretax income	(87,177)	(248,733)	(267,500)	(155,889)	Pretax income	-	-	-	-
Income taxes	0	0	0	0	Income taxes	-	-	-	-
Net income - recurring	(87,177)	(248,733)	(267,500)	(155,889)	Net income - recurring	-	-	-	-
Diluted shares outstanding	-	-	-	-	Diluted shares outstanding	-	-	-	-
EPS - excluding non-recurring	(10.65)	(6.73)	(6.45)	(3.30)	EPS - excluding non-recurring	-	-	-	-
EPS - recurring	(10.65)	(6.73)	(6.45)	(3.30)	EPS - recurring	-	-	-	-
Balance Sheet and Cash Flow Data	FY14A	FY15E	FY16E	FY17E	Ratio Analysis	FY14A	FY15E	FY16E	FY17E
Cash and cash equivalents	150,392	79,320	35,668	81,992	Sales growth	1030.7%	(8.5%)	31.7%	412.9%
Short Term Investment	-	-	-	-	EBIT growth	79.7%	277.6%	9.5%	(41.7%)
Accounts receivable	4,232	5,315	5,605	28,528	EPS growth - recurring	10.3%	(36.8%)	(4.2%)	(48.8%)
Inventories	-	-	-	-					
Other current assets	24,512	24,512	24,512	24,512	Gross margin	-	-	-	-
Current assets	179,136	109,147	65,784	135,032	EBIT margin	(207.9%)	(857.9%)	(713.3%)	(81.0%)
PP&E	4,472	6,647	8,822	10,997					
Total assets	187,221	119,407	78,219	149,642	Tax rate	0.0%	0.0%	0.0%	0.0%
					Net Profit Margin	(280.3%)	(873.7%)	(713.3%)	(81.0%)
Total debt	0	0	0	0					
Total liabilities	120,464	121,686	121,686	121,686					
Shareholders' equity	66,757	(2,279)	(43,467)	27,956					
Net income (including charges)	(87,177)	(248,733)	(267,500)	(155,889)					
D&A	674	674	674	674					
Change in working capital	28,434	139	(290)	(22,924)					
Other	22,933	35,000	0	0					
Cash flow from operations	(23,927)	(201,858)	(256,054)	(167,077)					
Capex	(2,849)	(2,849)	(2,849)	(2,849)					
Free cash flow	(22,876)	(204,674)	(258,903)	(169,926)					
Cash flow from investing activities	(525)	(2,849)	(2,849)	(2,849)					
Cash flow from financing activities	135,956	133,635	215,250	216,250					

Source: Company reports and J.P. Morgan estimates.

Note: \$ in millions (except per-share data). Fiscal year ends Dec

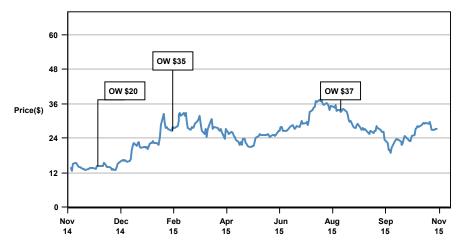
Analyst Certification: The research analyst(s) denoted by an "AC" on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an "AC" on the cover or within the document individually certifies, with respect to each security or issuer that the research analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or issuers; and (2) no part of any of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report. For all Korea-based research analysts listed on the front cover, they also certify, as per KOFIA requirements, that their analysis was made in good faith and that the views reflect their own opinion, without undue influence or intervention.

Important Disclosures

- Market Maker: JPMS makes a market in the stock of Coherus.
- Market Maker/ Liquidity Provider: J.P. Morgan Securities plc and/or an affiliate is a market maker and/or liquidity provider in Coherus.
- Lead or Co-manager: J.P. Morgan acted as lead or co-manager in a public offering of equity and/or debt securities for Coherus within the past 12 months.
- Client: J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as clients: Coherus.
- Client/Investment Banking: J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as investment banking clients: Coherus.
- Investment Banking (past 12 months): J.P. Morgan received in the past 12 months compensation for investment banking services from Coherus.
- Investment Banking (next 3 months): J.P. Morgan expects to receive, or intends to seek, compensation for investment banking services in the next three months from Coherus.
- Other Significant Financial Interests: J.P. Morgan owns a position of 1 million USD or more in the debt securities of Coherus.

Company-Specific Disclosures: Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan—covered companies by visiting https://jpmm.com/research/disclosures, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request. J.P. Morgan's Strategy, Technical, and Quantitative Research teams may screen companies not covered by J.P. Morgan. For important disclosures for these companies, please call 1-800-477-0406 or e-mail research.disclosure.inquiries@jpmorgan.com.

Coherus (CHRS, CHRS US) Price Chart



Date	Rating	Share Price (\$)	Price Target (\$)
02-Dec-14	OW	14.14	20.00
17-Feb-15	OW	26.58	35.00
10-Aug-15	OW	33.87	37.00

Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends. Initiated coverage Dec 02, 2014.

The chart(s) show J.P. Morgan's continuing coverage of the stocks; the current analysts may or may not have covered it over the entire period.

J.P. Morgan ratings or designations: OW = Overweight, N= Neutral, UW = Underweight, NR = Not Rated

Explanation of Equity Research Ratings, Designations and Analyst(s) Coverage Universe:

J.P. Morgan uses the following rating system: Overweight [Over the next six to twelve months, we expect this stock will outperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Neutral [Over the next six to twelve months, we expect this stock will perform in line with the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Underweight [Over the next six to twelve months, we expect this stock will underperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Not Rated (NR): J.P. Morgan has removed the rating and, if applicable, the price target, for this stock because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating and, if applicable, the price target, no longer should be relied upon. An NR designation is not a recommendation or a rating. In our Asia (ex-Australia) and U.K. small- and mid-cap equity research, each stock's expected total return is compared to the expected total return of a benchmark country market index, not to those analysts' coverage universe. If it does not appear in the Important Disclosures section of this report, the certifying analyst's coverage universe can be found on J.P. Morgan's research website, www.ipmorganmarkets.com.

Coverage Universe: Schott, Christopher: AbbVie (ABBV), Allergan plc (AGN), Bristol-Myers Squibb Company (BMY), Coherus (CHRS), Eli Lilly & Company (LLY), Endo International PLC (ENDP), Impax Laboratories (IPXL), Mallinckrodt (MNK), Merck & Co., Inc. (MRK), Momenta (MNTA), Mylan NV (MYL), Perrigo Company (PRGO), Pfizer Inc. (PFE), Sagent Pharmaceuticals (SGNT), Teva Pharmaceuticals (TEVA), Valeant Pharmaceuticals (VRX), Zoetis (ZTS)

J.P. Morgan Equity Research Ratings Distribution, as of September 30, 2015

	Overweight	Neutral	Underweight
	(buy)	(hold)	(sell)
J.P. Morgan Global Equity Research Coverage	45%	43%	12%
IB clients*	52%	49%	35%
JPMS Equity Research Coverage	45%	47%	8%
IB clients*	69%	66%	54%

^{*}Percentage of investment banking clients in each rating category.

For purposes only of FINRA/NYSE ratings distribution rules, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category. Please note that stocks with an NR designation are not included in the table above.

Equity Valuation and Risks: For valuation methodology and risks associated with covered companies or price targets for covered companies, please see the most recent company-specific research report at http://www.jpmorganmarkets.com, contact the primary analyst or your J.P. Morgan representative, or email research.disclosure.inquiries@jpmorgan.com.

Equity Analysts' Compensation: The equity research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Other Disclosures

J.P. Morgan ("JPM") is the global brand name for J.P. Morgan Securities LLC ("JPMS") and its affiliates worldwide. J.P. Morgan Cazenove is a marketing name for the U.K. investment banking businesses and EMEA cash equities and equity research businesses of JPMorgan Chase & Co. and its subsidiaries.

All research reports made available to clients are simultaneously available on our client website, J.P. Morgan Markets. Not all research content is redistributed, e-mailed or made available to third-party aggregators. For all research reports available on a particular stock, please contact your sales representative.

Options related research: If the information contained herein regards options related research, such information is available only to persons who have received the proper option risk disclosure documents. For a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options, please contact your J.P. Morgan Representative or visit the OCC's website at http://www.optionsclearing.com/publications/risks/riskstoc.pdf

Legal Entities Disclosures

U.S.: JPMS is a member of NYSE, FINRA, SIPC and the NFA. JPMorgan Chase Bank, N.A. is a member of FDIC. U.K.: JPMorgan Chase N.A., London Branch, is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and to limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from J.P. Morgan on request. J.P. Morgan Securities plc (JPMS plc) is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Registered in England & Wales No. 2711006. Registered Office 25 Bank Street, London, E14 5JP. South Africa: J.P. Morgan Equities South Africa Proprietary Limited is a member of the Johannesburg Securities Exchange and is regulated by the Financial Services Board. Hong Kong: J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong and/or J.P. Morgan Broking (Hong Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. Korea: This material is issued and distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch, which is a member of the Korea Exchange(KRX) and is regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). Australia: J.P. Morgan Australia Limited (JPMAL) (ABN 52 002 888 011/AFS Licence No: 238188) is regulated by ASIC and J.P. Morgan Securities Australia Limited (JPMSAL) (ABN 61 003 245 234/AFS Licence No: 238066) is

regulated by ASIC and is a Market, Clearing and Settlement Participant of ASX Limited and CHI-X. Taiwan: J.P.Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. India: J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai - 400098, is registered with Securities and Exchange Board of India (SEBI) as a 'Research Analyst' having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited (SEBI Registration Number - INB 230675231/INF 230675231/INE 230675231) and Bombay Stock Exchange Limited (SEBI Registration Number - INB 010675237/INF 010675237). Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: www.jpmipl.com. For non local research reports, this material is not distributed in India by J.P. Morgan India Private Limited. Thailand: This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Indonesia: PT J.P. Morgan Securities Indonesia is a member of the Indonesia Stock Exchange and is regulated by the OJK a.k.a. BAPEPAM LK. Philippines: J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. Brazil: Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. Mexico: J.P. Morgan Casa de Bolsa, S.A. de C.V., J.P. Morgan Grupo Financiero is a member of the Mexican Stock Exchange and authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. Singapore: This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MCI (P) 100/03/2015 and Co. Reg. No.: 199405335R] which is a member of the Singapore Exchange Securities Trading Limited and is regulated by the Monetary Authority of Singapore (MAS) and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore) which is regulated by the MAS. This material is provided in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289. Recipients of this document are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the document. Japan: JPMorgan Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. Malaysia: This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission in Malaysia. Pakistan: J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. Saudi Arabia: J.P. Morgan Saudi Arabia Ltd. is authorized by the Capital Market Authority of the Kingdom of Saudi Arabia (CMA) to carry out dealing as an agent, arranging, advising and custody, with respect to securities business under licence number 35-07079 and its registered address is at 8th Floor, Al-Faisaliyah Tower, King Fahad Road, P.O. Box 51907, Riyadh 11553, Kingdom of Saudi Arabia. Dubai: JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - Building 3, Level 7, PO Box 506551, Dubai, UAE.

Country and Region Specific Disclosures

U.K. and European Economic Area (EEA): Unless specified to the contrary, issued and approved for distribution in the U.K. and the EEA by JPMS plc. Investment research issued by JPMS plc has been prepared in accordance with JPMS plc's policies for managing conflicts of interest arising as a result of publication and distribution of investment research. Many European regulators require a firm to establish, implement and maintain such a policy. This report has been issued in the U.K. only to persons of a kind described in Article 19 (5), 38, 47 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is only available to relevant persons and will be engaged in only with relevant persons. In other EEA countries, the report has been issued to persons regarded as professional investors (or equivalent) in their home jurisdiction. Australia: This material is issued and distributed by JPMSAL in Australia to "wholesale clients" only. This material does not take into account the specific investment objectives, financial situation or particular needs of the recipient. The recipient of this material must not distribute it to any third party or outside Australia without the prior written consent of JPMSAL. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001. Germany: This material is distributed in Germany by J.P. Morgan Securities plc, Frankfurt Branch and J.P.Morgan Chase Bank, N.A., Frankfurt Branch which are regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht. Hong Kong: The 1% ownership disclosure as of the previous month end satisfies the requirements under Paragraph 16.5(a) of the Hong Kong Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission. (For research published within the first ten days of the month, the disclosure may be based on the month end data from two months prior.) J.P. Morgan Broking (Hong Kong) Limited is the liquidity provider/market maker for derivative warrants, callable bull bear contracts and stock options listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: http://www.hkex.com.hk. Japan: There is a risk that a loss may occur due to a change in the price of the shares in the case of share trading, and that a loss may occur due to the exchange rate in the case of foreign share trading. In the case of share trading, JPMorgan Securities Japan Co., Ltd., will be receiving a brokerage fee and consumption tax (shouhizei) calculated by multiplying the executed price by the commission rate which was individually agreed between JPMorgan Securities Japan Co., Ltd., and the customer in advance. Financial Instruments Firms: JPMorgan Securities Japan Co., Ltd., Kanto Local Finance Bureau (kinsho) No. 82 Participating Association / Japan Securities Dealers Association, The Financial Futures Association of Japan, Type II Financial Instruments Firms Association and Japan Investment Advisers Association. Korea: This report may have been edited or contributed to from time to time by affiliates of J.P. Morgan Securities (Far East) Limited, Seoul Branch. Singapore: As at the date of this report, JPMSS is a designated market maker for certain structured warrants listed on the Singapore Exchange where the underlying securities may be the securities discussed in this report. Arising from its role as designated market maker for such structured warrants, JPMSS may conduct hedging activities in respect of such underlying securities and hold or have an interest in such underlying securities as a result. The updated list of structured warrants for which JPMSS acts as designated market maker may be found on the website of the Singapore Exchange Limited: http://www.sgx.com.sg. In addition, JPMSS and/or its affiliates may also have an interest or holding in any of the securities discussed in this report – please see the Important Disclosures section above. For securities where the holding is 1% or greater, the holding may be found in the Important Disclosures section above. For all other securities mentioned in this report, JPMSS and/or its affiliates may have a holding of less than 1% in such securities and may trade them in ways different from those discussed in this report. Employees of JPMSS and/or its affiliates not involved in the preparation of this report may have investments in the securities (or derivatives of such securities) mentioned in this report and may trade them in ways different from those discussed in this report. Taiwan: This material is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited. India: For private circulation only, not for sale. Pakistan: For private circulation only, not for sale. New Zealand: This material is issued and distributed by JPMSAL in New Zealand only to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money. JPMSAL does not issue or distribute this material to members of "the public" as determined in accordance with section 3 of the Securities Act 1978. The recipient of this material must not distribute it to any third party or outside New Zealand without the prior written consent of JPMSAL. Canada: The information contained herein is not, and under no

North America Equity Research 19 November 2015

Chris Schott, CFA (1-212) 622-5676 christopher.t.schott@jpmorgan.com J.P.Morgan

circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the dealer registration requirement in the relevant province or territory of Canada in which such offer or sale is made. The information contained herein is under no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. To the extent that the information contained herein references securities of an issuer incorporated, formed or created under the laws of Canada or a province or territory of Canada, any trades in such securities must be conducted through a dealer registered in Canada. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed judgment upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offence.

Dubai: This report has been issued to persons regarded as professional clients as defined under the DFSA rules.** **Brazil:** Ombudsman J.P. Morgan: 0800-7700847 / ouvidoria.jp.morgan@jpmorgan.com.

General: Additional information is available upon request. Information has been obtained from sources believed to be reliable but JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) do not warrant its completeness or accuracy except with respect to any disclosures relative to JPMS and/or its affiliates and the analyst's involvement with the issuer that is the subject of the research. All pricing is as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. JPMS distributes in the U.S. research published by non-U.S. affiliates and accepts responsibility for its contents. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information. Clients should contact analysts and execute transactions through a J.P. Morgan subsidiary or affiliate in their home jurisdiction unless governing law permits otherwise.

"Other Disclosures" last revised October 17, 2015.

Copyright 2015 JPMorgan Chase & Co. All rights reserved. This report or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.