

NTPC (NATP IN)

Rating: **3**

Offers value following recent share-price fall; major negatives look factored in

Utilities: India

Target price: **Rs210.00**

Jonas Bhutta/Saurabh Mehta (91) 22 6622 1008 (jonas.bhutta@in.daiwacm.com)

Price (25 Nov)	Rs176.95
Reuters code	NTPC.NS
ADR/GDR code	n.a.
Shares per ADR/GDR	n.a.

Market data

SENSEX Index	19,318.16
Market cap	(US\$bn) 32.05
EV	(US\$bn: 11E) 38.90
3-mth avg daily T/O	(US\$m) 17.23
Shares outstanding	(m) 8,245
Free float	(%) 15.5
Major shareholder	President of India (84.5%)
Exchange rate	Rs/US\$ 45.518

Performance (%)	1M	3M	6M
Absolute	(14.7)	(8.7)	(8.2)
Relative	(9.9)	(15.0)	(28.7)

Source: Daiwa
Note: *Relative to SENSEX Index

Investment indicators

	2011E	2012E	2013E
PER (x)	17.6	14.8	12.6
PCFR (x)	10.7	10.9	9.0
EV/EBITDA (x)	13.9	12.1	10.5
PBR (x)	2.2	2.0	1.8
Dividend yield (%)	2.2	2.6	3.0
ROE (%)	12.8	14.1	15.3
ROA (%)	6.9	7.3	7.7
Net debt equity (%)	46.5	55.9	64.1
Relative to peers			In line
Relative to history			In line

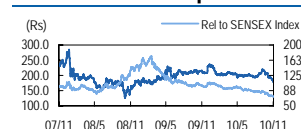
Source: Daiwa forecasts

Income summary (Rs m)

Yr to 31 Mar	2010	2011E	2012E	2013E
Revenue	463,777	511,526	579,144	669,083
YoY (%)	10.5	10.3	13.2	15.5
EBITDA	117,714	126,978	153,651	186,707
YoY (%)	18.9	7.9	21.0	21.5
Net profit	87,122	82,908	98,636	115,646
YoY (%)	4.7	(4.8)	19.0	17.2
EPS (Rs)	10.566	10.055	11.962	14.025
YoY (%)	4.7	(4.8)	19.0	17.2
CFPS (Rs)	10.454	16.501	16.305	19.750
DPS (Rs)	3.800	3.821	4.546	5.330

Source: Company, Daiwa forecasts

Price and relative performance



Source: Bloomberg, Daiwa

Forecasts revisions (%)

	FY11E	FY12E	FY13E
Revenue change	(2.6)	(2.5)	(2.1)
Net profit change	(11.6)	(12.4)	(7.3)
EPS change	(11.6)	(12.4)	(7.3)

Source: Daiwa forecasts

Fair value

Valuation (Rs/shr)	210.00
Methodology	SOTP
Key assumption	DCF for core ops

Source: Daiwa forecasts

What has changed?

- NTPC's share price has declined by 14% since its 2Q FY11 results announcement on 26 October 2010, reflecting its decision to gross up its ROE at a reduced tax rate and other concerns. It offers 19% upside potential to our target price.

Impact

- Why has the share price fallen?** We see two main reasons for this. 1) As the proportion of the company's new plants/expansion projects is expected to be greater than that of its old plants, NTPC has decided to gross up its normative ROE at a rate of Minimum Alternate Tax (MAT) of 19.9%, compared with the previous corporate tax rate of 33%. 2) Unscheduled Interchange (UI) charge rates have declined from about Rs4/Kwh for FY10 to Rs2-2.5/Kwh currently, affecting the company's earnings.

- Our earnings forecasts revised down.** We have incorporated these changes into our forecasts and as a result have revised down our EPS forecasts for FY11, FY12 and FY13 by 12%, 12% and 7%, respectively.

Valuation

- After adjusting for our earnings-forecast revisions and including the value of newer assets, our SOTP-based six-month target price remains unchanged at Rs210. We have now included the value of NTPC's investments in its joint-venture plants, since the capacity at the joint ventures is expected to increase from 2.8GW currently to 6.8GW by FY13 on our forecasts. We have also included the value of NTPC's proposed investments of Rs30bn in its captive mine at *Pakri Barwadih*.

Catalysts and action

- We believe NTPC's current share price factors in the negatives. Our forecasts for NPTC's capacity additions are below management's guidance, as we forecast 3GW for FY11, 3.3GW for FY12 and 4.6GW for FY13. We also believe NTPC's existing capacity is better-placed than that of its peers in terms of coal availability given that almost all of it is based on the current fuel-supply agreement with Coal India (Not rated).
- However, we maintain our **3 (Hold)** rating. The current share price implies 19% upside potential to our Rs210 target price. NTPC trades currently at a PBR of 2x on our FY12 BVPS forecast of Rs90.

NTPC: Daiwa forecast revisions (Rs bn)

	FY11E	FY12E	FY13E
Revenue			
Previous	525.4	594.1	683.6
Revised	511.5	579.1	669.1
% Change	(2.6)	(2.5)	(2.1)
PAT			
Previous	93.7	112.7	124.8
Revised	82.9	98.6	115.6
% Change	(11.6)	(12.4)	(7.3)
Book value (Rs)			
Previous	84.4	93.2	103.6
Revised	83.2	89.8	97.6
% Change	(1.5)	(3.6)	(5.8)

Source: Daiwa forecasts

Company background

NTPC is India's largest power-utility company, with 32.1GW of operational capacity and an additional 17.3GW of capacity under various stages of planning and construction. The company generates bulk electricity and in turn sells it to state electricity boards. It operates a regulated-return business model, with a fixed ROE of 15.5%.

NTPC – financial summary

Profit and loss (Rs m)

Year to 31 Mar	2009	2010	2011E	2012E	2013E
Energy Sales	419,752	463,777	511,526	579,144	669,083
Others	0	0	0	0	0
Others	0	0	0	0	0
Total revenue	419,752	463,777	511,526	579,144	669,083
Other income	0	0	0	0	0
COGS	(295,738)	(318,752)	(352,713)	(388,661)	(441,322)
SG&A	(25,023)	(27,311)	(31,836)	(36,833)	(41,053)
Other op. expenses	(23,645)	(26,501)	(30,448)	(34,774)	(37,043)
EBIT	75,346	91,213	96,530	118,878	149,665
Net-interest inc./(exp.)	16,978	13,234	1,170	(6,678)	(17,057)
Assoc/forex/extraord./others	(44)	6,358	5,846	10,989	11,826
Pre-tax profit	92,280	110,805	103,546	123,188	144,433
Tax	(11,582)	(21,573)	(20,638)	(24,553)	(28,787)
Min. int./pref. div./others	0	0	0	0	0
Net profit (reported)	80,698	89,232	82,908	98,636	115,646
Net profit (adj.)	83,174	87,122	82,908	98,636	115,646
EPS (reported) (Rs)	9.787	10.822	10.055	11.962	14.025
EPS (adj.) (Rs)	10.087	10.566	10.055	11.962	14.025
DPS (Rs)	3.600	3.800	3.821	4.546	5.330
EBIT (adj.)	75,346	91,213	96,530	118,878	149,665
EBITDA (adj.)	98,991	117,714	126,978	153,651	186,707

Balance sheet (Rs m)

As at 31 Mar	2009	2010	2011E	2012E	2013E
Cash & short-term investment	162,716	144,595	153,751	143,659	131,291
Inventory	32,434	33,477	36,987	40,809	46,377
Accounts receivable	35,842	66,514	42,043	47,601	54,993
Other current assets	78,261	63,571	68,518	75,921	86,084
Total current assets	309,253	308,157	301,299	307,990	318,746
Fixed assets	593,426	668,656	838,760	1,000,510	1,176,814
Goodwill & intangibles	0	0	0	0	0
Other non-current assets	139,835	148,272	128,021	111,506	94,992
Total assets	1,042,514	1,125,085	1,268,079	1,420,006	1,590,551
Short-term debt	0	0	0	0	0
Accounts payable	68,989	71,779	76,062	83,922	95,372
Other current liabilities	37,897	35,802	41,158	46,227	52,940
Total current liabilities	106,886	107,581	117,220	130,149	148,312
Long-term debt	345,678	377,970	465,227	549,383	637,464
Other non-current liabilities	16,249	15,159	15,159	15,159	15,159
Total liabilities	468,813	500,710	597,607	694,691	800,935
Share capital	82,455	82,455	82,455	82,455	82,455
Reserves/R.E./others	491,246	541,920	588,018	642,860	707,161
Shareholders' equity	573,701	624,375	670,473	725,315	789,616
Minority interests	0	0	0	0	0
Total equity & liabilities	1,042,514	1,125,085	1,268,079	1,420,006	1,590,551
Net debt/(cash)	182,962	233,375	311,477	405,724	506,173

Cash flow (Rs m)

Year to 31 Mar	2009	2010	2011E	2012E	2013E
Profit before tax	92,280	110,805	103,546	123,188	144,433
Depreciation and amortisation	23,645	26,501	30,448	34,774	37,043
Tax paid	(11,582)	(21,573)	(20,638)	(24,553)	(28,787)
Change in working capital	(12,776)	(16,299)	23,870	(5,647)	(6,900)
Other operational CF items	(16,978)	(13,234)	(1,170)	6,678	17,057
Cash flow from operations	74,589	86,200	136,056	134,440	162,847
Capex	(131,351)	(101,731)	(200,552)	(196,524)	(213,346)
Net (acquisitions)/disposal	12,837	(8,236)	20,251	16,515	16,515
Other investing CF items	0	0	0	0	0
Cash flow from investing	(118,514)	(109,967)	(180,300)	(180,009)	(196,832)
Change in debt	73,772	32,292	87,257	84,156	88,081
Net share issues/(repurchases)	1,317	(1,950)	0	0	0
Dividends paid	(34,718)	(36,639)	(35,027)	(42,000)	(49,406)
Other financing CF items	(40)	(1,090)	0	0	0
Cash flow from financing	40,331	(7,387)	52,231	42,155	38,674
Forex effect/others	0	0	0	0	0
Change in cash	(3,594)	(31,154)	7,986	(3,414)	4,689

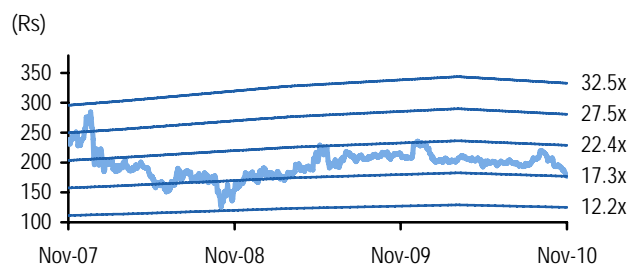
Key ratios

Year to 31 Mar	2009	2010	2011E	2012E	2013E
Sales – YoY %	13.2	10.5	10.3	13.2	15.5
EBITDA (adj.) – YoY %	(8.5)	18.9	7.9	21.0	21.5
Net profit (adj.) – YoY %	8.1	4.7	(4.8)	19.0	17.2
EPS (adj.) – YoY %	8.1	4.7	(4.8)	19.0	17.2
EBITDA margin % (adj.)	23.6	25.4	24.8	26.5	27.9
EBIT margin % (adj.)	18.0	19.7	18.9	20.5	22.4
Net-profit margin % (adj.)	19.8	18.8	16.2	17.0	17.3
ROAE (%)	15.1	14.5	12.8	14.1	15.3
ROAA (%)	8.6	8.0	6.9	7.3	7.7
ROCE (%)	8.8	9.5	9.0	9.9	11.1
ROIC (%)	9.4	9.1	8.4	9.0	9.9
Net debt to equity (%)	31.9	37.4	46.5	55.9	64.1
Effective tax rate (%)	12.6	19.5	19.9	19.9	19.9
Accounts receivable (days)	28.6	40.3	38.7	28.2	28.0
Payables (days)	52.3	55.4	52.7	50.4	48.9
Net interest cover (x)	n.a.	n.a.	n.a.	17.8	8.8
Net dividend payout (%)	36.8	35.1	38.0	38.0	38.0

Key assumptions

Year to 31 Mar	2009	2010	2011E	2012E	2013E
Gross Comm. Generation (Bu's)	206	218	232	247	271
Avg. Tariff (Rs/KWh)	2.16	2.25	2.35	2.50	2.63
Coal Cost (Rs/KWh)	1.06	1.20	1.27	1.33	1.39
PLF-Coal (%)	91.0%	90.8%	91.9%	92.0%	91.9%
PLF-Gas (%)	67.0%	78.0%	80.0%	80.0%	80.0%
PLF-Hydro (%)	0.0%	0.0%	0.0%		55.0%
Comm. capacity standalone (MW)	27,850	28,840	30,830	33,150	36,291

PER bands



Source: Company, Daiwa forecasts

DAIWA'S ASIA PACIFIC RESEARCH DIRECTORY

Hong Kong

Regional Research Head: Pan Asia Research	Nagahisa MIYABE	(852) 2848 4971	nagahisa.miyabe@hk.daiwacm.com
Regional Research Co-head	Craig IRVINE	(852) 2848 4485	craig.irvine@hk.daiwacm.com
Head of China Research; Chief Economist (Greater China)	Mingchun SUN	(852) 2773 8751	mingchun.sun@hk.daiwacm.com
Macro Economy (Hong Kong, China)	Kevin LAI	(852) 2848 4926	kevin.lai@hk.daiwacm.com
Strategy (Regional)	Colin BRADBURY (Regional Chief Strategist)	(852) 2848 4983	colin.bradbury@hk.daiwacm.com
Strategy (Regional)	Mun Hon THAM	(852) 2848 4426	munhon.tham@hk.daiwacm.com
Property Developers (Hong Kong)	Jonas KAN (Head of Hong Kong Research; Regional Property Co-ordinator; Co-head of Hong Kong and China Property)	(852) 2848 4439	jonas.kan@hk.daiwacm.com
All Industries (China); Pan Asia Research	Hongxia ZHU	(852) 2848 4460	hongxia.zhu@hk.daiwacm.com
Banking (Hong Kong, China)	Grace WU (Head of Hong Kong and China Banking)	(852) 2532 4383	grace.wu@hk.daiwacm.com
Banking (Hong Kong, China)	Sophia HUO	(852) 2532 4380	sophia.huo@hk.daiwacm.com
Banking (Hong Kong, China)	Queenie POON	(852) 2532 4381	queenie.poon@hk.daiwacm.com
Insurance	Jennifer LAW	(852) 2773 8745	jennifer.law@hk.daiwacm.com
Capital Goods – Electrical Equipment and Machinery (China)	Ole HUI	(852) 2848 4468	ole.hui@hk.daiwacm.com
Consumer/Retail (Hong Kong, China)	Peter CHU	(852) 2848 4430	peter.chu@hk.daiwacm.com
Consumer/Retail (China)	Nicolas WANG	(852) 2848 4963	nicolas.wang@hk.daiwacm.com
Hotels, Restaurants and Leisure – Casinos and Gaming (Hong Kong); Capital Goods – Conglomerate (Hong Kong)	Gavin HO	(852) 2532 4384	gavin.ho@hk.daiwacm.com
IT/Electronics – Semiconductor and Solar (Regional, Taiwan, Singapore, Hong Kong and China)	Pranab Kumar SARMAH (Regional Head of IT/Electronics)	(852) 2848 4441	pranab.sarmah@hk.daiwacm.com
IT/Electronics – Semiconductor/IC Design (Regional)	Eric CHEN (Co-head of Regional IT/Electronics)	(852) 2773 8702	eric.chen@hk.daiwacm.com
IT/Electronics – Tech IT Services (Hong Kong, China)	Joseph HO	(852) 2848 4443	joseph.ho@hk.daiwacm.com
Materials/Energy (Regional)	Alexander LATZER (Regional Head of Materials)	(852) 2848 4463	alexander.latzer@hk.daiwacm.com
Materials (China)	Felix LAM	(852) 2532 4341	felix.lam@hk.daiwacm.com
Oil & Gas (China, Korea)	Andrew CHAN	(852) 2848 4964	andrew.chan@hk.daiwacm.com
Property Developers (Hong Kong, China)	Danny BAO (Head of Hong Kong and China Property)	(852) 2773 8715	danny.bao@hk.daiwacm.com
Property (Hong Kong, China)	Yannis KUO	(852) 2773 8735	yannis.kuo@hk.daiwacm.com
Small/Medium Cap (Regional)	Mark CHANG (Regional Head of Small/Medium Cap)	(852) 2773 8729	mark.chang@hk.daiwacm.com
Small/Medium Cap (Regional)	John CHOI	(852) 2773 8730	john.choi@hk.daiwacm.com
Telecommunications (Regional, Greater China and SG); Internet	Marvin LO (Regional Head of Telecommunications)	(852) 2848 4465	marvin.lo@hk.daiwacm.com
Transportation – Land/Marine (Regional); Capital Goods – Infrastructure Construction (China)	Jimmy LAM	(852) 2848 4024	jimmy.lam@hk.daiwacm.com
Transportation – Aviation and Expressway (Hong Kong, China, Singapore)	Kelvin LAU	(852) 2848 4467	kelvin.lau@hk.daiwacm.com
Transportation (Hong Kong, China)	Edwin LEE	(852) 2532 4349	edwin.lee@hk.daiwacm.com
Utilities; Power Equipment; Renewables (Hong Kong/China)	Dave DAI	(852) 2848 4068	dave.dai@hk.daiwacm.com
Custom Products Group	Justin LAU (Head of Custom Products Group)	(852) 2773 8741	justin.lau@hk.daiwacm.com
Custom Products Group	Phillip LO	(852) 2773 8714	philip.lo@hk.daiwacm.com
Custom Products Group	Jibo MA	(852) 2848 4489	jibo.ma@hk.daiwacm.com

South Korea

Strategy; Banking/Finance	Chang H LEE (Head of Research)	(82) 2 787 9177	chlee@kr.daiwacm.com
Automobiles; Shipbuilding; Steel	Sung Yop CHUNG	(82) 2 787 9157	sychung@kr.daiwacm.com
Banking/Finance	Anderson CHA	(82) 2 787 9185	anderson.cha@kr.daiwacm.com
Capital Goods (Construction and Machinery)	Mike OH	(82) 2 787 9179	mike.oh@kr.daiwacm.com
Consumer/Retail	Sang Hee PARK	(82) 2 787 9165	sanghee.park@kr.daiwacm.com
IT/Electronics (Tech Hardware and Memory)	Jae H LEE	(82) 2 787 9173	jhlee@kr.daiwacm.com
IT Electronics (Tech Hardware)	Steve OH	(82) 2 787 9195	steve.oh@kr.daiwacm.com
Materials (Chemicals)	Daniel LEE	(82) 2 787 9121	daniel.lee@kr.daiwacm.com
Pan Asia Research; Small/Medium Caps	Yumi KIM	(82) 2 787 9838	yumi.kim@kr.daiwacm.com
Pan Asia Research	Hirokazu MIYAGI	(82) 2 787 9801	hirokazu.miyagi@kr.daiwacm.com
Telecommunications; Software (Internet/Online Games)	Thomas Y KWON	(82) 2 787 9181	yskwon@kr.daiwacm.com

Taiwan

Head of Research: Pan Asia Research	Hirokazu MITSUDA	(886) 2 2758 8754	h.mitsuda@daiwacm-cathay.com.tw
Co-head of Research: Strategy	Alex YANG	(886) 2 2345 3660	alex.yang@daiwacm-cathay.com.tw
Banking/Diversified Financials	Ling TANG	(886) 2 8789 5158	ling.tang@daiwacm-cathay.com.tw
Consumer/Retail	Yoshihiko KAWASHIMA	(886) 2 8780 5987	y.kawashima@daiwacm-cathay.com.tw
IT/Technology Hardware (PC Hardware)	Calvin HUANG	(886) 2 2758 8805	calvin.huang@daiwacm-cathay.com.tw
IT/Technology Hardware (PC Hardware); Software (Small/Medium Caps)	Christine WANG	(886) 2 8788 1531	christine.wang@daiwacm-cathay.com.tw
IT/Technology Hardware (PC Hardware - Panels)	Chris LIN	(886) 2 8788 1614	chris.lin@daiwacm-cathay.com.tw
IT/Technology Hardware (PC Components)	Jenny SHIH	(886) 2 8780 1326	jenny.shih@daiwacm-cathay.com.tw
IT/Technology Hardware: Pan Asia Research	Mitsuharu WATANABE	(886) 2 2758 9437	m.watanabe@daiwacm-cathay.com.tw
Materials; Small/Medium Caps	Albert HSU	(886) 2 8786 2212	albert.hsu@daiwacm-cathay.com.tw

India

Head of India Equities Strategy	Jaideep GOSWAMI	(91) 22 6622 1010	jaideep.goswami@in.daiwacm.com
Strategy; Banking/Finance	Punit SRIVASTAVA (Deputy Head of Research)	(91) 22 6622 1013	punit.srivastava@in.daiwacm.com
All Industries: Pan Asia Research	Fumio YOKOMICHI	(91) 22 6622 1003	fumio.yokomichi@in.daiwacm.com
Capital Goods; Utilities	Jonas BHUTTA	(91) 22 6622 1008	jonas.bhutta@in.daiwacm.com
Materials	Vishal CHANDAK	(91) 22 6622 1006	vishal.chandak@in.daiwacm.com
Oil & Gas; Construction; Small/Medium Caps	Atul RASTOGI	(91) 22 6622 1020	atul.rastogi@in.daiwacm.com
Pharmaceuticals and Healthcare; Consumer	Kartik A. MEHTA	(91) 22 6622 1012	kartik.mehta@in.daiwacm.com
Real Estate	Amit AGARWAL	(91) 22 6622 1063	amit.agarwal@in.daiwacm.com
Small/Medium Caps	Prakash KAPADIA	(91) 22 6622 8410	prakash.kapadia@in.daiwacm.com
Software (Tech IT Services)	R. RAVI	(91) 22 6622 1014	ravi.r@in.daiwacm.com

Singapore

Head of Research: Pan Asia Research	Tatsuya TORIKOSHI	(65) 6321 3050	tatsuya.torikoshi@sg.daiwacm.com
Macro Economy (Regional)	Prasenjit K BASU (Chief Economist, Asia Ex-JP)	(65) 6321 3069	p-k.basu@sg.daiwacm.com
Quantitative Research	Deep KAPUR (Global Director of Quantitative Research)	(65) 6321 3079	deep.kapur@sg.daiwacm.com
Quantitative Research	Josh CHERIAN	(65) 6499 6549	josh.cherian@sg.daiwacm.com
Quantitative Research	Suzanne HO	(65) 6499 6545	suzanne.ho@sg.daiwacm.com
Banking; Property and REITs	David LUM (Regional Head of Banking/Finance)	(65) 6329 2102	david.lum@sg.daiwacm.com
Conglomerates; Soft Commodities; Energy; Small/Medium Caps	Chris SANDA	(65) 6321 3085	chris.sanda@sg.daiwacm.com
Oil and Gas; Utilities (Southeast Asia)	Adrian LOH	(65) 6499 6548	adrian.loh@sg.daiwacm.com
Small/Medium Cap	Pyari MENON	(65) 6499 6566	pyari.menon@sg.daiwacm.com
Telecommunications (Southeast Asia & India)	Ramakrishna MARUVADA (Head of SE Asia & India Telecommunications)	(65) 6499 6543	ramakrishna.maruvada@sg.daiwacm.com

Australia

Banking/Diversified Financials	Johan VANDERLUGT	(61) 3 9916 1335	johan.vanderlugt@au.daiwacm.com
Resources/Mining/Petroleum	David BRENNAN	(61) 3 9916 1323	david.brennan@au.daiwacm.com

Japan

Industrials (Regional); Pan Asia Research	Taiki KAJI	(81) 3 5555 7174	taiki.kaji@jp.daiwacm.com
Industrials (Regional); Pan Asia Research	Daijiro HATA	(81) 3 5555 7178	daijiro.hata@jp.daiwacm.com

DAIWA SECURITIES GROUP INC

<i>OFFICE / BRANCH / AFFILIATE</i>	<i>ADDRESS</i>	<i>TEL</i>	<i>FAX</i>
HEAD OFFICE	Gran Tokyo North Tower, 1-9-1, Marunouchi, Chiyoda-ku, Tokyo, 100-6753	(81) 3 5555 3111	(81) 3 5555 0661
Daiwa Securities Trust Company	One Evertrust Plaza, Jersey City, NJ 07302, U.S.A.	(1) 201 333 7300	(1) 201 333 7726
Daiwa Securities Trust and Banking (Europe) PLC (Head Office)	5 King William Street, London EC4N 7JB, United Kingdom	(44) 207 320 8000	(44) 207 410 0129
Daiwa Securities Trust and Banking (Europe) PLC (Dublin Branch)	Level 3, Block 5, Harcourt Centre, Harcourt Road, Dublin 2, Ireland	(353) 1 603 9900	(353) 1 478 3469

DAIWA CAPITAL MARKETS LIMITED

<i>OFFICE / BRANCH / AFFILIATE</i>	<i>ADDRESS</i>	<i>TEL</i>	<i>FAX</i>
HEAD OFFICE	Gran Tokyo North Tower, 1-9-1, Marunouchi, Chiyoda-ku, Tokyo, 100-6753	(03) 5555 3111	(03) 5555 0661
Daiwa Capital Markets America Inc	Financial Square, 32 Old Slip, New York, NY10005, U.S.A.	(1) 212 612 7000	(1) 212 612 7100
Daiwa Capital Markets Europe Limited	5 King William Street, London EC4N 7AX, United Kingdom	(44) 20 7597 8000	(44) 20 7597 8600
Daiwa Capital Markets Europe Limited, Frankfurt Branch	Tranion Building, Mainzer Landstrasse 16, 60325 Frankfurt am Main, Federal Republic of Germany	(49) 69 717 080	(49) 69 723 340
Daiwa Capital Markets Europe Limited, Paris Branch	127, Avenue des Champs-Élysées, 75008 Paris, France	(33) 1 56 262 200	(33) 1 47 550 808
Daiwa Capital Markets Europe Limited, Geneva Branch	50 rue du Rhône, P.O.Box 3198, 1211 Geneva 3, Switzerland	(41) 22 818 7400	(41) 22 818 7441
Daiwa Capital Markets Europe Limited, Milan Branch	Via Senato 14/16, 20121 Milan, Italy	(39) 02 763 271	(39) 02 763 27250
Daiwa Capital Markets Europe Limited, Moscow Representative Office	25/9, build. 1, Per. Sivtsev Vrazhek, Moscow 119002, Russian Federation	(7) 495 617 1960	(7) 495 244 1977
Daiwa Capital Markets Europe Limited, Bahrain Branch	7th Floor, The Tower, Bahrain Commercial Complex, P.O. Box 30069, Manama, Bahrain	(973) 17 534 452	(973) 17 535 113
Daiwa Capital Markets Europe Limited, Dubai Branch	The Gate village Building 1, 1st floor, Unit-6, DIFC, P.O.Box-506657, Dubai, UAE.	(971) 47 090 401	(971) 43 230 332
Daiwa Capital Markets Hong Kong Limited	Level 26, One Pacific Place, 88 Queensway, Hong Kong	(852) 2525 0121	(852) 2845 1621
Daiwa Capital Markets Singapore Limited	6 Shenton Way #26-08, DBS Building Tower Two, Singapore 068809, Republic of Singapore	(65) 6220 3666	(65) 6223 6198
Daiwa Capital Markets Australia Limited	Level 34, Rialto North Tower, 525 Collins Street, Melbourne, Victoria 3000, Australia	(61) 3 9916 1300	(61) 3 9916 1330
DBP-Daiwa Capital Markets Philippines, Inc	18th Floor, Citibank Tower, 8741 Paseo de Roxas, Salcedo Village, Makati City, Republic of the Philippines	(632) 813 7344	(632) 848 0105
Daiwa-Cathay Capital Markets Co Ltd	14/F, 200, Keelung Road, Sec 1, Taipei, Taiwan, R.O.C.	(886) 2 2723 9698	(886) 2 2345 3638
Daiwa Securities Capital Markets Co Ltd, Seoul Branch	6th Floor, Hana Daetoo Securities Bldg 27-3, Yeouido-Dong, Yeongdeungpo-Gu, Seoul, Republic of Korea	(82) 2 787 9100	(82) 2 787 9191
Daiwa Securities Capital Markets Co Ltd, Beijing Representative Office	Room 3503/3504, Capital Tower Beijing, No.6 Jia Jianguomen Wai Avenue, Chaoyang District, Beijing 100022, People's Republic of China	(86) 10 6500 6688	(86) 10 6500 3594
Daiwa SSC Securities Co Ltd	Room 011, 45F HSBC Tower, 1000 Lujiazui Ring Road, Pudong New Area, Shanghai 200120, People's Republic of China	(86) 21 6859 8000	(86) 21 6859 8030
Daiwa Securities Capital Markets Co. Ltd, Bangkok Representative Office	Level 8 Zuellig House, 1 Siom Road, Bangkok 10500, Thailand	(66) 2 231 8381	(66) 2 231 8121
Daiwa Capital Markets India Private Ltd	10th Floor, 3 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra East, Mumbai – 400051, India	(91) 22 6622 1000	(91) 22 6622 1019
Daiwa Securities Capital Markets Co. Ltd, Hanoi Representative Office	Suite 405, Pacific Palace Building, 83B, Ly Thuong Kiet Street, Hoan Kiem Dist. Hanoi, Vietnam	(84) 4 3946 0460	(84) 4 3946 0461

DAIWA INSTITUTE OF RESEARCH LTD

<i>OFFICE / BRANCH / AFFILIATE</i>	<i>ADDRESS</i>	<i>TEL</i>	<i>FAX</i>
HEAD OFFICE	15-6, Fuyuki, Koto-ku, Tokyo, 135-8460, Japan	(81) 3 5620 5100	(81) 3 5620 5603
MARUNOUCHI OFFICE	Gran Tokyo North Tower, 1-9-1, Marunouchi, Chiyoda-ku, Tokyo, 100-6756	(81) 3 5555 7011	(81) 3 5202 2021
New York Research Center	11th Floor, Financial Square, 32 Old Slip, NY, NY 10005-3504, U.S.A.	(1) 212 612 6100	(1) 212 612 8417
London Research Centre	3/F, 5 King William Street, London, EC4N 7AX, United Kingdom	(44) 207 597 8000	(44) 207 597 8550

DISCLAIMER

This publication is produced by Daiwa Securities Capital Markets Co. Ltd. and/or its non-U.S. affiliates, and distributed by Daiwa Securities Capital Markets Co. Ltd. and/or its non-U.S. affiliates, except to the extent expressly provided herein. This publication and the contents hereof are intended for information purposes only, and may be subject to change without further notice. Any use, disclosure, distribution, dissemination, copying, printing or reliance on this publication for any other purpose without our prior consent or approval is strictly prohibited. Neither Daiwa Securities Capital Markets Co. Ltd. nor any of its respective parent, holding, subsidiaries or affiliates, nor any of its respective directors, officers, servants and employees, represent nor warrant the accuracy or completeness of the information contained herein or as to the existence of other facts which might be significant, and will not accept any responsibility or liability whatsoever for any use of or reliance upon this publication or any of the contents hereof. Neither this publication, nor any content hereof, constitute, or are to be construed as, an offer or solicitation of an offer to buy or sell any of the securities or investments mentioned herein in any country or jurisdiction nor, unless expressly provided, any recommendation or investment opinion or advice. Any view, recommendation, opinion or advice expressed in this publication may not necessarily reflect those of Daiwa Securities Capital Markets Co. Ltd., and/or its affiliates nor any of its respective directors, officers, servants and employees except where the publication states otherwise. This research report is not to be relied upon by any person in making any investment decision or otherwise advising with respect to, or dealing in, the securities mentioned, as it does not take into account the specific investment objectives, financial situation and particular needs of any person.

Daiwa Securities Capital Markets Co. Ltd., its parent, holding, subsidiaries or affiliates, or its or their respective directors, officers and employees from time to time have trades as principals, or have positions in, or have other interests in the securities of the company under research including derivatives in respect of such securities or may have also performed investment banking and other services for the issuer of such securities. The following are additional disclosures.

Japan

Daiwa Securities Capital Markets Co. Ltd and Daiwa Securities Group

Daiwa Securities Capital Markets Co. Ltd and Daiwa Securities Group: Daiwa Securities Capital Markets Co. Ltd is a subsidiary of Daiwa Securities Group.

Investment Banking Relationship

Within the preceding 12 months, The Affiliates of Daiwa Securities Capital Markets Co. Ltd.* has lead-managed public offerings and/or secondary offerings (excluding straight bonds) of the securities of the following companies: China Zhongwang Holdings Ltd (1333 HK); Sundart International Holdings (2288 HK); China Automation Group (569 HK); China Kangda Food Co Ltd (834 HK); Glorious Property (845 HK); Tong Yang Life (082640 KS); China Kangda Food Co Ltd (CKANG SP); Great Group Co., Ltd (GGH SP); Patel Engineering (PEC IN); Greens Holdings Ltd (1318 HK); China High Precision Automation Group (591 HK); Mingfa Group (846 HK); Fantasia Holding Group (1777 HK); Hontex International Holding (946 HK); Sijia Group Company Limited (1863 HK); International Taifeng Holdings Limited (873 HK); Agricultural Bank of China Limited (1288 HK); Guotai Junan International Holdings Limited (1788 HK); West China Cement Limited (2233 HK); AIA Group Limited (1299 HK); Sihuan Pharmaceutical Holdings Group Limited (460 HK); Strides Arcolab Limited (STR IN).

*Affiliates of Daiwa Securities Capital Markets Co. Ltd. for the purposes of this section shall mean any one or more of:

- Daiwa Capital Markets Hong Kong Limited
- Daiwa Capital Markets Singapore Limited
- Daiwa Capital Markets Australia Limited
- Daiwa Capital Markets India Private Limited
- Daiwa-Cathay Capital Markets Co., Ltd.
- Daiwa Securities Capital Markets Co. Ltd., Seoul Branch

Hong Kong

This research is distributed in Hong Kong by Daiwa Capital Markets Hong Kong Limited ("DHK") which is regulated by the Hong Kong Securities and Futures Commission. Recipients of this research in Hong Kong may contact DHK in respect of any matter arising from or in connection with this research.

Ownership of Securities

For "Ownership of Securities" information, please visit BlueMatrix disclosure Link at http://www2.us.daiwacm.com/report_disclosure.html.

Investment Banking Relationship

For "Investment Banking Relationship", please visit BlueMatrix disclosure Link at http://www2.us.daiwacm.com/report_disclosure.html.

Relevant Relationship (DHK)

DHK may from time to time have an individual employed by or associated with it serves as an officer of any of the companies under its research coverage.

DHK market making

DHK may from time to time make a market in securities covered by this research.

Singapore

This research is distributed in Singapore by Daiwa Capital Markets Singapore Limited and it may only be distributed in Singapore to accredited investors, expert investors and institutional investors as defined in the Financial Advisers Regulations and the Securities and Futures Act (Chapter 289), as amended from time to time. By virtue of distribution to these category of investors, Daiwa Capital Markets Singapore Limited and its representatives are not required to comply with Section 36 of the Financial Advisers Act (Chapter 110) (Section 36 relates to disclosure of Daiwa Capital Markets Singapore Limited's interest and/or its representative's interest in securities). Recipients of this research in Singapore may contact Daiwa Capital Markets Singapore Limited in respect of any matter arising from or in connection with the research.

Australia

This research is distributed in Australia by Daiwa Capital Markets Stockbroking Limited and it may only be distributed in Australia to wholesale investors within the meaning of the Corporations Act. Recipients of this research in Australia may contact Daiwa Capital Markets Stockbroking Limited in respect of any matter arising from or in connection with the research.

Ownership of Securities

For "Ownership of Securities" information, please visit BlueMatrix disclosure Link at http://www2.us.daiwacm.com/report_disclosure.html.

India

This research is distributed by Daiwa Capital Markets India Private Limited (DAIWA) which is an intermediary registered with Securities & Exchange Board of India. This report is not to be considered as an offer or solicitation for any dealings in securities. While the information in this report has been compiled by DAIWA in good faith from sources believed to be reliable, no representation or warranty, express of implied, is made or given as to its accuracy, completeness or correctness. DAIWA its officers, employees, representatives and agents accept no liability whatsoever for any loss or damage whether direct, indirect, consequential or otherwise howsoever arising (whether in negligence or otherwise) out of or in connection with or from any use of or reliance on the contents of and/or omissions from this document. Consequently DAIWA expressly disclaims any and all liability for, or based on or relating to any such information contained in or errors in or omissions in this report. Accordingly, you are recommended to seek your own legal, tax or other advice and should rely solely on your own judgment, review and analysis, in evaluating the information in this document. The data contained in this document is subject to change without any prior notice DAIWA reserves its right to modify this report as maybe required from time to time. DAIWA is committed to providing independent recommendations to its Clients and would be happy to provide any information in response to any query from its Clients. This report is strictly confidential and is being furnished to you solely for your information. The information contained in this document should not be reproduced (in whole or in part) or redistributed in any form to any other person. We and our group companies, affiliates, officers, directors and employees may from time to time, have long or short positions, in and buy sell the securities thereof, of company(ies) mentioned herein or be engaged in any other transactions involving such securities and earn brokerage or other compensation or act as advisor or have the potential conflict of interest with respect to any recommendation and related information or opinion. DAIWA prohibits its analyst and their family members from maintaining a financial interest in the securities or derivatives of any companies that the analyst cover. This report is not intended or directed for distribution to, or use by any person, citizen or entity which is resident or located in any state or country or jurisdiction where such publication, distribution or use would be contrary to any statutory legislation, or regulation which would require DAIWA and its affiliates/ group companies to any registration or licensing requirements. The views expressed in the report accurately reflect the analyst's personal views about the securities and issuers that are subject of the Report, and that no part of the analyst's compensation was, is or will be directly or indirectly, related to the recommendations or views expressed in the Report. This report does not recommend to US recipients the use of Daiwa Capital Markets India Private Limited or any of its non – US affiliates to effect trades in any securities and is not supplied with any understanding that US recipients will direct commission business to Daiwa Capital Markets India Private Limited.

Taiwan

This research is distributed in Taiwan by Daiwa-Cathay Capital Markets Co., Ltd and it may only be distributed in Taiwan to institutional investors or specific investors who have signed recommendation contracts with Daiwa-Cathay Capital Markets Co., Ltd in accordance with the Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers. Recipients of this research in Taiwan may contact Daiwa-Cathay Capital Markets Co., Ltd in respect of any matter arising from or in connection with the research.

United Kingdom

This research report is produced by Daiwa Securities Capital Markets Co., Ltd and/or its affiliates and is distributed by Daiwa Capital Markets Europe Limited in the European Union, Iceland, Liechtenstein, Norway and Switzerland. Daiwa Capital Markets Europe Limited is authorised and regulated by The Financial Services Authority ("FSA") and is a member of the London Stock Exchange, Chi-X, Eurex and NYSE Liffe. Daiwa Capital Markets Europe Limited and its affiliates may, from time to time, to the extent permitted by law, participate or invest in other financing transactions with the issuers of the securities referred to herein (the "Securities"), perform services for or solicit business from such issuers, and/or have a position or effect transactions in the Securities or options thereof and/or may have acted as an underwriter during the past twelve months for the issuer of such securities. In addition, employees of Daiwa Capital Markets Europe Limited and its affiliates may have positions and effect transactions in such securities or options and may serve as Directors of such issuers. Daiwa Capital Markets Europe Limited may, to the extent permitted by applicable UK law and other applicable law or regulation, effect transactions in the Securities before this material is published to recipients.

This publication is intended for investors who are not Retail Clients in the United Kingdom within the meaning of the Rules of the FSA and should not therefore be distributed to such Retail Clients in the United Kingdom. Should you enter into investment business with Daiwa Capital Markets Europe's affiliates outside the United Kingdom, we are obliged to advise that the protection afforded by the United Kingdom regulatory system may not apply; in particular, the benefits of the Financial Services Compensation Scheme may not be available.

Daiwa Capital Markets Europe Limited has in place organisational arrangements for the prevention and avoidance of conflicts of interest. Our conflict management policy is available at <http://www.uk.daiwacm.com/about-us/corporate-governance-and-regulatory>. Regulatory disclosures of investment banking relationships are available at www2.us.daiwacm.com/report_disclosure.html.

Germany

This document has been approved by Daiwa Capital Markets Europe Limited and is distributed in Germany by Daiwa Capital Markets Europe Limited, Niederlassung Frankfurt which is regulated by BaFin (Bundesanstalt fuer Finanzdienstleistungsaufsicht) for the conduct of business in Germany.

Dubai

This document has been distributed by Daiwa Capital Markets Europe Limited, Dubai Branch. Related financial products or services are intended only for professional clients and no other person should act upon it. Daiwa Capital Markets Europe Limited is duly licensed and regulated by the Dubai Financial Services Authority.

United States

This report is distributed in the U.S. by Daiwa Capital Markets America Inc. (DCMA). It may not be accurate or complete and should not be relied upon as such. It reflects the preparer's views at the time of its preparation, but may not reflect events occurring after its preparation; nor does it reflect DCMA's views at any time. Neither DCMA nor the preparer has any obligation to update this report or to continue to prepare research on this subject. This report is not an offer to sell or the solicitation of any offer to buy securities. Unless this report says otherwise, any recommendation it makes is risky and appropriate only for sophisticated speculative investors able to incur significant losses. Readers should consult their financial advisors to determine whether any such recommendation is consistent with their own investment objectives, financial situation and needs. This report does not recommend to U.S. recipients the use of any of DCMA's non-U.S. affiliates to effect trades in any security and is not supplied with any understanding that U.S. recipients of this report will direct commission business to such non-U.S. entities. Unless applicable law permits otherwise, non-U.S. customers wishing to effect a transaction in any securities referenced in this material should contact a Daiwa entity in their local jurisdiction. Most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as a process for doing so. As a result, the securities discussed in this report may not be eligible for sales in some jurisdictions. *Customers wishing to obtain further information about this report should contact DCMA: Daiwa Capital Markets America Inc., Financial Square, 32 Old Slip, New York, New York 10005 (telephone 212-612-7000).*

Ownership of Securities

For "Ownership of Securities" information please visit BlueMatrix disclosure link at http://www2.us.daiwacm.com/report_disclosure.html.

Investment Banking Relationships

For "Investment Banking Relationships" please visit BlueMatrix disclosure link at http://www2.us.daiwacm.com/report_disclosure.html.

DCMA Market Making

For "DCMA Market Making" please visit BlueMatrix disclosure link at http://www2.us.daiwacm.com/report_disclosure.html.

Research Analyst Conflicts

For updates on "Research Analyst Conflicts" please visit BlueMatrix disclosure link at http://www2.us.daiwacm.com/report_disclosure.html. The principal research analysts who prepared this report have no financial interest in securities of the issuers covered in the report, are not (nor are any members of their household) an officer, director or advisory board member of the issuer(s) covered in the report, and are not aware of any material relevant conflict of interest involving the analyst or DCMA, and did not receive any compensation from the issuer during the past 12 months except as noted: no exceptions.

Research Analyst Certification

For updates on "Research Analyst Certification" and "Rating System" please visit BlueMatrix disclosure link at http://www2.us.daiwacm.com/report_disclosure.html. The views about any and all of the subject securities and issuers expressed in this Research Report accurately reflect the personal views of the research analyst(s) primarily responsible for this report (or the views of the firm producing the report if no individual analyst(s) is named on the report); and no part of the compensation of such analyst(s) (or no part of the compensation of the firm if no individual analyst(s) is named on the report) was, is, or will be directly or indirectly related to the specific recommendations or views contained in this Research Report.

The following explains the rating system in the report as compared to relevant local indices, based on the beliefs of the author of the report.

- "1": the security could outperform the local index by more than 15% over the next six months.
- "2": the security is expected to outperform the local index by 5-15% over the next six months.
- "3": the security is expected to perform within 5% of the local index (better or worse) over the next six months.
- "4": the security is expected to underperform the local index by 5-15% over the next six months.
- "5": the security could underperform the local index by more than 15% over the next six months.

Additional information may be available upon request.

Japan - additional notification items pursuant to Article 37 of the Financial Instruments and Exchange Law

(This Notification is only applicable where report is distributed by Daiwa Securities Capital Markets Co. Ltd.)

If you decide to enter into a business arrangement with us based on the information described in materials presented along with this document, we ask you to pay close attention to the following items.

- In addition to the purchase price of a financial instrument, we will collect a trading commission* for each transaction as agreed beforehand with you. Since commissions may be included in the purchase price or may not be charged for certain transactions, we recommend that you confirm the commission for each transaction.
- In some cases, we may also charge a maximum of ¥ 2 million (including tax) per year as a standing proxy fee for our deposit of your securities, if you are a non-resident of Japan.
- For derivative and margin transactions etc., we may require collateral or margin requirements in accordance with an agreement made beforehand with you. Ordinarily in such cases, the amount of the transaction will be in excess of the required collateral or margin requirements.
- There is a risk that you will incur losses on your transactions due to changes in the market price of financial instruments based on fluctuations in interest rates, exchange rates, stock prices, real estate prices, commodity prices, and others. In addition, depending on the content of the transaction, the loss could exceed the amount of the collateral or margin requirements.
- There may be a difference between bid price etc. and ask price etc. of OTC derivatives handled by us.
- Before engaging in any trading, please thoroughly confirm accounting and tax treatments regarding your trading in financial instruments with such experts as certified public accountants.

* The amount of the trading commission cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

When making an actual transaction, please be sure to carefully read the materials presented to you prior to the execution of agreement, and to take responsibility for your own decisions regarding the signing of the agreement with us.

Corporate Name: Daiwa Securities Capital Markets Co. Ltd.
Financial instruments firm: chief of Kanto Local Finance Bureau (Kin-sho) No.109
Memberships: Japan Securities Dealers Association, Financial Futures Association of Japan
Japan Securities Investment Advisers Association