Macquarie Research
Equities

INDIA

Unitech Limited

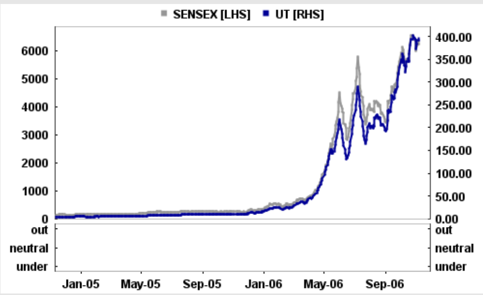
14 November 2006

UT IN		Outperform
Stock price as of 10 Nov 06	Rs	405.70
12-month target	Rs	501.00
Upside/downside	%	+23.5
Valuation	Rs	501.00
- Sum of Parts		
GICS sector		real estate
Market cap	Rs m	329,307
30-day avg turnover	Rs m	402.9
Market cap	US$m	7,390
Number shares on issue	m	811.7

Investment fundamentals

Year end 31 Mar		2006A	2007E	2008E	2009E
Total revenue	bn	9.4	25.8	63.2	162.1
EBITDA	bn	2.0	11.5	33.2	85.3
EBITDA growth	%	0.0	485.7	188.1	156.8
Recurring profit	bn	1.4	9.2	29.0	79.9
Reported profit	bn	0.9	6.4	20.3	55.9
Adjusted profit	bn	0.8	6.4	20.3	55.9
EPS rep	Rs	0.02	7.92	24.97	68.88
EPS rep growth	%	0.0	47,764.7	215.1	175.8
EPS adj	Rs	0.02	7.92	24.97	68.88
EPS adj growth	%	nmf	49,281.3	215.1	175.8
PE rep	x	24,504.6	51.2	16.2	5.9
PE adj	x	25,281.1	51.2	16.2	5.9
Total DPS	Rs	0.004	0.396	1.248	6.888
Total DPS growth	%	0.00	10,990.74	215.08	451.70
Total div yield	%	0.0	0.1	0.3	1.7
ROA	%	4.2	17.7	27.3	40.1
ROE	%	32.6	113.8	110.5	105.2
EV/EBITDA	x	10,880.8	31.9	11.1	4.3
Net debt/equity	%	1,074.2	681.4	377.3	114.3
Price/book	x	8,234.2	37.8	11.8	4.2

UT IN rel SENSEX performance, & rec history



Source: Datastream, Macquarie Research, November 2006 (all figures in INR unless noted)

Analysts

Siddhartha Gupta
91 22 6653 3048 siddhartha.gupta@macquarie.com
Matt Nacard
852 2823 4731 matt.nacard@macquarie.com

It's not too late

Event

- We initiate coverage on Unitech Limited (UT IN, Rs385) with an Outperform rating and a target price of Rs501. Unitech is our most preferred real estate play in India.

Impact

- **Asset rich, largest land bank among peers.** Unitech has the largest land bank of the listed real estate developers in India, owning 71% more land than its nearest competitor. Its land bank totals 10,332 acres comprising 400m sqf of constructible area and 8m sqyd of plot area (74% to be used for mid to high end residential development). This is the primary driver of our Rs501 NAV which we believe is conservative. More importantly though, Unitech is rapidly monetising its land bank. Completions should grow from 3.5m sqf in FY06 to 7.84m sqf in FY07 and up again to 15.7m sqf in FY08.
- **'Monetisation' ramping up… significant earnings growth.** We forecast a strong EPS increase of 66x from Rs1.04 in FY06 to Rs68.9 in FY09. This impressive growth should consume only 13.5% of the total land bank. Unitech's PER should modify to 48.7x in FY07 and reduce further to 15.4x in FY08. We believe the company has potential to enjoy NAV accretion through large land bank acquisitions given its size and negotiating power. We also note that Unitech has pre sold >90% of its FY07 completions.
- **Land diversified and has come cheaply – adds margin growth to the mix.** Unitech acquired its land at an average of around Rs150/sqf. Post construction costs, average gross margins are expected to increase from 35% in FY06 to 51% in FY07 and further to 59% in FY08 at which point they should stabilise. Unitech has its land in Chennai (25% of land bank), Kolkata (20%), and national capital region (19%). This provides Unitech diversification in a market that has a dearth of national players and hence some risk mitigation.

Price catalyst

- 12-month price target: Rs501.00 based on a Sum of Parts methodology.
- Catalyst: Surging residential demand and higher realisations.

Action and recommendation

- We initiate coverage of Unitech with an Outperform rating and a target price of Rs501 based on a sum-of-the-parts methodology (NAV). Our NAV is based on our assessment of the future profitability of Unitech's land bank.
- Our NAV does not assume any value for the Special Economic Zones (SEZ) of 10,134 acres and New Kolkata International Development Project (38,000 acres). Any clarity on SEZ policies can provide further upside.
- **Key risk**: The physical delivery of forecast development schedule is the key risk. We have forecast strong delivery growth, increasing from 3.5m sqf in FY06 to 34.2m sqf in FY09.

Unitech: Size does matter

Largest land bank among listed companies

- Unitech has the largest land bank among the listed real estate developers. It has land bank of 10,332 acres comprising 400m sqf of constructible area and 8m sqyd of plot area. Unitech owns 71% more land than its nearest competitor.

Fig 1 Land bank of real estate developers

	Land size (acres)
Unitech	10,332
Sobha Developers	6,059
Ansal properties	5,924
DLF (as per prospectus filed in May'06 by the company)	4,265
Mahindra Gesco	1,637

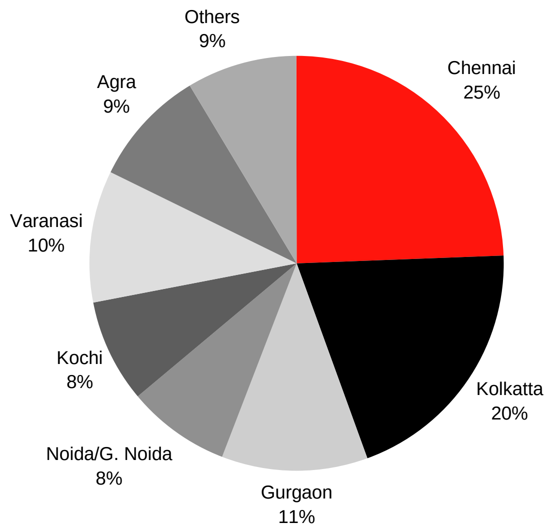
Source: Company Reports, Macquarie Research, November 2006

- Unitech has disclosed its land bank aggregating 10,332 acres; we also understand the company is in the process of acquiring more land. Unitech is also proposing to develop various multi-product SEZ and integrated township in Kolkata.
- Unitech has clearly stated that it does not intend to participate in any of the land auctions at prime locations. Instead the company will focus on buying agricultural land and get conversion rights as well as acquiring land via private negotiation which is undervalued by the market.

Cheap and diversified land bank

- Unitech has acquired land cheaply at about Rs150/sqf. Unitech has Rs40bn (10% of our estimated NAV of Rs 501/share) outstanding towards the payment of 10,332 acres which, according to our estimates, represents approximately 60% of the total land acquisition cost of 10,332 acres. The cheap land acquired is one of the competitive advantages that Unitech is going to harvest over the next 3–5 years. We calculate EBITDA margin on developed product for Unitech will be 44% in FY07 and 52% in FY08.

Fig 2 Land bank – diversified portfolio



Source: Company Data, Macquarie Research, November 2006

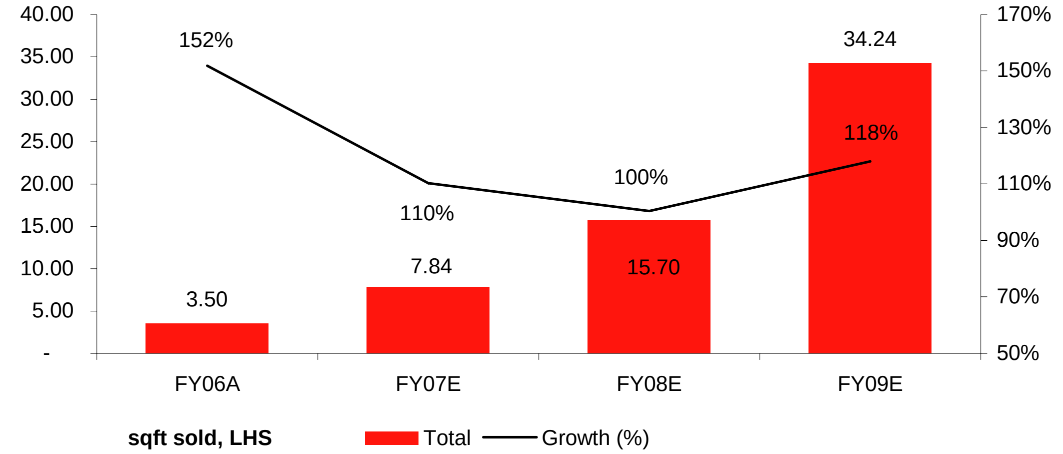
- Unitech has the most diversified land bank among its competitors, with a pan-India presence. Land acquisitions have been in Chennai (25%), Kolkata (20%), and national capital region (19%). We summarise the land bank city-wise detail in figure 2.

- Unitech has focused on IT/ITES growth while acquiring the land bank across the country. The selection of cities was driven by the fundamentals of job creation and capital flows. Unitech has acquired land in suburbs of metropolitan cities like Delhi, Chennai and Kolkatta and in tier-2 cities like Hyderabad, Bangalore etc.
- Unitech has acquired land in tier-3 cities of northern India like Agra, Varanasi and Mohali. Developments in national capital region of Delhi include presence in Gurgaon, Noida, Greater Noida and Faridabad. Kochi is only tier-3 city based outside of northern India.

Strong earnings growth

- We forecast a strong EPS increase of 66x from Rs1.04 in FY06 to Rs68.9 in FY09 mainly because 1) increased development schedule from 3.5m sqf in FY06 to 34.24m sqf in FY09 and 2) higher realisations given that property prices have increased by 60–70% in last two years. We have also forecasted a very strong revenue growth; rising from Rs9.4bn in FY06 to Rs162.1bn in FY09 implying a CAGR of 158%.
- This impressive growth would consume only 13.5% of the company's total land bank. We believe the company has potential NAV accretion through large land bank acquisitions given the size and negotiating power of the company.
- We have not assigned any value to the Special Economic Zones (SEZ) of 10,134 acres (further expandable to 20,250 acres) and New Kolkata International Development Project (38,000 acres) due to its uncertainty with regard to time and guidelines. Any clarity on SEZ policies can provide further upside.

Fig 3 Forecast delivery schedule

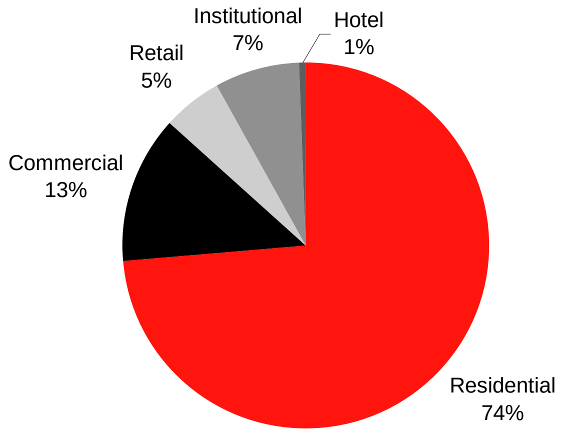


Source: Macquarie Research, November 2006

Residential focus

- 74% of the development plan of the company is for the residential sector. Unitech will focus on middle-to-upper-middle-class housing projects, townships, and luxury and super-luxury apartments. This is strategically positive as residential market is the largest growing segment of the real estate market.
- The residential segment is in a sweet spot among all forms of development as it is not only the largest growing market but also one of the most profitable too. In India developers rely on pre-selling route; as a result the company enjoys a very healthy cashflow for its working capital and to take up new projects (more on the detail later).

Fig 4 Land bank – usage



Source: Company data, Macquarie Research, November 2006

- The second most important focus area for company is commercial development. The company is planning IT parks in cities like Gurgaon, Greater Noida, Kolkatta, Chennai, Kochi and Hyderabad. It is also building modern commercial buildings again in suburbs of metropolitan cities of Delhi, Chennai and Kolkata to feed to the strong demand from IT/ITES industry. Unitech plans 31.5m sqf and 26m sqf of IT parks and commercial development respectively to be completed till FY13.
- Unitech plans retail development too but it would not in the form of malls or high streets. Unitech plans retail development in the form of residential shopping complexes which would be situated near to their residential developments. Unitech plans to develop 25.1m sqf of retail development largely in Varanasi, Agra, Chennai and Kochi by FY13.
- For all its non-residential property development we assume Unitech adopts a ‘develop and sell’ approach. We will monitor our assumption over time to see whether Unitech tends to retain property developments for investment purposes.

Fig 5 Uniworld City, Gurgaon

Source: Company information, November 2006

WACC and NAV discount analysis

Our discount rate – 14.03%

We use sum-of-the-parts methodology (NAV) to value the assets of property developers. Since Unitech follows the develop and sell model, we have followed the discounted cashflow (DCF) approach as it can capture the cost, selling price and margins of each property project. We believe this is the most appropriate approach due to the fluctuation in earnings, driven by volume increases, particularly in the near to medium term.

The weighted average discounted rate (WACC) is used to discount the future cashflow. WACC accounts for the target debt level, current risk free rate, projected beta and long-term market expected risk premium of individual companies.

Fig 6 Unitech Ltd: Our discount rate

		Notes
WACC	**14.03%**	
Pre-tax cost of debt	10.0%	Average cost of debt
Tax rate	30%	Company's tax rate
Post-tax cost of debt	7.0%	Post-tax cost of debt
Risk free rate	7.75%	10 year Govt. bond yield
Equity risk premium (Rm-Rf)	7.0%	
Equity beta (b)	1.40	Used higher beta considering volatility
Cost of equity (Re = Rf+b(Rm-Rf))	18%	
Target debt to total assets	33%	Management's long-term target gearing

Note: Current gearing levels are far higher, however if these were adopted; our valuation would be significantly higher due to the lower cost of debt versus equity. 33% is more realistic as a long term ratio.

Source: Macquarie Research, November 2006

Our NAV is Rs501/share

Our NAV, based on a sum-of-the parts methodology, is Rs501. Our valuation has incorporated the following assumptions:

- Current prices of individual projects for property under development are assumed in their valuations.
- Property price increases of 5% on each subsequent phase is assumed in light of the improved infrastructure and anxillary facilities as Unitech constructs its project in phases to capture the better prices for its name and quality develoement. Such assumption is independent of the potential property price increase.
- The land bank of constructible 400m sqf and plot area of 8m sqyd is expected to be developed over the next 8–9 years with the exception of one of the Kolkatta project (73m sqf) which is likely to be completed by 2020. We have assumed on an average slippage of about a year for medium term projects compared to company's estimates.
- For additional conservatism and due to difficulties in forecasting prices on a project by project basis we generally assume no price increases for future independent non-staged projects.
- Aside from projects for which land-use certificates have already been obtained, our NPV calculation does not take into account any of the proposed SEZs (10,134 acres) and the New Kolkata International Development Project (38,000 acres) in joint venture with Indonesia based Salim group, which can prove to be big opportunities in themselves. Also we have not included any such land bank where acquisition may be in process and hence is not public information.

For hotel projects we have assumed the company will be able to sell them as and when they are constructed. This is not entirely in line with company's strategy to run the hotels in assocoation with prominent international hotel chains for the initial couple of years before selling them off.

Fig 7 Net asset value (NAV)

	(Rs m)	NAV/share (Rs)	% of pre Debt NAV
- Development property			
- Residential	279,284	344	66.0%
- Commercial	77,457	95	18.3%
- Retail	32,826	40	7.8%
- Institutional	17,709	22	4.2%
- Hotel	15,993	20	3.8%
- Development property sub total	**423,270**	**522**	
Less: Net bank borrowing	17,000	21	
Net asset value	**406,270**	**501**	

Source: Macquarie Research, November 2006

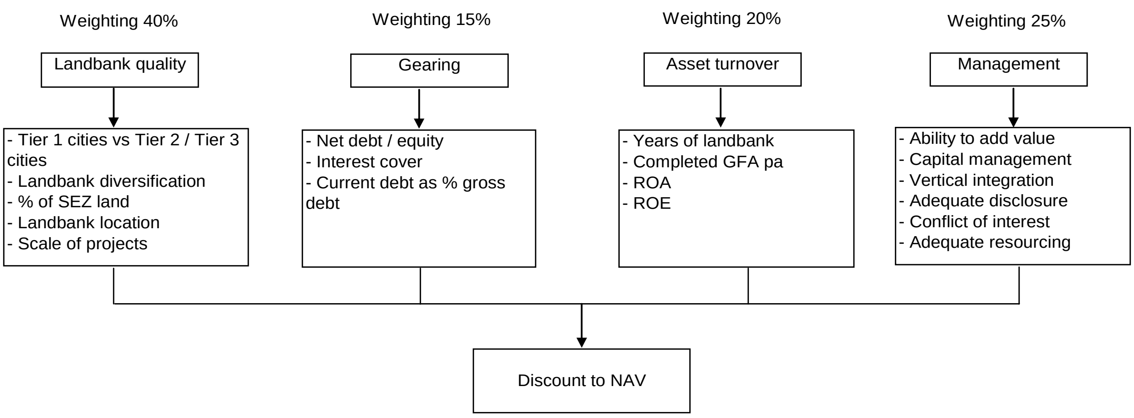
Target discount methodology (Macquarie's DiNAV Model)

Our DiNAV model helps us to set our target price relative to the underlying NAV of the company. It is relative valuation tool. That is, it helps us set the target discount/premium to NAV of one developer vs another. In absolute terms, the best developer in the market in India should trade at NAV in our view. This is because of the opportunity to make NAV accretive acquisitions, market positioning, brand recognition and the opportunities to benefit from the long-term growth of the Indian market with limited organised competition relative to other markets.

As a result, we have carefully chosen certain factors that are important to the success of Unitech and assign weightings on each factor. The respective weightings are then applied to Unitech for ascertaining discount or premium to NAV. In our view, we consider the important factors to be land-bank quality (40%), gearing (15%), asset turnover (20%) and management related factors (25%).

In our view the benchmark stock and market leader is Unitech. Due to its market leadership position, land bank, highly experienced management team and pan India platform it should trade at its underlying value or NAV. Hence our target price is at par with its NAV of Rs 501.

Fig 8 Macquarie DiNAV Model (India) – Discounts to NAV are driven by four key factors



Source: Macquarie Research, November 2006

Land bank quality (40%) – 70% of land bank in Tier-1 and-2 cities

We believe Unitech's land bank in Tier-I and Tier-2 is superior to that in Tier-3 cities. Unitech has about 70% of its land bank in either Tier-1 or Tier-2 cities. In terms of diversification, Unitech is one of very few companies that have acquired a land bank to position itself as a pan India developer. Generally speaking, we believe large-scale projects lead to economies of scale and therefore are preferred to small projects. On average Unitech's projects typically contain 600–700 dwellings which we consider relatively large scale for India. Unitech proposes to build SEZs (10,134 acres) in the state of Haryana and the New Kolkata International Development Project (38,000 acres) in joint venture with Indonesia based Salim Group, which can prove to be significant opportunities in themselves. Also we have not included any such land bank where acquisition may be in process and hence is not public information.

Gearing (15%) – High but interest coverage reasonable

We identified three key criteria to determine the developers' gearing profile: net debt to equity, interest coverage and current debt as a percentage of gross total debt. As at end of FY06, Unitech had a very typical developer financial profile, with a gearing of 248% (obviously very high by regional standards) but a reasonable interest coverage ratio of 4x. In terms of cost and easy availability of debt Unitech is better placed in comparison to its peers on back of its large size, long track record and brand name.

Asset turnover (20%) – long dated land bank and outstanding ROE

- Asset turnover is determined by the years of land bank, completed GFA pa, ROA and ROE. Unitech's existing land bank should be sufficient for the next 8–9 years. This is long relative to the industry average. We view this as a positive as it indicates that Unitech has enough capability to scale up its production according to the demand for a longer period of time.
- Unitech has an asset turnover that is in line with the industry rate which in this business is quite low especially during the growth phase. Based on our forecast completion schedule, Unitech's ROA of 3.4% and ROE of 58.6% in FY06 place the company at the top end of the industry range. Further, these ratios should undergo a significant improvement in line with our strong earnings forecast for Unitech.

Management (25%) – Best of breed

- Our assessment of management takes into account factors such as ability to add value, management of capital, conflict of interest, vertical integration of the business, adequate disclosure and adequate resources for business operations. We rate Unitech's management as one of the best in the industry given its track record of project execution. All criteria for Unitech are rated above the industry average. Unitech's management team is one of the most transparent in the sector and on par with regional peers.

Project delivery summary

Unitech's revenue and profit growth is unlike any other property company in the region. In fact on face value the numbers appear fanciful; how can a company ramp up EPS by a factor of 66x from FY06–09 and how can revenues grow by a factor of 17x from FY06–09?

Fig 9 Development schedule (FY07–09)

(m sqf, project completions)	FY07	FY08	FY09
Residential	6.75	12.06	21.87
Commercial	0.57	2.70	8.93
Retail	0.22	0.38	1.46
Institutional	0.30	0.56	1.43
Hotel	-	-	0.54
Total	**7.84**	**15.70**	**34.24**
Growth (%)	**110%**	**100%**	**118%**

Source: Macquarie Research, November 2006

Comparing profitability with the past or even FY06 can be dangerous. In our analysis we have determined future revenue growth by looking at what is currently under construction and planned commencements in the next few years. We make the following important points:

- Unitech currently has about total GFA of 20m sqf under construction predominantly in National Capital Region and Kolkata. They are in various stages of completion but as Unitech uses the percentage of completion method for profit booking; 39% of current GFA under construction will contribute to our FY07 revenue forecasts of 7.84m sqf. In comparison Unitech had GFA of 13m sqf under construction at the end of FY06 out of which 27% (approx. 3.5m sqf) contributed towards FY06 revenues.
- Revenue growth from FY07 to FY08 is 145%. We are expecting Unitech to start more projects in newer markets outside National Capital Region in FY08. With GFA of 25m sqf forecast to be under construction at the end of FY07 and 7.84m sqf being completed in FY07, the total GFA under construction at the end of FY08 is expected to be in excess of 45m sqf with 15.7m sqf (approx. 35%) contributing towards FY08 revenues.
- Throughout this period (ie FY06–08) gross margin is expected to grow from 35% in FY06 to 59% in FY08. In combination with the increase in number of projects underway from FY06 (GFA under construction 13m sqf) to FY08 (GFA under construction 45m sqf) it is not difficult to see how earnings can and should ramp up significantly.

Pre sales reduce risks to forecast

In India there are very few restrictions on pre-sales unlike elsewhere in the region. Unitech has been selling its products through pre-selling route. Unitech pre-sells only when it has land title and necessary government approvals. For its residential properties (average construction period 2.5 years), Unitech offers two types of pre selling plans:

- **Plan A:** Unitech collects 50% of selling amount within the first year and the balance 50% in next one and half years. This plan accounts for 60% of their total sales.
- **Plan B:** Unitech collects 90% of selling amount within first 45 days with a discount of 10% and the balance of 10% is collected at the time of delivery of product. This plan accounts for 40% of its total sales.

Unitech has been very successful in pre selling its products. We believe that close to 100% of FY07 revenue has been pre sold. It takes around 60% of the total purchase price in the first year of construction itself and collects the remainder linked to construction progress. The level of pre sales achieved provides us with additional confidence that our revenue and profit forecast are achievable.

Key risks for the group

- **Ambitious production schedule**: Though we believe that Unitech is one of the best players poised to ramp up production significantly especially in next couple of years yet there could be few difficulties Unitech might encounter especially in relation to contractors outside National Capital Region (NCR). Unitech so far had developed properties mainly in NCR so entering new markets and finding an appropriate contractor could act as a hindrance in our forecasted production schedule. *Quite simply, for a multitude of reasons, Unitech may not be able to ramp up production to the extent that we forecast. If this occurs its NAV will slip, its PER will stay at the current unsustainable level and the stock is likely to be de-rated.*
- **Financial leverage**: Unitech presently has in its book debt of Rs17bn issued by various commercial and housing banks. At the end of FY06 Unitech had very high gearing of 248%; however this is not out of line if compared to the Indian industry average. Real estate industry being at a high growth trajectory requires high financial leverage. The company has recently passed a board resolution enabling the company to raise a debt up to Rs30bn. Gearing ratio will further increase to 301% till FY08 before it starts declining in FY09 to 148%; as a result of increased earnings forecasts. However this decline in gearing might not happen so significantly if the company requires fund for land acquisition for its SEZ plans and New Kolkata International Development Project. Unitech has indicated that the efforts are already underway to acquire land for its SEZ projects.
- **Interest rate increase and impact on volumes**: Interest rate increase is an inherent risk to property development companies. However this looms large over a company that has significant residential portfolio. As the cost of financing becomes dearer there may be a clear and direct impact on residential property sales. We also believe that in India a 100bp increase should not affect the residential market significantly as housing loan interest rates are at a much lower level (9.5%) as compared to the late 1990s.

The land bank summary

- **Largest land bank**: Unitech recently released its land bank details with a projected development schedule. The Unitech's share of land bank comes to 10,332 acres which constitutes 400m sqf of constructible area and 8m sqyd of plot area. The constructible area includes residential, commercial, retail and hotel development. The plot area includes residential plots and institutional plots for schools, hospitals etc.

Fig 10 Land bank details

	Unitech's Share		Residential		Commercial	Retail	Institutional	Hotel	Total	
1,000	**Acres**	**% of Total**	**Sqyd (m)**	**Sqf (m)**	**Sqf (m)**	**Sqf (m)**	**Sqyd (m)**	**Sqf (m)**	**Sqyd (m)**	**Sqf (m)**
Agra	1,500	15%	0.73	19.60	7.84	3.92	0.58		1.31	31.36
Bangalore	83	1%		7.05	0.32	0.35		0.25		7.98
Chennai	2,063	20%	0.92	90.81	8.73	3.13	0.51		1.43	102.67
Delhi	29	0%			0.20	0.11				0.32
Faridabad	8	0%		0.66						0.66
Greater Noida	251	2%		15.96	5.40	0.18	0.02		0.02	21.55
Gurgaon	1,173	11%	0.37	33.60	9.39	2.37	0.48	0.58	0.84	45.95
Hyderabad	274	3%	0.20	11.81	3.65	0.54			0.20	16.00
Kochi	604	6%	0.30	28.23	3.54	3.01		0.44	0.30	35.21
Kolkatta	2,213	21%	0.73	62.34	12.74	1.59	1.19	0.88	1.92	77.55
Mohali	350	3%	0.13	10.32		1.43	0.17		0.30	11.75
Noida	286	3%		7.59	6.70	0.62	0.04	0.56	0.04	15.47
Varanasi	1,500	15%	0.73	22.34	3.92	7.84	0.87		1.60	34.10
Total	**10,332**		**4.10**	**310.32**	**62.45**	**25.11**	**3.85**	**2.71**	**7.96**	**400.58**

Source: Company data, Macquarie Research, November 2006

- **Cheap land bank**: As per the company report, the land bank includes only that land where the company has either a clear title or has paid for a firm commitment. In respect of the disclosed land bank detail, the company has outstanding commitment of Rs40bn. Out of this amount about 75% is outstanding towards the government and its agencies.
- **Diversified land bank**: Land bank details of the company reveal that Unitech is one of the very few real estate developers in the country that has a pan India presence. Unitech's strategy as clear from its land bank is to focus on suburbs of metropolitan cities and Tier-2 cities. Unitech has increased its concentration of land bank in Chennai and Kolkata which accounts for 25% and 20% of development respectively. The traditional forte of company is Gurgaon development which accounts for about 11% of their projected development.
- **Residential focus**: Also Unitech has its focus on mid to high end residential developments which accounts for 74% of its total developmental plans followed by commercial at 13%. Unitech has smaller portfolio of retail, institutional and hotel development too.
- **Hospitality and entertainment:** Unitech has tied up with Carlson Hospitality to manage Radisson group of hotels. It has also tied up with Marriot International to manage the courtyard brand of hotels. Unitech would lend its expertise in developing & constructing and the hotel would be managed by an experienced operator. Unitech is in the process of developing an amusement park "Adventure island" covering roughly around 65 acres and a big Entertainment City (roughly 140 acres).
- **SEZ:** Unitech has received in principle approval for many SEZ proposals submitted by Unitech. Among the large projects Unitech would jointly develop 9,884 acres SEZ in Kundli (Haryana) along with the Haryana government, which is likely to be a 90:10 partnership. This is further expandable to 20,000 acres. Unitech has also received in-principle approval of an auto component SSEZ in Gurgaon over 250 acres.
- **Mega development project of 38,000 acres in Kolkata**: Unitech is party to a three-member consortium with the Salim Group of Indonesia and Universal Success. The Kolkata government has taken the onus on itself to provide the necessary land at cheaper cost. In lieu Unitech is to build an expressway and bridge in the Hooghly district on a build and transfer basis. Unitech is also involved in infrastructure and construction projects in the road, power and industrial segment.

Company's land bank acquisition strategy

- **Focus on suburbs of metropolitan cities and key Tier-2 cities:** Unitech has focused on IT/ITES growth while acquiring the land bank across the country. The selection of cities was driven by the fundamentals of job creation and capital flows. Unitech has acquired land in suburbs of metropolitan cities like Delhi, Chennai and Kolkatta and in tier-2 cities like Hyderabad, Bangalore etc. Unitech has also acquired land in tier-3 cities of northern India like Agra, Varanasi and Mohali. Developments in national capital region of Delhi include presence in Gurgaon, Noida, Greater Noida and a small presence in Faridabad. Kochi is only tier-3 city based outside of northern India.
- **Acquire, develop and sell model**: Unitech plans to follow develop and sell model. Unitech would develop and then sell the assets. Unitech plans to develop and out rightly sell all its residential commercial and retail developments. For commercial and hotel development, Unitech plans to develop them and would sell after couple of years of operation to unlock the better value. Traditionally also Unitech sold all its development both residential and commercial.
- **Land acquisitions:** Unitech has clearly stated that the company does not intend to participate in any of the land auctions at prime locations. Instead the company would focus on buying agricultural land and get conversion rights as well as acquiring land via private negotiation which is undervalued by the market.
- **Residential focus:** Unitech has always focused on residential sector. 74% of the development plan of the company is for residential sector. Unitech will focus on middle-to-upper-middle class housing projects, townships, and luxury and super-luxury apartments. This is strategically positive as the residential market is the largest growing segment of the real estate market. The residential segment is in a sweet spot among all forms of development as it is not only the largest growing market but also one of the most profitable too. Also in India developers rely on pre-selling route; as a result company enjoys a very healthy cashflow for its working capital and to take up new projects.

Fig 11 Unitech Habitat, Greater Noida

Source: Company information, November 2006

Earnings growth analysis

- **Strong revenues forecast**: We forecast an impressive top line growth of 158% CAGR FY06–09 and an EPS increase of 66x from Rs1.04 to Rs68.9 in the same period. This would place the company on a 15.4x PER in FY08 and 5.6x PER in FY09. We forecast strong revenues beyond FY09 due to 1) increased production and 2) higher realisations on back of rising property prices especially over the past two years by almost 60–70%.
- **Sustainable high revenue growth**: This impressive growth until FY09 would consume only 13.5% of the company's total land bank and hence we believe the company should be able to maintain high revenues growth beyond FY09 also. The high margins would also be maintained on back of higher realisations, cheap land acquired and economies of scale arising out of company's large planned projects. The earnings forecast are summarised in the Fig 9.

Fig 12 Profit & loss A/C

	FY06A	FY07E	FY08E	FY09E
Total Operating Income	**9,417**	**25,819**	**63,231**	**162,059**
- Sales Growth	**43%**	**174%**	**145%**	**156%**
Less:				
Cost of Construction	6,136	12,550	26,132	67,538
- Gross margins	35%	51%	59%	58%
Selling, General & Admn Expenses	1,077	1,291	3,162	8,103
Personnel Expenses	366	548	822	1,234
Total Operating Expenses	7,578	14,389	30,116	76,874
EBITDA	**1,839**	**11,430**	**33,115**	**85,185**
EBIDTA Margin	**20%**	**44%**	**52%**	**53%**
Depreciation & Amortisation	112	283	374	510
Other Income	130	100	100	100
EBIT	1,857	11,247	32,842	84,775
Less: Interest	465	2,058	3,889	4,911
Recurring Pre-tax Income	1,392	9,189	28,952	79,864
Less: Taxation	513	2,757	8,686	23,959
Net Income (Reported)	**879**	**6,432**	**20,267**	**55,905**
- Net Profit Margin	**9%**	**25%**	**32%**	**34%**
- Earning Per Share	**1.04**	**7.92**	**24.97**	**68.88**

Source: Macquarie Research, November 2006

- **Expanding profit margins**: We forecast Unitech's EBITDA margins to improve from 20% in FY06 to 44% in FY07 and further to 52% in FY08. This is due to 1) higher realisations and 2) change in accounting policy with regard to regard to revenue recognition for projects after April '04 and 3) better economies of scale due to increased production. The increased share of residential segment also leads to higher profitability as the working capital requirement reduces.
- **Change in revenue recognition method**: Unitech has started following percentage of completion method in regard to projects commenced after April '04. For projects prior to that period, estimated profit basis of accounting was followed. Accordingly, revenue was recognised to estimate profit at 20% of actual collection during the year towards booking of properties and the final adjustment was done in the completion year of the respective project. Therefore the FY06 financials are not directly comparable to future estimated revenues of FY07–09.
- **Increased interest coverage ratio**: With higher forecasted revenues and better realisations the EBIT of the company is increasing in proportion to EBITDA margins and hence the interest coverage ratio of the company would increase from 4x in FY06 to 8.4x on FY08 and further to 17.3x in FY09.

Balance sheet analysis

- **Sharp decline in gearing post FY07**: Unitech had very high gearing of 248% as at FY06; however this is not out of line if compared to the Indian industry average. With a high growth trajectory, the real estate industry requires high financial leverage. The company has recently passed a board resolution enabling the company to raise a debt up to Rs30bn. Gearing ratio will further increase to 301% till FY08 before it starts declining in FY09 to 148%; as a result of increased earnings forecasts. However this decline in gearing might not happen so significantly if the company requires funds for land acquisition for its SEZ plans and New Kolkata International Development Project.
- **Higher return on capital employed:** Unitech's return on capital employed is likely to increase from 3.4% in FY06 to 28.1% in FY09 on back of 1) higher EBITDA margins at 52.6% in FY09 due to better realisations; 2) better economies of scale due to increased production and 3) higher residential development portfolio improves the working capital cycle. Return on equity (ROE) is outstanding (partly due to high gearing) at 58% in FY06 to 129% in FY07.
- **Reducing working capital cycle**: With the revenue growth forecasted at a CAGR of 258% from FY06–09 the requirement for working capital will increase from 194 days of sales in FY06 to 266 days in FY08; thereafter we forecast a decline in working capital requirement from FY09 (154 days) for the company mainly on account of higher customer advances and pre-sales in residential segment coming out of Unitech's residential development portfolio.
- **Improving current ratio**: Current ratio represents the amount of current assets like inventories, cash, and debtors to current liabilities like creditors, short term debt and advance from customers. The large cash amount resulting from higher sales and production schedule will lead to an improvement in current ratio of the company from 1.1x in FY06 to 2.2x in FY09 thereby depicting a better liquidity position for Unitech.

Fig 13 Financial ratios

	FY06A	FY07E	FY08E	FY09E
Dupont model				
Net profit margin (%)	9.0	24.9	32.1	34.5
Total Asset Turnover Ratio (x)	0.3	0.4	0.5	0.8
Total Asset to equity ratio (x)	23.3	12.6	6.7	4.0
Return on (Common) Equity (RoE)	58.6	129.2	112.9	105.5
Return / Profitability Ratios (%)				
EBITDA Margins	19.5%	44.3%	52.4%	52.6%
Return on Capital Employed (RoCE)	3.4%	12.5%	19.2%	28.1%
Return on Net Worth (RoNW)	58.6%	129.2%	112.9%	105.5%
Turnover Ratios				
Inventory Turnover Ratio (x)	1.2	1.1	0.9	1.4
Assets Turover Ratio (x)	0.3	0.4	0.5	0.8
Working Capital Cycle (days)	193.9	260.5	265.9	154.0
Average Collection Period (days)	36.5	27.3	28.2	27.8
Average Payment Period (days)	216.5	168.6	108.0	88.6
Solvency Ratios / Liquidity Ratios (%)				
Debt Equity Ratio (D/E)	247.8%	301.4%	147.9%	57.6%
Net Working Capital / Total Assets	10.8%	34.4%	38.5%	27.0%
Interest Coverage Ratio-based on EBIT	4.0	5.5	8.4	17.3
Current Ratio	1.1	1.6	1.9	2.2

Source: Macquarie Research, November 2006

Company profile

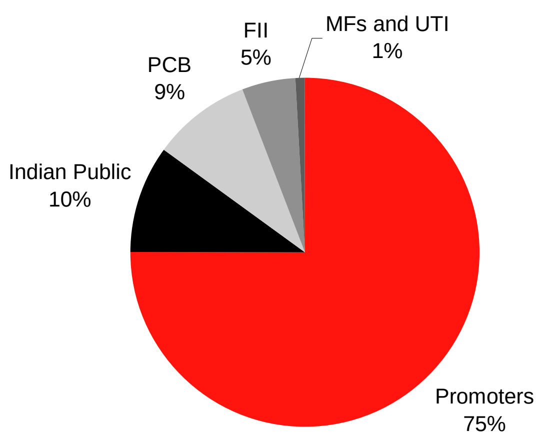
Unitech was started in 1972. The company is now one of the leading real estate developers in India and the largest listed (UT IN, US$7bn) real estate company. Unitech has set benchmarks in residential, commercial and retail projects for many years. Unitech was the first to receive the prestigious ISO: 9002 certification for design, planning, construction and marketing of real estate in the national capital region of Delhi.

The promoter family owns about 75% of the company and Mr Ramesh Chandra is the company chairman. Unitech traditionally had strong foothold in the national capital region of Delhi but in recent years Unitech has increased its presence in other parts of the country. Unitech to date has developed nearly 10m sqf of constructible space and 1,000 acres in plots. Unitech is currently developing various residential and commercial projects including IT parks. Unitech is working closely with various state governments to develop SEZs across the country. A example is the New Kolkata International Development Project (38,000 acres) in joint venture with Indonesia based Salim group and West Bengal Government.

Unitech has a small presence in the power transmission, prefabricated construction, paving blocks and ready mix concrete businesses. However going forward Unitech will reduce its exposure in this segment of business and will focus only on property development. Also Unitech has a tie-up with Carlson Hospitality for the Radisson brand of hotels and with Marriott International to manage three Courtyard-branded hotels.

Unitech has long partnered with internationally acclaimed architects and design consultants/ groups including Callison Inc (USA), RMJM (UK), FORREC (Canada), RSP (Singapore), HOK (USA). Unitech's corporate clients include global leaders such as Fidelity, HP, Gillette, EDS, Hewitt, Convergys, Reebok, Vertex, E-Value Serve, Keane, Fritolay, Sun Life Assurance, BCG, AT Kearney, Asahi Glass, Seagram, Perfetti, and General Motors etc.

Fig 14 Shareholding pattern (%) as of 30 June 2006



Source: NSE, Macquarie Research, October 2006

Unitech: A brand to reckon with

- Unitech is a very strong band name in the real estate business. Its brand name reflects trust and quality which helps the company with better pricing and saleability for its products. Unitech's strong brand name is evidenced from the company's ability to sell its products faster than its competitors in the same locations. The company has also been able to attract a premium of around 10–20% on its product over its competitors' prices.
- The strong brand name not only helps provide better demand; it also helps the company in attracting contractors, thereby reducing the scalability concern which is an imortant issue for other developers. Construction contractors in India are small and regional; and they are always more willing to work for better brand names and on larger projects inorder to have more certainity of income. Unitech is a developer that provides both, the brand name and large projects. This is one of the main reason why we believe that the company will not face any scalability issues.

Fig 15 Unitech landmark projects

	City	Area (m sqf)	No. of units
Residential			
Heritage City	Gurgaon	1.8	725
Uniworld City	Gurgaon	1.3	516
Nirvana Country	Gurgaon	1.0	797
Heritage Estate	Bangalore	0.3	372
Commercial			
Signature Towers	Gurgaon	0.3	
Millennium Plaza	Gurgaon	0.2	
Global Business Park	Gurgaon	0.5	
Unitech Trade Centre	Gurgaon	0.3	
Townships		**(Acres)**	
South City-1	Gurgaon	300	
Vista Villas	Gurgaon	15	
Greenwood City	Gurgaon	130	
South City	Lucknow	300	

Source: Company data, Macquarie Research, November 2006

- These projects have become landmarks in the locations in which they are situated. As a result these projects command a better price in secondary markets compared to competitor developments. Unitech has successfully built integrated townships which is not a very common trend in the Indian market and now plan to replicate this success in different parts of the country.
- On back of its brand and management reputation, the company has tied-up contracts with Carlson Hospitality for the Radisson brand of hotels and with Marriott International to manage three Courtyard-branded hotels.

Unitech Limited (UT IN, Outperform, Target price: Rs501.00)

Profit & Loss		**2006A**	**2007E**	**2008E**	**2009E**
Net Property Income	m	2,172	0	0	0
Development Income	m	5,110	25,819	63,231	162,059
Other Revenue	m	2,135	0	0	0
Total Revenue	**m**	**9,417**	**25,819**	**63,231**	**162,059**
Management Fees	m	0	0	0	0
Other Expenses	m	-7,578	-14,389	-30,116	-76,874
EBITDA	**m**	**1,839**	**11,430**	**33,115**	**85,185**
Dep & Amortisation	m	112	283	374	510
EBIT	**m**	**1,857**	**11,247**	**32,842**	**84,775**
Net Interest Income	m	-465	-2,058	-3,889	-4,911
Associates	m	0	0	0	0
Exceptionals	m	27	0	0	0
Other Pre-Tax Income	m	0	0	0	0
Pre-Tax Profit	**m**	**1,418**	**9,189**	**28,952**	**79,864**
Tax Expense	m	-513	-2,757	-8,686	-23,959
Net Profit	**m**	**905**	**6,432**	**20,267**	**55,905**
Minority Interests	m	-33	0	0	0
Reported Earnings	**m**	**873**	**6,432**	**20,267**	**55,905**
Adjusted Earnings	**m**	**846**	**6,432**	**20,267**	**55,905**
EPS (rep)		0.02	7.92	24.97	68.88
EPS (adj)		0.02	7.92	24.97	68.88
EPS Growth (adj)	%	nmf	49,281.3	215.1	175.8
PE (rep)	x	23,278.5	48.6	15.4	5.6
PE (adj)	x	24,016.1	48.6	15.4	5.6
Total DPS		0.00	0.40	1.25	6.89
Total Div Yield	%	0.0	0.1	0.3	1.8
Weighted Average Shares	m	52,707	812	812	812
Period End Shares	m	52,707	812	812	812

Profit & Loss Ratios		**2006A**	**2007E**	**2008E**	**2009E**
Revenue Growth	%	nmf	174.2	144.9	156.3
EBITDA Growth	%	nmf	485.7	188.1	156.8
EBIT Growth	%	nmf	505.8	192.0	158.1
EBITDA Margins	%	20.9	44.7	52.5	52.6
EBIT Margins	%	19.7	43.6	51.9	52.3
Net Profit Margins	%	9.6	24.9	32.1	34.5
Payout Ratio	%	22.3	5.0	5.0	10.0
EV/EBITDA	x	10,337.3	30.4	10.6	4.1
EV/EBIT	x	10,962.1	31.2	10.7	4.1
Balance Sheet Ratios					
ROE	%	32.6	113.8	110.5	105.2
ROA	%	4.2	17.7	27.3	40.1
ROIC	%	nmf	23.7	32.9	44.1
Net Debt/Equity	%	1,074.2	681.4	377.3	114.3
Interest Cover	x	4.0	5.5	8.4	17.3
Price/Book	x	7,822.2	35.9	11.2	4.0
Book Value per Share		0.0	10.7	34.4	96.4

Cashflow Analysis		**2006A**	**2007E**	**2008E**	**2009E**
EBITDA	**m**	**1,839**	**11,430**	**33,115**	**85,185**
Tax Paid	m	-153	-659	-2,757	-8,686
Chg in Working Capital	m	-2,677	-25,717	-39,186	-30,527
Net Interest Paid	m	-465	-2,058	-3,889	-4,911
Other	m	22	303	307	234
Operating Cashflow	**m**	**-1,435**	**-16,701**	**-12,410**	**41,295**
Investments	m	358	-273	-639	-959
Capex	m	-3,485	-2,899	-1,739	-5,218
Asset Sales	m	0	0	0	0
Other	m	127	100	100	100
Investing Cashflow	**m**	**-3,001**	**-3,072**	**-2,279**	**-6,077**
Dividend (Ordinary)	m	-60	-185	-322	-1,013
Equity Raised	m	0	1,499	0	0
Debt Movements	m	6,686	20,265	16,359	4,077
Other	m	-1,009	-2,556	0	0
Financing Cashflow	**m**	**5,617**	**19,023**	**16,037**	**3,064**
Net Chg in Cash/Debt	**m**	**1,182**	**-750**	**1,349**	**38,282**

Balance Sheet		**2006A**	**2007E**	**2008E**	**2009E**
Cash	m	3,900	3,150	4,499	42,780
Receivables	m	1,033	2,831	6,933	17,768
Inventories	m	30,870	64,327	127,056	163,950
Investments	m	0	0	0	0
Fixed Assets	m	4,887	7,503	8,868	13,577
Intangibles	m	824	526	226	0
Other Assets	m	3,009	4,297	10,548	26,331
Total Assets	**m**	**44,521**	**82,633**	**158,129**	**264,406**
Payables	m	5,270	6,324	9,146	23,638
Short Term Debt	m	23,889	33,387	63,822	81,356
Long Term Debt	m	10,449	30,715	47,074	51,151
Provisions	m	2,080	3,263	9,890	29,749
Other Liabilities	m	0	0	0	0
Total Liabilities	**m**	**41,688**	**73,688**	**129,932**	**185,894**
Shareholders' Funds	m	2,597	8,707	27,961	78,275
Minority Interests	m	237	237	237	237
Total S/H Equity	**m**	**2,834**	**8,944**	**28,198**	**78,512**
Total Liab & S/H Funds	**m**	**44,522**	**82,633**	**158,129**	**264,406**

All figures in INR unless noted.
Source: Macquarie Research, November 2006

Important disclosures:

Recommendation definitions

Macquarie Australia/New Zealand
Outperform – return >5% in excess of benchmark return (>2.5% in excess for listed property trusts)
Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts)
Underperform – return >5% below benchmark return (>2.5% below for listed property trusts)

Macquarie Asia
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Recommendation proportions

Macquarie Australia/New Zealand	
Outperform	42.81%
Neutral	44.60%
Underperform	12.59%
Macquarie Asia	
Outperform	57.12%
Neutral	26.36%
Underperform	16.52%

For quarter ending 30 September 2006

Volatility index definition*

This is calculated from the volatility of historic price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Australian/NZ stocks only

Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / efpowa*
ROA = adjusted ebit / average total assets
ROA Banks/Insurance = adjusted net profit /average total assets
ROE = adjusted net profit / average shareholders funds
Gross cashflow = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Analyst Certification: The views expressed in this research accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research. The analyst principally responsible for the preparation of this research receives compensation based on overall revenues, including investment banking revenues, of Macquarie Bank Ltd ABN 46 008 583 542 (AFSL No.237502)("Macquarie") and its related entities ("the Macquarie group") and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.
Disclaimers: Macquarie Securities (Australia) Ltd; Macquarie Europe Ltd; Macquarie Securities (USA) Inc; Macquarie Securities Ltd; Macquarie Securities (Singapore) Pte Ltd; and Macquarie Securities (New Zealand) Ltd are not authorised deposit-taking institutions for the purposes of the Banking Act 1959 (Commonwealth of Australia), and their obligations do not represent deposits or other liabilities of Macquarie. Macquarie provides a guarantee to the Monetary Authority of Singapore in respect of Macquarie Securities (Singapore) Pte Ltd for up to SGD25m under the Securities and Futures Act (Chapter 289). Macquarie does not otherwise guarantee or provide assurance in respect of the obligations of any of the above mentioned entities. This research has been prepared for the general use of the wholesale clients of the Macquarie group and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this research in any way. Nothing in this research shall be construed as a solicitation to buy or sell any security or product, or to engage in or refrain from engaging in any transaction. In preparing this research, we did not take into account the investment objectives, financial situation and particular needs of the reader. Before making an investment decision on the basis of this research, the reader needs to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of their particular investment needs, objectives and financial circumstances. There are risks involved in securities trading. The price of securities can and does fluctuate, and an individual security may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international stock market or economic conditions, which may adversely affect the value of the investment. This research is based on information obtained from sources believed to be reliable but we do not make any representation or warranty that it is accurate, complete or up to date. We accept no obligation to correct or update the information or opinions in it. Opinions expressed are subject to change without notice. No member of the Macquarie group accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this research and/or further communication in relation to this research.
Other Disclaimers: Securities research is issued and distributed by Macquarie Securities (Australia) Ltd (AFSL No. 238947) in Australia, a participating organisation of the Australian Stock Exchange; Macquarie Securities (New Zealand) Ltd in New Zealand, a licensed sharebroker and New Zealand Exchange Firm; Macquarie Europe Ltd in the United Kingdom, which is authorised and regulated by the Financial Services Authority (No. 193905); Macquarie Securities Ltd in Hong Kong, which is licensed and regulated by the Securities and Futures Commission; Macquarie Securities (Japan) Limited in Japan, a member of the Tokyo Stock Exchange, Inc. and Osaka Securities Exchange Co., Ltd and in Singapore, Macquarie Securities (Singapore) Pte Ltd (Company Registration Number: 198702912C), a Capital Markets Services licence holder under the Securities and Futures Act to deal in securities and provide custodial services in Singapore. Pursuant to the Financial Advisers (Amendment) Regulations 2005, Macquarie Securities (Singapore) Pte Ltd is exempt from complying with sections 25, 27 and 36 of the Financial Advisers Act. Economic research is issued and distributed in Australia by Macquarie; in New Zealand by Macquarie Securities (New Zealand) Ltd and in the United Kingdom by Macquarie Europe Ltd. Clients should contact analysts at, and execute transactions through, a Macquarie group entity in their home jurisdiction unless governing law permits otherwise. This research may be distributed in the United States only to major institutional investors and may not be circulated to any other person in the United States. Macquarie Securities (USA) Inc., which is a registered broker-dealer and member of the NASD, accepts responsibility for the content of each research report prepared by one of its non-US affiliates when the research report is distributed in the United States by Macquarie Securities (USA) Inc. All transactions by US investors involving securities discussed in this report must be effected through Macquarie Securities (USA) Inc. The information contained in this email is confidential. If you are not the intended recipient, you must not disclose or use the information in this email in any way. If you received it in error, please tell us immediately by return e-mail and delete the document. We do not guarantee the integrity of any e-mails or attached files and are not responsible for any changes made to them by any other person. Disclosures with respect to the issuers, if any, mentioned in this research are available at www.macquarie.com/research/disclosures.

Auckland Tel: (649) 377 6433	**Bangkok** Tel: (662) 694 7999	**Hong Kong** Tel: (852) 2823 3588	**Jakarta** Tel: (62 21) 515 1818	**Kuala Lumpur** Tel: (60 3) 2059 8833	**London** Tel: (44 20) 7065 2000
Manila Tel: (63 2) 857 0888	**Melbourne** Tel: (613) 9635 8139	**Mumbai** Tel: (91 22) 6653 3000	**New York** Tel: (1 212) 231 2500	**Perth** Tel: (618) 9224 0888	**Seoul** Tel: (82 2) 3705 8500
Shanghai Tel: (86 21) 6841 3355	**Singapore** Tel: (65) 6231 1111	**Sydney** Tel: (612) 8232 9555	**Taipei** Tel: (886 2) 2734 7500	**Tokyo** Tel: (81 3) 3512 7900	**Wellington** Tel: (644) 498 2800

Available to clients on the world wide web at **www.macquarie.com/research** and through Thomson Financial, Reuters and Bloomberg.

Macquarie Research
Equities

Research

Automobiles/Auto Parts

Kurt Sanger (Japan, Asia)	(813) 3512 7859
Peter So (China)	(852) 2823 3586
Liny Halim (Indonesia)	(6221) 515 7343
Toshisuke Hayami (Japan)	(813) 3512 7873
Eunsook Kwak (Korea)	(822) 3705 8644
Francis Eng (Malaysia)	(603) 2059 8986

Banks and Non-Bank Financials

Ismael Pili (Asia, Singapore)	(65) 6231 2840
Nick Lord (China, Hong Kong)	(852) 2823 4774
Christina Fok (China)	(852) 2823 3584
Chris Esson (Hong Kong)	(852) 2823 3567
Seshadri Sen (India)	(9122) 6653 3053
Liny Halim (Indonesia)	(6221) 515 7343
Hideyasu Ban (Japan)	(813) 3512 7858
Kentaro Kogi (Japan)	(813) 3512 7865
Mark Barclay (Korea)	(822) 3705 8658
Young Chung Mok (Korea)	(822) 3705 8668
Chin Seng Tay (Malaysia, S'pore)	(65) 6231 2837
Gilbert Lopez (Philippines)	(632) 857 0898
Chris Hunt (Taiwan)	(8862) 2734 7526
Matthew Smith (Taiwan)	(8862) 2734 7514
Alastair Macdonald (Thailand)	(662) 694 7741

Chemicals/Textiles

Scott Weaver (China, Taiwan)	(8862) 2734 7512
Jal Irani (India)	(9122) 6653 3040
Kitti Nathisuwan (Thailand)	(662) 694 7724

Conglomerates

Peter So (China)	(852) 2823 3586
Gilbert Lopez (Philippines)	(632) 857 0898

Consumer

Ramiz Chelat (Asia)	(852) 2823 3587
Xiaopo Wei (China)	(852) 2823 4741
Duane Sandberg (Japan)	(813) 3512 7867
Christina Lee (Korea)	(822) 3705 8670
Paul Hwang (Korea)	(822) 3705 8678
Woochang Chung (Korea)	(822) 3705 8667
Edward Ong (Malaysia)	(603) 2059 8982
Nadine Javellana (Philippines)	(632) 857 0890
Chris Clayton (Thailand)	(662) 694 7829

Emerging Leaders

PJ King (Asia)	(852) 2823 3566
Paul Quah (Hong Kong)	(852) 2823 4627
Saurabh Jain (India)	(9122) 6653 3046
Oliver Cox (Japan)	(813) 3512 7871
Robert Burghart (Japan)	(813) 3512 7853
Paul Hwang (Korea)	(822) 3705 8678
Woochang Chung (Korea)	(822) 3705 8667
Nadine Javellana (Philippines)	(632) 857 0890
Jeremy Chen (Taiwan)	(8862) 2734 7521
Scott Weaver (Taiwan)	(8862) 2734 7512

Insurance

Chris Esson (China, Taiwan)	(852) 2823 3567

Media

Ramiz Chelat (Asia)	(852) 2823 3587
Prem Jearajasingam (Malaysia)	(603) 2059 8989

Metals and Mining

Simon Francis (Asia)	(852) 2823 3590
Felix Lam (China, HK, Taiwan)	(852) 2823 3575
Rakesh Arora (India)	(9122) 6653 3054
Adam Worthington (Indonesia)	(6221) 515 7338
Samuel Thawley (Japan)	(813) 3512 7876
Christina Lee (Korea)	(822) 3705 8670

Oil and Gas

Scott Weaver (China, Taiwan)	(8862) 2734 7512
Jal Irani (India)	(9122) 6653 3040
Haksoo Ha (Korea)	(822) 3705 8645
Mark Barclay (Korea)	(822) 3705 8658
Edward Ong (Malaysia)	(603) 2059 8982
Kitti Nathisuwan (Thailand)	(662) 694 7724

Pharmaceuticals

Shubham Majumder (India)	(9122) 6653 3049

Property

Matt Nacard (Asia)	(852) 2823 4731
Eva Lee (Hong Kong)	(852) 2823 3573
Takashi Sakai (Japan)	(813) 3512 7884
Francis Eng (Malaysia)	(603) 2059 8986
Gilbert Lopez (Philippines)	(632) 857 0898
Tuck Yin Soong (Singapore)	(65) 6231 2838
Monchai Jaturanpinyo (Thailand)	(662) 694 7727

Technology

Suveer Chainani (India)	(9122) 6653 3045
Damian Thong (Japan)	(813) 3512 7877
David Gibson (Japan)	(813) 3512 7880
George Chang (Japan)	(813) 3512 7854
Yoshihiro Shimada (Japan)	(813) 3512 7862
Do Hoon Lee (Korea)	(822) 3705 8641
Michael Bang (Korea)	(822) 3705 8659
Patrick Yau (Singapore)	(65) 6231 2835
Cheryl Hsu (Taiwan)	(8862) 2734 7522
Daniel Chang (Taiwan)	(8862) 2734 7516
Dominic Grant (Taiwan)	(8862) 2734 7528
Jessica Chang (Taiwan)	(8862) 2734 7518
Nicholas Teo (Taiwan)	(8862) 2734 7523
Warren Lau (Taiwan)	(852) 2823 3592

Telecoms

Tim Smart (Asia)	(852) 2823 3565
Jake Lynch (China, Hong Kong)	(852) 2823 3583
Shubham Majumder (India)	(9122) 6653 3049
Richard Moe (Indonesia)	(662) 694 7753
Nathan Ramler (Japan)	(813) 3512 7875
Joel Kim (Korea)	(822) 3705 8677
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Ramakrishna Maruvada (Singapore)	(65) 6231 2842
Dominic Grant (Taiwan)	(8862) 2734 7528
Richard Moe (Thailand)	(662) 694 7753

Transport & Logistics

Anderson Chow (China, Hong Kong)	(852) 2823 4773
Michael Chan (China)	(852) 2823 3595
Eunsook Kwak (Korea)	(822) 3705 8644

Utilities

Sylvia Chan (Asia)	(852) 2823 3579
Adam Worthington (Indonesia)	(6221) 515 7338
Prem Jearajasingam (Malaysia)	(603) 2059 8989

Commodities

Jim Lennon	(4420) 7065 2014
Adam Rowley	(4420) 7065 2013
Bonnie Liu	(4420) 7065 2014
Henry Liu	(4420) 7065 2014

Data Services

Liz Dinh (Asia)	(852) 2823 4762
Brent Borger (Japan)	(813) 3512 7852

Economics

Roland Randall (Asean)	(852) 2823 3572
Bill Belchere (Asia)	(852) 2823 4636
Richard Gibbs (Australia)	(612) 8232 3935
Paul Cavey (China)	(852) 2823 3570
Daniel McCormack (Int'l)	(612) 8232 2999
Richard Jerram (Japan)	(813) 3512 7855

Quantitative

Martin Emery (Asia)	(852) 2823 3582
Viking Kwok (Asia)	(852) 2823 4735
George Platt (Australia)	(612) 8232 6539

Strategy/Country

Tim Rocks (Asia)	(852) 2823 3585
Desh Peramunetilleke (Asia)	(852) 2823 3564
Jake Lynch (China)	(852) 2823 3583
Jal Irani (India)	(9122) 6653 3040
Peter Eadon-Clarke (Japan)	(813) 3512 7850
Eugene Ha (Korea)	(822) 3705 8643
Uday Jayaram (Malaysia)	(603) 2059 8988
Gilbert Lopez (Philippines)	(632) 857 0898
Tuck Yin Soong (Singapore)	(65) 6231 2838
Chris Hunt (Taiwan)	(8862) 2734 7526
Kitti Nathisuwan (Thailand)	(662) 694 7724

Find our research at

Macquarie:	www.macquarie.com.au/research
Thomson:	www.thomson.com/financial
Reuters:	www.rbr.reuters.com
Bloomberg:	MAC GO

Contact Gareth Warfield for access (612) 8232 3207

Sales

Regional Heads of Sales

Greg Gordon (Asia)	(852) 2823 3509
Ulrike Pollak-Tsutsumi (Frankfurt)	(49) 69 7593 8747
Daniel Fust (Geneva)	(41) 22 818 7710
Thomas Renz (Geneva)	(41) 22 818 7712
Ajay Bhatia (India)	(9122) 6653 3200
Stuart Smythe (India)	(9122) 6653 3200
Eugene Ha (Korea)	(822) 3705 8643
K.Y. Nam (Korea)	(822) 3705 8607
Derek Wilson (London)(N Asia)	(44) 20 7065 5856
Julien Roux (London)	(44) 20 7065 5887
Lena Yong (Malaysia)	(603) 2059 8888
Ismael Pili (Manila)	(65) 6231 2840

Regional Heads of Sales cont'd

Luke Sullivan (New York)	(1 212) 231 2507
Mark Lawrence (New York)	(1 212) 231 2516
Sheila Schroeder (San Francisco)	(1 415) 835 1235
Giles Heyring (Singapore)	(65) 6231 2888
Mark Duncan (Taiwan)	(8862) 2734 7510
Angus Kent (Thailand)	(662) 694 7601
Dominic Henderson (Tokyo)	(813) 3512 7820
Nick Cant (Tokyo)	(813) 3512 7821
Charles Nelson (UK/Europe)	(44) 20 7065 2032
Rob Fabbro (UK/Europe)	(44) 20 7065 2031

Sales Trading

Anthony Wilson (Asia)	(852) 2823 3511
Mona Lee (Hong Kong)	(852) 2823 3519

Sales Trading cont'd

Stuart Goddard (Europe)	(44) 20 7065 2033
Vijay Gussain (India)	(9122) 6653 3205
Howard Yoon (Korea)	(822) 3705 8601
Robert Risman (New York)	(1 212) 231 2555
Isaac Huang (Taiwan)	(8862) 2734 7582
Kenichi Ohtaka (Tokyo)	(813) 3512 7830

Alternative Strategies

Convertibles - Roland Sharman	(852) 2823 4628
Depository Receipts - Robert Ansell	(852) 2823 4688
Derivatives - Vipul Shah	(852) 2823 3523
Futures - Tim Smith	(852) 2823 4637
Hedge Fund Sales - Darin Lester	(852) 2823 4736
Structured Products - Andrew Terlich	(852) 2249 3225