

Sinopharm

Sinopharm shares to potentially ride on diversification efforts; Finance cost guided to rise slower than sales

Sinopharm reported FY14 results with sales in line with consensus and net profit ahead by 1.5%. Its net profit outgrew sales by 7.83ppt, a first since its establishment in 2003. Management reaffirmed that the distribution business should outgrow industry by 3-5ppt and indicated they are actively planning the O2O and B2C drug business in a comprehensive and thorough way. We are encouraged by the improvement in GM and operating leverage and see upside from interest rate easing and the company's diversification efforts. We have revised models and increased Dec-15 PT from HK\$30 to HK\$36. We remain OW and keep Sinopharm as one of our top picks for 2015.

- **Solid top-line and EPS performance:** Total FY14 sales of Rmb200bn (+19.9%Y/Y), in line with our estimate. GM rose Y/Y by 14 basis points and SG&A ratio was down by 20bp. Hence, OPM went up by 27bp and net profit went by +27.8% Y/Y. Sinopharm recorded FY2014 EPS of Rmb1.11, for Y/Y growth of 24.7%, beating consensus estimate by 1.5%.
- **Integration and scale paying off:** Of 19.9% sales growth, management indicated 2.5% came from acquisition while 17.5% was due to organic growth, far outpacing industry growth of about 13-15%. GM improved due to higher % of direct sales to hospitals. SG&A leveraging came from efficiency gain via integrations and economic of scales. Sinopharm was also mindful of quality of sales growth. Overall, management indicated margins should be stable as tender price cuts may have only temporary effects on distribution margins and they expect sales marketing leveraging to continue.
- **Diversifying outside of distribution:** Management was satisfied with its collaborations with AstraZeneca and Sinopharm has signed multiple sales agreements with others. Sinopharm sees an increasing need to actively promote drug sales after the meltdown of old sales model of depending on kickbacks. Sinopharm expanded retail network through acquisitions of two drugstore chains of Fosun and expects to do more. While others have aggressively signalled to the market their online ventures, Sinopharm has quietly planned to be a major player and views online efforts to drive internal coordination of 300 subsidiaries and transformation of the Group.

Sinopharm (Reuters: 1099.HK, Bloomberg: 1099 HK)

Rmb in mn, year-end Dec	FY13A	FY14A	FY15E	FY16E	FY17E
Revenue (Rmb mn)	166,866	200,131	234,770	275,067	318,794
Net Profit (Rmb mn)	2,250	2,875	3,411	4,306	5,454
EPS (Rmb)	0.89	1.11	1.23	1.56	1.97
DPS (Rmb)	0.26	0.33	0.37	0.46	0.59
Revenue growth (%)	22.9%	19.9%	17.3%	17.2%	15.9%
EPS growth (%)	8.4%	24.7%	10.9%	26.2%	26.7%
ROCE	11.8%	11.6%	11.6%	12.5%	13.4%
ROE	11.5%	11.7%	11.9%	13.8%	15.7%
P/E (x)	26.2	21.0	19.0	15.0	11.9
P/BV (x)	2.8	2.2	2.2	2.0	1.8
EV/EBITDA (x)	10.5	8.8	7.9	6.8	6.0
Dividend Yield	1.1%	1.4%	1.6%	2.0%	2.5%

Source: Company data, Bloomberg, J.P. Morgan estimates.

Overweight

1099.HK, 1099 HK

Price: HK\$29.25

▲ Price Target: HK\$36.00
Previous: HK\$30.00



China

Healthcare

Sean Wu ^{AC}

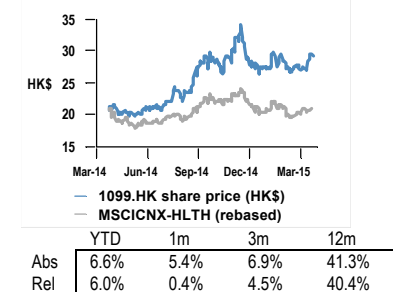
(852) 2800-8538

sean.wu@jpmorgan.com

Bloomberg JPMA SWU <GO>

J.P. Morgan Securities (Asia Pacific) Limited

Price Performance



Company Data	
Shares O/S (mn)	2,403
Market Cap (Rmb mn)	56,207
Market Cap (\$ mn)	9,059
Price (HK\$)	29.25
Date Of Price	23 Mar 15
Free Float(%)	95.0%
3M - Avg daily vol (mn)	5.19
3M - Avg daily val (HK\$ mn)	145.75
3M - Avg daily val (\$ mn)	18.8
MSCICNX-HLTH	151.66
Exchange Rate	7.76
Price Target End Date	31-Dec-15

See page 8 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.

Key catalysts for the stock price:	Upside risks to our view:	Downside risks to our view:
<ul style="list-style-type: none"> Major announcement of M&A seen as good for future cash flow Tenders drive industry-wide sales growth Steps to absorb two A-share listed major subsidiaries Quarterly earnings 	<ul style="list-style-type: none"> Lower than expected drug price cut leads to higher margin Diversification into other areas and downstream integration of hospital services improve cash flow Unexpected favorable government policies driven faster cash collection from hospitals 	<ul style="list-style-type: none"> A slower pace of acquisition of new distributors Margin contraction from EDL implementation Further deterioration of hospital payment term Rising interest rate driving up finance cost

Key financial metrics	FY13A	FY14A	FY15E	FY16E
Revenues (LC)	166,866	200,131	234,770	275,067
Revenue growth (%)	22.9%	19.9%	17.3%	17.2%
EBITDA (LC)	7,157	9,143	10,339	12,020
EBITDA margin (%)	4.3%	4.6%	4.4%	4.4%
Tax rate (%)	22.5%	23.3%	23.5%	23.5%
Net profit (LC)	2,250	2,875	3,411	4,306
EPS (LC)	0.892	1.112	1.233	1.556
EPS growth (%)	8.4%	24.7%	10.9%	26.2%
DPS (LC)	0.26	0.33	0.37	0.46
BVPS (LC)	8.49	10.59	10.76	11.85
Operating cash flow (LC mn)	4,941	5,561	2,226	4,837
Free cash flow (LC mn)	4,214	5,593	2,850	5,538
Interest cover (x)	4.3	4.3	5.2	5.7
Net margin (%)	1.3%	1.4%	1.5%	1.6%
Sales/assets (X)	1.8	1.7	1.7	1.7
Debt/equity (%)	87.9%	81.2%	76.3%	74.0%
Net debt/equity (%)	38.9%	39.2%	32.7%	25.2%
ROE (%)	11.5%	11.7%	11.9%	13.8%

Key model assumptions	FY13A	FY14E	FY15E	FY16E
Overall distribution growth		15.0%	14.5%	14.0%
GM assumption		7.07%	7.02%	6.97%
Sales growth from acquisitions		4.3%	2.6%	3.6%

Source: Company and J.P. Morgan estimates.

Sensitivity analysis	EBITDA		EPS	
Sensitivity to	FY13A	FY14A	FY15E	FY16E
1% chg in sales volume growth	0.6%	0.7%	0.7%	0.8%
10bp chg in distribution GM	2.7%	3.0%	2.7%	3.0%
1% increase in interest rate	0.0%	5.0%	0.0%	4.5%
AR days change by 1 day	0.0%	0.5%	0.0%	0.5%

Source: J.P. Morgan estimates.

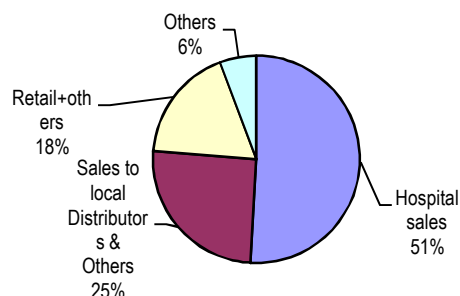
Comparative metrics	CMP LC	Mkt Cap \$Mn	P/E (x)		EV/EBITDA (x)		P/BV (x)		YTD Stock perf.
			FY14E	FY15E	FY14E	FY15E	FY14E	FY15E	
SINOPHARM-H (OW)	29.25	10,437	18.2	15.1	10.0	8.6		14.0	6.6
CHINA MEHECO C-A (NC)	17.84	2,907	32.4	28.3	17.2	15.9	4.6	4.5	8.7
CHINA NATIONAL ACCORD (NC)	56.35	3,069	24.9	19.6	17.6	14.7		18.0	18.1
CHINA NATIONAL MEDICINE (NC)	4.78	1,562	20.2	16.4	14.9	12.5	2.7	1.6	6.7
CHONGQING ZHIF-A (NC)	28.36	3,651	#N/A	#N/A					42.4
JINTIAN PHARMACE (NC)	2.92	753	8.2	7.0	4.4	3.8	1.5	1.9	9.8
JOINTOWN PHARM-A (NC)	26.72	7,065	84.0	68.5	48.1	40.1		5.0	47.9
NANJING PHARMA-A (NC)	9.83	1,420	98.3	49.2	19.1	14.1	6.7	1.7	36.7
TONGRENTANGCM (NC)	10.96	1,183	25.0	20.6	17.9	14.5	5.2	2.5	1.7
SHANGHAI PHARM-H (N)	19.00	8,989	16.5	14.6	14.5	13.0		11.1	8.6

Source: Bloomberg; J.P. Morgan. Price as of 03/23/2015

Valuation and price target basis

Our Dec-15 price target of HK\$36 is based on DCF. The nature of the industry leads us to apply a terminal growth rate of 5% (the high end of the 3%-6% growth rate used for health care stocks).

Sales mix (2015e)



Source: J.P. Morgan estimates.

JPM vs. consensus, change in estimates

EPS (LC)	FY15E	FY16E
JPMe old	1.378	1.695
JPMe new	1.233	1.556
% chg	-11%	-8%
Consensus	1.291	1.555

Source: Bloomberg, J.P. Morgan estimates.

Financial Overview:

- Revenue for the group was Rmb200,131.26 mn, up 19.94% y/y.
- Revenue from distribution business was Rmb191,467.90 mn, up 20.44% y/y
 - a) Distribution - Rmb191.5bn, +20.44% Y/Y, accounting for 94.87% of total sales, +0.41ppt Y/Y
 - b) Retail – Rmb5,904mn, +22.16% Y/Y, accounting for 2.92% of total sales, +0.05ppt Y/Y
 - c) Other – Rmb4,451.6bn, -0.98% Y/Y, accounting for 2.21% of total sales, - 0.46ppt Y/Y.
- Net profit of the group stands at Rmb4,551.57 mn, which is an increase of 27.15% y/y and profit attributable to equity holders stands at RMB 2,874.82 mn, which is 27.77% increase y/y.
- EPS of the company was Rmb 1.11, up 24.72% compared to last year.
- Total assets of the group were at RMB 128,655.74, up 22% and net assets at RMB 36,289.63, up 26.84%. Gathering ratio was reduced from 72.87% to 71.79%.

Table 1: Sinopharm – FY14 variance analysis

	FY13A	FY14A	FY13E	Growth	Variance	Consensus	Variance
Turnover	166,866	200,131	198,859	19.9%	0.6%	199,180	0.5%
Gross profit	13,379	16,328	16,074	22.0%	1.6%		
GPM	8.02%	8.16%	8.08%	0.14 ppt	7.55%	8.14%	1.88%
EBIT	6,102	7,862	7,811	28.8%	0.7%	7,812	0.6%
Net profit	2,250	2,875	2,988	27.8%	-3.8%	2,831	1.5%
EPS	0.892	1.112	1.163	24.7%	-4.4%	1.10	1.5%

Source: J.P. Morgan estimates, Bloomberg, Company data.

Cash flow and Balance sheet analysis: As of YE2014, Sinopharm had cash and cash equivalents of Rmb15.2bn, up from Rmb12.4bn as of June30, 2014. For the whole year 2014, Sinopharm generated net cash inflow from operations of Rmb5.56bn, up +12.54% Y/Y. Total capital expenditure for 2014 was Rmb2,904.2mn, of which development and expansion of distribution channels, improving logistic delivery system had a major chunk. The net cash used in investing activities was Rmb4,358mn. Sinopharm recorded net cash from financing activities of Rmb22.0mn with cash raised via equity placement at YE2014 used largely to pay down long to mid-term debt. While interest rate cuts have not had direct impact on the company’s short term borrowing costs, management has proactively sought to lower finance cost through structured financing products and the company has set up a separate unit for financing and leasing. Hence, management expressed confidence that in 2015, the growth of finance cost should come behind sales growth.

The AR days increased from 98 in 2013 to 107, offset a bit by AP days increase from 91 to 95, while inventory days stay relatively flat (36 for both 2013 and 2014).

Sinopharm declared a dividend of Rmb0.31 per share for a payout of 28%.

Model revisions

We are adjusting our model to reflect improved gross margins. We fine-tune capital expenditure estimates. Our changes are summarized in the table below.

Table 2: Sinopharm - Model revisions

	New		Old		Change	
	FY15E	FY16E	FY15E	FY16E	FY15E	FY16E
Turnover	234,770	275,067	235,381	275,567	-0.3%	-0.2%
Gross profit	18,735	21,822	18,922	21,990	-1.0%	-0.8%
EBIT	8,905	10,427	9,232	10,759	-3.5%	-3.1%
Net profit	3,411	4,306	3,540	4,354	-3.6%	-1.1%
EPS	1.23	1.56	1.38	1.70	-10.5%*	-8.2%*
Gross margin	8.0%	7.9%	8.0%	8.0%	-0.06%	-0.05%

Source: J.P. Morgan estimates; EPS revision down due to higher than originally assumed shares outstanding following equity placement in late 2014.

Valuation and share price analysis

DCF valuation and Dec-15 PT of HK\$36

Our Dec-15 price target of HK\$36 is based on a DCF valuation that assumes a market premium of 6.0% and risk-free rate of 4.2% (yield on 10-year government notes in China). We assume a beta of 0.794 based on regression analysis performed by Bloomberg. Normally, pharmaceutical distribution is a stable business and leading US distributors have a similarly low beta of 0.8. Accordingly, we assume a WACC of 10.8%. We estimate free cash flow for Sinopharm until 2017 and assume a terminal growth rate of 5.0%. The terminal growth is based on the annual growth rate expected in 2017 (the final year of the estimate period), subject to a minimum of 3% and a maximum of 6% depending on the nature of the industry and the level of maturity in China. We use 5% for Sinopharm as we believe a faster-growing industry and a low penetration should allow for strong long-term growth.

We also analyze the DCF price sensitivity to WACC, and the terminal multiple.

Table 2: Sinopharm—Base-case DCF analysis indicates an equity value per share of HK\$31

Rmb in millions	2009	2010	2011A	2012A	2013A	2014A	2015E	2016E	2017E				
Cash flow estimates													
Sales	52,668	69,234	102,225	135,787	166,866	200,131	234,770	275,067	318,794				
EBIT	1,892	2,409	3,636	4,863	6,102	7,862	8,905	10,427	12,301				
NOPAT	2,141	2,730	4,130	5,505	6,925	8,876	10,018	11,843	11,174				
Capex, net	(355)	(411)	(946)	(2,714)	(2,013)	(1,600)	(900)	(900)	(1,014)				
Depreciation	190	301	460	567	677	828	902	970	1,045				
Change in working capital	(3,240)	(1,836)	(9,499)	(465)	(1,883)	(2,744)	(6,360)	(5,107)	(5,333)				
Free operating CF (FoCF)	(1,265)	784	(5,855)	2,893	3,706	5,360	3,661	6,808	5,875				
DCF Parameters													
Liabilities as a % of EV				20%			Terminal growth			5.0%			
WACC				10.8%			Risk-free rate			4.2%			
Enterprise NPV (10E-16E)													
										Market risk			6.0%
										Beta			0.79
										Cost of debt			6.2%
+ Net cash (debt), current	103,434						Implied exit P/E multiple (x)			204.9x			
- Minorities (Market value)	(13,347)												
+/- Other items	(13,592)												
= Equity value	76,495												
/ Number of shares	2,568												
= Equity value per share (HK\$)	36.0												

Source: Company data, J.P. Morgan estimates.

Table 3: Sinopharm—Sensitivity analysis based on WACC and perpetual terminal growth rate

WACC		Terminal growth rate						
		3.5%	4.0%	4.5%	5.0%	6.0%	6.5%	7.0%
	9.3%	42.9	45.4	48.4	52.1	67.1	80.8	100.4
	9.8%	38.6	40.5	42.7	45.5	56.8	66.9	80.5
	10.3%	34.9	36.4	38.1	40.1	49.0	56.7	66.7
	10.8%	31.8	32.9	34.2	35.7	42.7	48.8	56.5
	11.3%	29.1	29.9	30.9	32.0	37.7	42.6	48.7
	11.8%	26.6	27.3	28.0	28.8	33.5	37.6	42.5
	12.3%	24.5	25.0	25.5	26.1	30.0	33.4	37.4

Source: Company data, J.P. Morgan estimates.

Investment Thesis, Valuation and Risks

Sinopharm (*Overweight; Price Target: HK\$36.00*)

Investment Thesis

Sinopharm was established in 2003 and is the largest pharmaceutical distributor in China, with ~13.5% market share. Products are sold directly to hospitals or through local third-party distributors. Sinopharm also has small drug retailing and manufacturing operations. Sinopharm has established a distribution network in all provinces of China and should stand to benefit from higher GSP standards and expected industry consolidation. In the near term, we see potential for economies of scale and leveraging. In the long run, we believe it may become a logistics company providing solutions to hospitals and other distributors.

Valuation

Our Dec-15 price target of HK\$36 is based on a DCF valuation that assumes a market premium of 6.0% and risk-free rate of 4.2% (yield on 10-year government notes in China). We assume a beta of 0.794 based on regression analysis performed by Bloomberg. Normally, pharmaceutical distribution is a stable business and leading US distributors have a similarly low beta of 0.8. Accordingly, we assume a WACC of 10.8%. We estimate free cash flow for Sinopharm until 2017 and assume a terminal growth rate of 5.0%. The terminal growth is based on the annual growth rate expected in 2017 (the final year of the estimate period), subject to a minimum of 3% and a maximum of 6% depending on the nature of the industry and the level of maturity in China. We use 5% for Sinopharm as we believe a faster-growing industry and a low penetration should allow for strong long-term growth.

Risks to Rating and Price Target

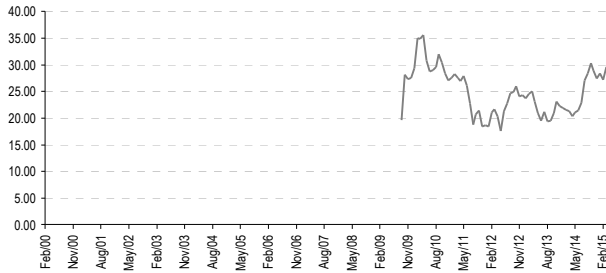
Key risks to our rating and PT include a slower pace of acquisition of new distributors and a faster pickup in sales volume arising from the implementation of the Essential Drug List, resulting in low points taken by Sinopharm because of low profitability to manufacturers who would ask for shared sacrifice of profits from distributors. In addition, we see risks from: (1) unexpected industry-wide slowdown; (2) acquisitions becoming prohibitively expensive; and (3) finance costs staying high for longer than expected.

JPM Q-Profile
Sinopharm Group Co., Ltd. Class H (CHINA / Health Care)
As Of: 23-Mar-2015

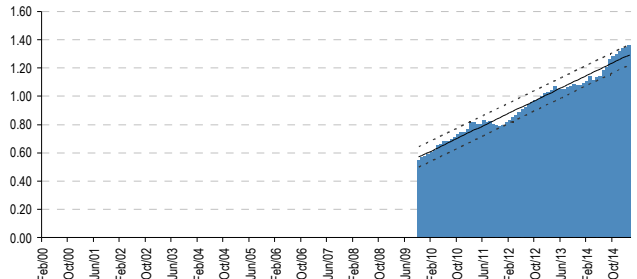
Global Equity Quantitative Analysis

Quant_Strategy@jpmorgan.com

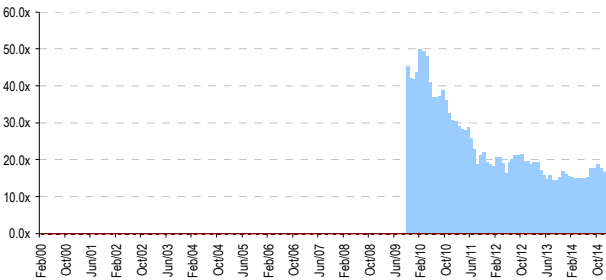
Local Share Price Current: **29.60**



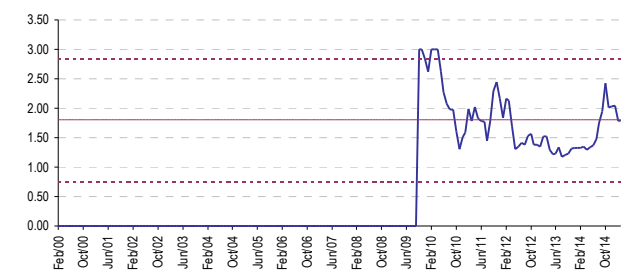
12 Mth Forward EPS Current: **1.37**



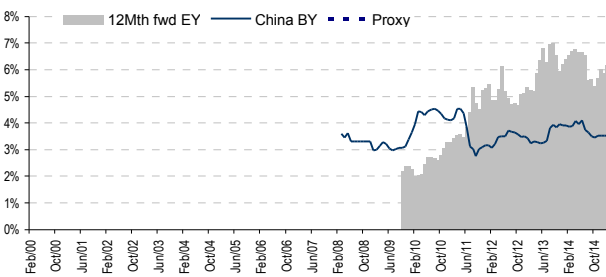
PE (1Yr Forward) Current: **17.3x**



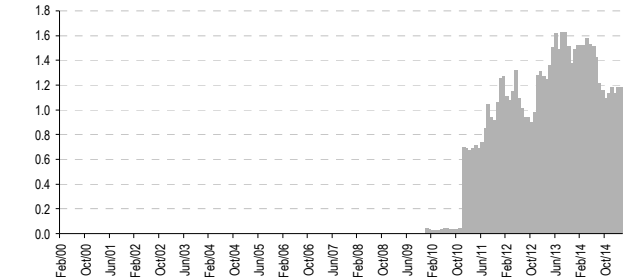
P/E Relative to China Index Current: **1.79**



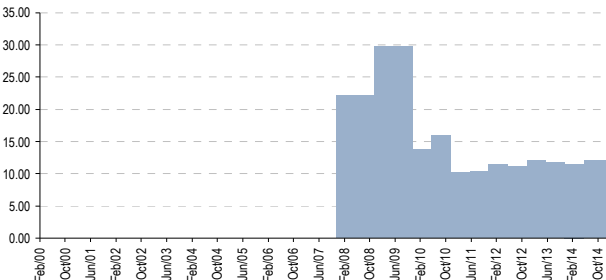
Earnings Yield (& Local Bond Yield) Current: **6%**



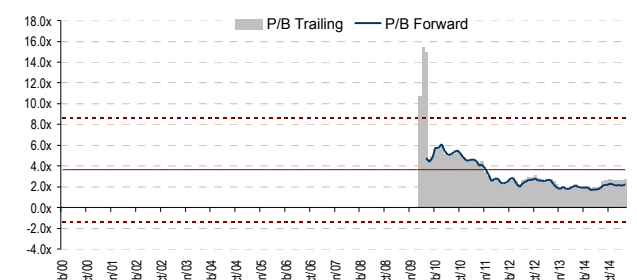
Dividend Yield (Trailing) Current: **1.18**



ROE (Trailing) Current: **12.01**



Price/Book (Value) Current: **2.8x**



Summary

Sinopharm Group Co., Ltd. Class H		TICKER 1099 HK		As Of: 23-Mar-15							
CHINA				Local Price: 29.60							
Health Care				EPS: 1.37							
	Latest	Min	Max	Median	Average	2 S.D.+	2 S.D. -	% to Min	% to Max	% to Med	% to Avg
12mth Forward PE	17.31x										
P/BV (Trailing)	2.78	1.90	15.41	2.73	3.66	8.72	-1.40	-32%	455%	-2%	32%
Dividend Yield (Trailing)	1.18x	0.00	1.63	1.09	0.92	2.01	-0.17	-100%	38%	-8%	-22%
ROE (Trailing)	12.01	10.25	29.75	12.01	15.80	29.18	2.42	-15%	148%	0%	32%

Source: Bloomberg, Reuters Global Fundamentals, IBES CONSENSUS, JPMorgan Quantitative & Derivative Strategy

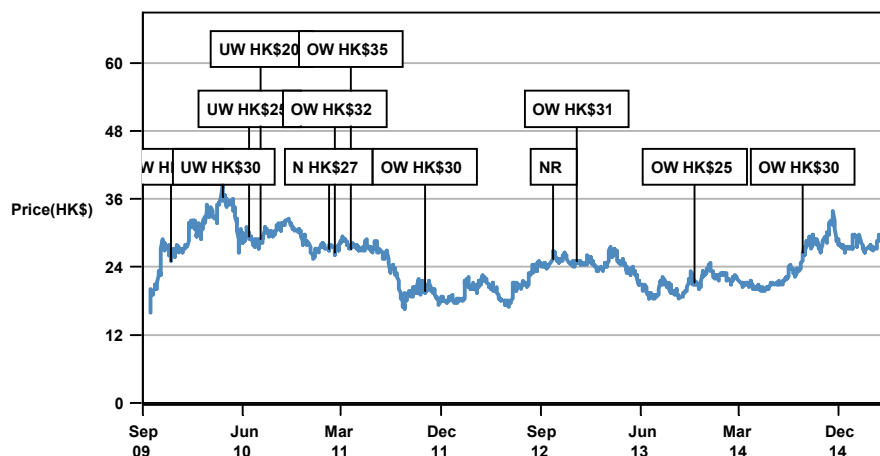
Analyst Certification: The research analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to 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

- **Beneficial Ownership (1% or more):** J.P. Morgan beneficially owns 1% or more of a class of common equity securities of Sinopharm.
- **Client:** J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as clients: Sinopharm.
- **Client/Non-Securities-Related:** J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as clients, and the services provided were non-securities-related: Sinopharm.

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://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.

Sinopharm (1099.HK, 1099 HK) Price Chart



Date	Rating	Share Price (HK\$)	Price Target (HK\$)
18-Nov-09	OW	25.05	36.00
08-Apr-10	UW	36.45	30.00
21-Jun-10	UW	29.30	25.00
21-Jul-10	UW	28.95	20.00
24-Jan-11	N	27.15	27.00
14-Feb-11	OW	26.55	32.00
28-Mar-11	OW	27.35	35.00
15-Oct-11	OW	19.74	30.00
03-Oct-12	NR	25.65	--
10-Dec-12	OW	25.05	31.00
30-Oct-13	OW	21.35	25.00
25-Aug-14	OW	26.65	30.00

Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.
Break in coverage Oct 03, 2012 - Dec 10, 2012.

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.jpmorganmarkets.com.

Coverage Universe: Wu, Sean: CSPC Pharmaceutical (1093.HK), China Medical System (0867.HK), China Shineway Pharmaceutical Group Limited (2877.HK), Fosun Pharmaceutical - A (600196.SS), Fosun Pharmaceutical - H (2196.HK), Lijun Intl Pharmaceutical (2005.HK), MicroPort Scientific Corp (0853.HK), Mindray Medical (MR), Seegene, Inc. (096530.KQ), Shandong Weigao Group Medical Polymer Co. Ltd. (1066.HK), Shanghai Pharmaceutical - A (601607.CH), Shanghai Pharmaceutical - H (2607.HK), Sihuan Pharmaceutical Holdings (0460.HK), Sino Biopharmaceutical (1177.HK), Sinopharm (1099.HK), The United Laboratories (3933.HK)

J.P. Morgan Equity Research Ratings Distribution, as of January 1, 2015

	Overweight (buy)	Neutral (hold)	Underweight (sell)
J.P. Morgan Global Equity Research Coverage	45%	43%	12%
IB clients*	56%	49%	33%
JPMS Equity Research Coverage	45%	48%	7%
IB clients*	75%	67%	52%

*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.jpmpi.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 (JPSS) [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 JPSS 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:** JPSS 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 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.