

Century Plyboards India Ltd.

Company Visit Note: Chipping away

Century Plyboards (CPBI) is one of the leading plywood players with a dominant 30% organized market share (8% of overall market). It has been outperforming industry growth and peer group (Greenply) in the recent past, aided by strong brand equity, increasing distribution network and shift to branded players. Plywood industry with a market size of Rs150B provides a huge growth potential for organized players, which account for only 30% of the industry. GST implementation and RM sourcing constraints are expected to accelerate the demand shift to large organized players like Century, as per mgmnt.

- **Medium-term revenue growth guidance of 25%+. Recent capacity additions provide good visibility on growth.** CPBI has increased its plywood capacity by 20% to 210000 CBM and doubled its laminate capacity to 4.8M sheets over the last year. Pick up in capacity utilization at its newly commissioned plywood plants and increasing market share in the laminate segment should translate into strong revenue growth and even better earnings growth (given operating leverage) over next 2-3 years, as per management. CPBI's mid-end brand "Sainik" targeting tier 2/3 markets has been registering strong growth taking share from unorganized players.
- **Raw material security implies competitive advantage.** Export ban on raw timber by the Myanmar government has adversely impacted the industry especially smaller unorganized players. However, Century is well placed to counter the ban given its peeling facility in Myanmar and correspondingly has adequate RM security for face veneer. It has also further tied up for a JV via Laos and is evaluating additional linkage opportunities. As per management, RM sourcing constraints (on face timber) coupled with GST implementation will reduce price competitiveness of unorganized players and should benefit the large branded players (viz. Century/ Greenply).
- **Valuations, risks.** Based on Bloomberg consensus estimates, the stock is trading at 17x FY16 P/E, discount of 15-20% to other building product peers. This is despite its strong earnings growth (75% CAGR FY14-16E) and ROE of 35%+. FX is key risk given imported RM.

NOTE: THIS DOCUMENT IS INTENDED AS INFORMATION ONLY AND NOT AS A RECOMMENDATION FOR ANY STOCK. IT CONTAINS FACTUAL INFORMATION, OBTAINED BY THE ANALYST DURING MEETINGS WITH MANAGEMENT. J.P. MORGAN DOES NOT COVER THIS COMPANY AND HAS NO RATING ON THE STOCK.

Table 1: Century Plyboards - Key financials

Rs M, Year end March	FY11	FY12	FY13	FY14
Sales	13,601	16,674	11,816	13,477
Net profit	1,546	1,228	552	603
EPS (Rs)	7.0	5.5	2.5	2.7
Net Debt/Equity	0.7	1.1	1.7	1.8
BPS	28.3	32.7	11.5	13.2
P/E (x)	21.4	26.9	60.1	55.0
EBITDA	2,573	2,923	1,249	1,795
EV/EBITDA	15.0	13.2	31.0	21.5
P/B	5.3	4.6	12.9	11.3
ROE (%)	27.0%	18.1%	11.2%	22.0%

Source: Company, Bloomberg. Pricing as of 19 Dec

India SMID

Gunjan Prithyani ^{AC}

(91-22) 6157-3593

gunjan.x.prithyani@jpmorgan.com

Bloomberg JPMA PRITHYANI <GO>

J.P. Morgan India Private Limited

Saurabh Kumar

(91-22) 6157-3590

saurabh.s.kumar@jpmorgan.com

J.P. Morgan India Private Limited

Leon Chik, CFA

(852) 2800-8590

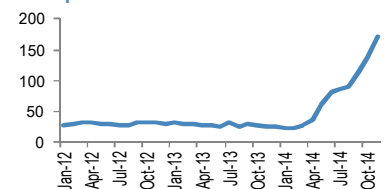
leon.hk.chik@jpmorgan.com

J.P. Morgan Securities (Asia Pacific) Limited

CNTP.NS, Not Covered

Rs148, December 18, 2014

Share price chart



One-year price performance

	1M	3M	12M
Absolute (%)	5%	22%	106%
Relative (%)	7%	21%	73%

Source: Bloomberg

Company data

52-wk range (Rs)	176.65 - 21.9
Mkt cap. (Rs MM)	33,104
Mkt cap. (US\$ MM)	523
Avg. daily volume (MM)	0.7
Average daily value (Rs MM)	94.1
Average daily value (US\$ MM)	1.5
Shares O/S (MM)	222
Index (BSE Sensex)	26,972
Exchange rate	63.3

Source: Bloomberg

See page 9 for analyst certification and important disclosures, including non-US analyst 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.

One of the leading plywood companies with a strong brand and extensive distribution network

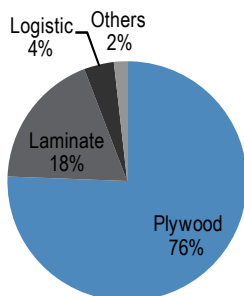
Century Plyboards (CPBI) is one of the leading plywood players with a dominant 30% share of the organized market and 7.5% share of the overall plywood market. The company has been outperforming overall industry as well as organized market growth trends. This has been driven by market share gains on the back of its strong brand equity, increasing distribution network and shift to branded players from the unorganized market.

CPBI has been aggressively expanding its distribution network (c10,000 sales points) to increase penetration in tier 2/3 markets. Further, the company has also been increasing its advertisement spend (4% of the plywood revenue is ad spend) to increase brand visibility. These efforts have yielded positive results with the company gaining market share and outperforming the industry growth (+5-7%).

Within the organized space, the closest competitor for the company is Greenply. Both these companies command 50% of the organized market, while other players are primarily regional players confined to 1-2 states. Century appears to have managed its leadership position and has consistently delivered better growth than its closest peer over the recent past.

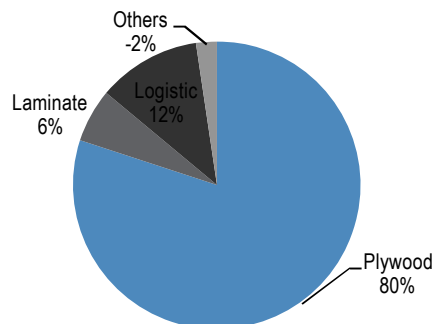
CPBI has plywood capacity of 210000 CBM, which is the highest in India. It has 7 manufacturing facilities spread across India and one in Myanmar, and has 32 branch office (warehouses), which ensures better distribution and reach given its proximity to key markets. Given its branches/ warehouses across key geographies, the company has been able to limit inventory stocking at the dealer end. CPBI is also the top three laminate manufacturers with a capacity of 4.8M sheets (recently doubled).

Figure 1: Century Plyboards - F14 Revenue break up by segment



Source: Company

Figure 2: Century Plyboards - F14 EBIT break up by segment



Source: Company

Figure 3: Century - Manufacturing plants for plywood

Plant	Capacity (cbm)	
	2009-10	2013-14
Joka (West Bengal)	25,400	37,000
Chennai	25,400	39,420
Guwahati	21,600	35,000
Karnal	36,000	36,000
Kandla	-	31,000
Roorkee	25,000	25,000
Myanmar	-	6,000
Total	147,420	209,420

Source: Company

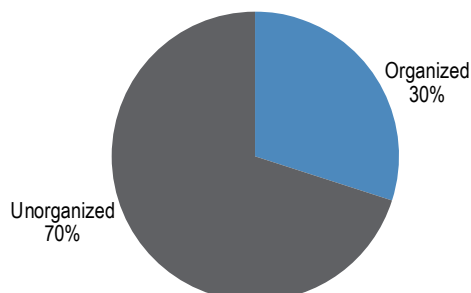
Plywood industry offers huge growth potential to organized players. GST implementation and RM sourcing constraints expected to accelerate the shift to branded players

The plywood industry in India with a market size of Rs150B offers huge growth potential for the organized players, which is dominated by two large companies Century and Greenply. While the share of unorganized players in the market is fairly large at 70%; we note that organized players have been growing faster than the overall industry with a shift in preference towards branded players.

Organized players' market share has increased to 30% from 10% a decade back. Overall industry growth has been moderate at sub 10% levels as against branded players growth at 25%+ levels over the last 5 years. **We see the shift accelerating towards branded players due to diminishing cost advantage of the unorganized players on the back of:**

- a) **GST implementation** - will increase the tax compliance and disclosures of unorganized players diminishing the price differential between organized and smaller unorganized players and placing them on a level playing field.
- b) **RM sourcing constraints** post the ban on import of raw timber from Myanmar. This has not only affected the availability of face timber for the industry but also the price. The industry has taken price hikes in 1H (5-7%) to factor in higher costs. Organized players are better placed on the RM front with manufacturing facilities in Myanmar.

Figure 4: Plywood Industry - Market size - Rs150B. Organized share 30%



Source: Century presentation

Recent capacity additions provide good visibility on revenue growth. Guidance of 25%+ revenue growth

Over the last 2 years, CPBI has invested in increasing capacity across both plywood and laminate despite weak market trends. It increased its plywood capacity by 20% to 210000 CBM and doubled its laminate capacity to 4.8M sheets. Capex commitments are limited ahead (Rs400M) and the company is well positioned to capture the demand pick up as sales volumes in real estate market recover. We note that the real estate market is showing some signs of absorption pick up in select markets given the pent up demand of last 3 years and overall improved sentiment.

Management is guiding to 25%+ revenue growth over the medium term with 15-17% coming from volume growth; while remaining will be price/ value led. This will primarily be driven by a) pick up in capacity utilization at the newly commissioned plants in Kandla, Myanmar for plywood; b) increasing market share in laminate segment (capacity doubled) and c) increasing contribution from its mid end brand “Sainik” plywood brand. This brand has been growing very fast. This is priced 15-20% discount to the company’s premium range targeting tier 2/3 markets and is primarily outsourced. This is the key comparable to unorganized players and has been benefitting from the shift to branded players.

Recent capacity additions coupled with operating leverage (as capacity utilization picks up) should deliver higher earnings growth over the next 2 years, as per the company. CPBI expects sustainable margins to be in the range of 14-17% as new capacity reaches full capacity utilization.

Table 2: Century Plyboards - Key financials

Rs M	F13	F14	1HF15
Revenue	11,243	12,760	7,657
Y/Y Growth		13%	21%
EBITDA margin (ex forex)	9.8%	1293.0%	14.1%
PAT	527	669	615
Y/Y Growth		27%	345%

Source: Company

Well placed on RM sourcing given its manufacturing presence in Myanmar

CPBI has good raw material security given its manufacturing unit in Myanmar. It was the first company to set up a peeling facility in Myanmar last year and was able to counter the ban imposed by the Myanmar government on the import of raw timber. Correspondingly, the company was unaffected by the ban from Myanmar, which adversely impacted the industry especially unorganized players. It has also further tied up for a JV via Laos and is evaluating additional linkage opportunities.

Financials

Table 3: 1H F15 Financials

Rs M, year end March	1HF15	1HF14	% ch Y/Y	Comments
Revenues				
Plywood	5,749	4,683	23%	
Laminate	1,445	1,248	16%	
CFS	352	302	17%	
Others	151	122	24%	
Total	7,698	6,355	21%	Guidance of 25% growth for full year
EBITDA (ex forex)				
Plywood	827.7	724.3	14%	Improving margin. Scope for further improvement as capacity utilization improves further and price hikes flow through
EBITDA margin	14.4%	15.5%	1.1%	
Laminate	155	157	-1%	Impacted by lower capacity utilization at new plant. As utilization improves margin should improve
EBITDA margin	11%	13%	1.8%	
CFS	149	147		
EBITDA margin	42%	49%		
Others	(9)	(5)		
Segmental EBITDA total	1,123	1,023	10%	
EBITDA margin (total)	14.6%	16.1%	-1.5%	
Reported EBITDA (ex forex)	1077.9	977.7	10%	
Reported EBITDA margin (ex forex)	14.08%	15.47%	-1.4%	
Reported PAT	614.8	178.1	245%	
PAT margin	8.03%	2.82%		
Debt	Rs5B			This includes Rs3.2B of buyers credit

Source: Company reports

Valuations

CPBI's share price has seen a sharp run up over the last 1 year. This is in line with the re-rating seen across the entire building product space and is also supported by improving growth outlook and strong ROE profile.

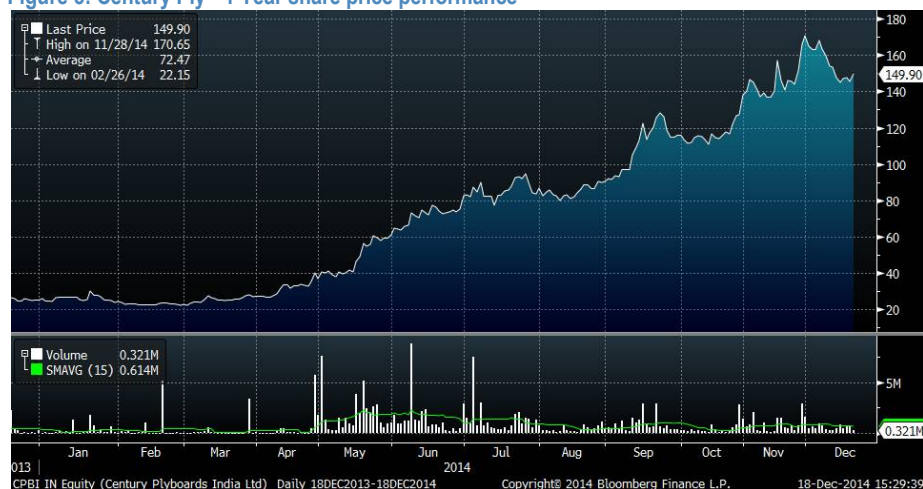
At current levels, CPBI is trading at a 15-20% discount to peers in the building product segment despite strong earnings growth trajectory. Recent capacity additions provide good visibility on growth over the next 2 years. ROEs are also impressive at 35%+.

Table 4: India Building Product Valuations

	Mkt Cap \$ Mn	P/E		EV/EBITDA		Earnings growth (%)		P/BV		ROE	
		FY15	FY16	FY15	FY16	FY15	FY16	FY15	FY16	FY15	FY16
Greenply	287	12.1	10.1	7.7	6.6	32%	20%	2.61	2.30	21.5	21.5
Century Plyboards	522	24.1	18.8	15.5	12.5	105%	28%	8.49	6.47	38.7	37.8
Kajaria Ceramics	684	26.0	19.9	13.1	10.3	26%	31%	6.03	4.82	25.9	26.5
Somany Ceramics	184	26.2	17.6	13.3	10.1	39%	49%	4.41	3.67	17.0	22.9
HSIL	381	28.4	19.1	11.0	8.9	149%	49%	2.46	2.22	8.5	11.3
Cera Sanitary ware	329	30.0	24.4	17.1	13.6	34%	23%	7.28	5.70	26.7	27.1
Berger Paints	2,046	43.0	33.3	24.8	19.5	29%	29%	9.78	8.18	24.4	26.5
Akzo Nobel	1,015	35.3	29.6	25.3	21.1	18%	19%	6.80	6.27	20.6	24.0
Havells India	2,612	29.7	23.7	18.4	15.2	16%	25%	7.14	5.94	30.0	30.3
Pidilite Industries	3,765	43.5	35.3	33.7	27.3	17%	23%	10.44	8.82	25.7	26.9
Supreme Industries	1,244	24.9	19.9	17.4	14.7	12%	25%	6.24	5.20	27.3	28.4
Astral Poly	710	38.0	27.2	39.3	30.4	46%	40%	9.02	7.08	30.6	29.6

Source: Company reports, Bloomberg

Figure 5: Century Ply - 1 Year share price performance

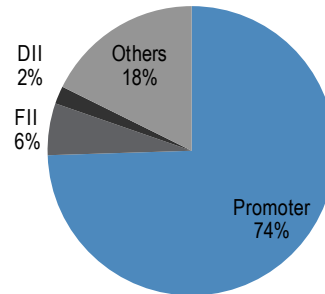


Source: Bloomberg

Shareholding pattern

Century Plyboards is a 32-year old company promoted by first generation entrepreneurs, which are extensively involved in its operations. The company did its IPO in 1997. Promoter holds 74.5% of the company.

Figure 6: Century – Shareholding pattern



Source: BSE

Century Plyboards: Backpage financials

Profit and Loss statement					Cash flow statement				
	FY11	FY12	FY13	FY14		FY11	FY12	FY13	FY14
Revenues	13,601	16,674	11,816	13,477	Net income	1,546	1,228	552	603
% change Y/Y	17%	23%	-29%	14%	Depreciation	508	556	280	387
EBITDA	2,573	2,923	1,249	1,795	Other non cash items	(361)	(1,155)	(393)	(913)
% change Y/Y	NA	14%	-57%	44%	Cash flow from operation	1,693	629	439	76
EBITDA Margin (%)	19%	18%	11%	13%	Sales of fixed assets	15	6	22	22
EBIT	2,065	2,366	969	1,408	Capex	(3,158)	(4,471)	(1,592)	(665)
% change Y/Y	NA	15%	-59%	45%	Change in investments	(51)	12	NA	43
EBIT Margin (%)	15%	14%	8%	10%	Others	98	252	(20)	(130)
Net financial income	196	278	160	296	Cash flow from investing activities	(3,097)	(4,201)	(1,590)	(730)
Earnings before tax	1,838	1,555	622	629	Dividend paid	(95)	(554)	(1)	(60)
Tax	(59)	58	46	(5)	Debt re-paid/raised	NA	4,641	1,967	372
as % of EBT	3%	-4%	-7%	1%	Equity raised	-	-	(5)	-
Net Income (adjusted)	1,546	1,228	552	603	Others	(60)	(130)	(244)	(307)
% change Y/Y	6%	-21%	-55%	9%	Cash flow from investing activities	1,375	3,958	1,717	5
EPS (adjusted)	7.0	5.5	2.5	2.7	Net change in cash	(28.9)	384.7	566.0	(648.9)
% change Y/Y	NA	-21%	-55%	9%					
Balance sheet					Ratio Analysis				
	FY11	FY12	FY13	FY14		FY11	FY12	FY13	FY14
Cash and short term investments	NA	654	1,018	362	EBITDA margin	19%	18%	11%	13%
Trade debtors	1,522	1,951	1,793	2,089	EBIT margin	15%	14%	8%	10%
Inventories	2,555	3,105	2,293	3,029	Net profit margin	11%	7%	5%	4%
Other current assets	3,220	3,320	460	661	Sales growth	17%	23%	-29%	14%
Current assets	NA	9,029	5,564	6,140	Net profit growth	6%	-21%	-55%	9%
Investments	60	60	54	30	Debt to assets	35.7	47.9	57.9	56.7
Net fixed assets	4,352	4,578	3,145	3,377	Net debt to equity	68.8	108.5	166.4	178.6
Other long term assets	3,897	8,206	595	692	Sales/assets	0.9	0.8	1.3	1.3
Total assets	15,875	21,873	9,358	10,239	Assets/equity	2.0	2.4	3.5	3.4
Current liabilities	2,124	1,890	1,250	1,370	ROE	21%	18%	11%	22%
Short term borrowings	3,089	4,273	3,270	4,024	ROCE	11%	11%	5%	16%
Long term borrowings	2,574	6,209	2,148	1,777					
Other liabilities	241	441	45	23					
Total liabilities	8,028	12,813	6,714	7,194					
Minority interest and others	1,563	1,799	NA	NA					
Shareholders' equity	7,846	9,060	2,644	3,045					
BVPS	28.3	32.7	11.5	13.2					

Source: Company

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

Company-Specific Disclosures: Important disclosures, including price charts, are available for compendium reports and all J.P. Morgan-covered companies by visiting <https://jpm.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.

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.jpmorganmarkets.com.

Coverage Universe: Prithyani, Gunjan: Cox and Kings Ltd. (COKI.NS), Godrej Properties (GODR.NS), Havells India Ltd (HVEL.NS), Phoenix Mills (PHOE.BO), Pidilite Industries (PIDI.NS), Sobha Developers (SOBH.BO)

J.P. Morgan Equity Research Ratings Distribution, as of September 30, 2014

	Overweight (buy)	Neutral (hold)	Underweight (sell)
J.P. Morgan Global Equity Research Coverage	46%	42%	12%
IB clients*	57%	49%	34%
JPMS Equity Research Coverage	46%	48%	7%
IB clients*	76%	67%	51%

*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.

Registration of non-US Analysts: Unless otherwise noted, the non-US analysts listed on the front of this report are employees of non-US affiliates of JPMS, are not registered/qualified as research analysts under NASD/NYSE rules, may not be associated persons of JPMS, and may not be subject to FINRA Rule 2711 and NYSE Rule 472 restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

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:** J.P. Morgan Securities (Far East) Ltd, Seoul Branch, is regulated by the Korea Financial Supervisory Service. **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 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) and is regulated by Securities and Exchange Board of India. Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: www.jpmpil.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 (JPMS) [MCI (P) 199/03/2014 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 JPMS or JPMCB Singapore in respect of any matters arising from, or in connection with, the document. **Japan:** JPMorgan Securities Japan Co., Ltd. is 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) Ltd, Seoul Branch. **Singapore:** JPMS and/or its affiliates may have a holding in any of the securities discussed in this report; for securities where the holding is 1% or greater, the specific holding is disclosed in the Important Disclosures section above. **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 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 November 29, 2014.

Copyright 2014 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.