

INDIA

Indian IT 2.0

25 June 2007



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Stocks covered in this report

Infosys Technologies - INFO IN, Market Cap: US\$27.4b, Outperform, TP: Rs2437, 30-day average turnover: US\$93.5m)

Tata Consultancy Services - TCS IN, Market Cap: US\$27.5b, Outperform, TP: Rs1399, 30-day average turnover: US\$42.9M)

Wipro Ltd - WPRO IN, Market Cap: US\$18.7b, Neutral, TP: Rs492, 30-day average turnover: US\$18.6m)

Satyam Computer Services - SCS IN, Market Cap: US\$7.7b, Outperform, TP: Rs542, 30-day average turnover: US\$45.6m)

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Surviving the storm

We took a close look at various margin levers that affect the profitability and growth of Indian IT companies and conclude that, although the long-term story remains attractive, there might be further weakness in the short term. For FY08, we project substantial margin erosion for the stocks in our coverage universe, primarily due to a stronger rupee paradigm (Macquarie forecast for FY08 is 40.3 INR/USD). We remain positive on Infosys, TCS and Satyam, but are downgrading Wipro to Neutral. Going forward, we expect a ramp-up in products business and inorganic growth to push these companies back into the limelight.

Despite margin squeeze, the story remains strong

Using our proprietary margin analysis framework, we project margin erosion in FY08 of 210bp for Infosys, 261bp for TCS, 388bp for Wipro and 261bp for Satyam. Contributing factors are the following.

- **Stronger rupee (-ve):** Taking into account Macquarie's rupee forecast of 40.3 for FY08 and the natural and artificial hedge of various companies, the applicable rupee appreciation for FY08 ranges from 6% to 9.3%. This should affect FY08 margins by 248bp for Satyam, 335bp for Infosys, 351bp for TCS and 467bp for Wipro. We believe that this effect is a one-time event.
- **Wage inflation (-ve):** Wage hikes of 15% offshore and 4% onsite could erode margins by 377–466bp in FY08, which is ongoing in nature. The difference reflects a different base effect.
- **Pricing/business mix power (+ve):** Indian companies need to swiftly move up the value chain and attract higher pricing to offset the 'sorrow' factors. For Infosys, a 3% price increase could improve margins by 147bp in FY08. We believe that this factor is sustainable and will be more prominent over time.
- **Other 'joy' factors (+ve):** The combined effect of other 'joy' factors such as efficiency/productivity gains, shifting work to offshore, better utilization and SG&A leverage could result in margin improvement of 289–410bp.

Call to action – depends on who you are

Long term: We reaffirm our long-term accumulate recommendation for Infosys and TCS based on their ability to adjust to the new paradigm and to deliver strong earnings for the long term. We view Satyam as a candidate for crossing the tier-1 valuation chasm. We downgrade Wipro to Neutral because we believe that it has limited capabilities to survive the storm.

Short term: With the rupee showing strength in the near term, we see some unwarranted fear building up in the investor community. In addition, most companies are reducing their FY08 guidance after 1Q results. It might be a good strategy to book profits in the short term and to re-enter on any weakness.

Risks – can swing either way

Apart from surprise about the rupee moving above or below our forecast, there is an upside risk if these companies make opportunistic overseas acquisitions. On the other hand, there is a downside risk if any MNC IT firms make a large acquisition in India, stiffening the competitive landscape.

Please refer to the important disclosures on inside back cover of this document, or on our website www.macquarie.com.au/research/disclosures.

Surviving the storm

Although the long-term story remains attractive, there might be further weakness in the short term

We took a close look at various margin levers that affect the profitability and growth of Indian IT companies and conclude that, although the long-term story remains attractive, there might be further weakness in the short term. For FY08, we project substantial margin erosion for the stocks in our coverage universe, primarily due to a stronger rupee paradigm (Macquarie forecast for FY08 is 40.3 INR/USD). We remain positive on Infosys, TCS and Satyam, but are downgrading Wipro to Neutral. Going forward, we expect a ramp-up in products business and inorganic growth to push these companies back into the limelight.

Despite margin squeeze, the story remains strong

Using our proprietary margin analysis framework, we have quantified the following drivers.

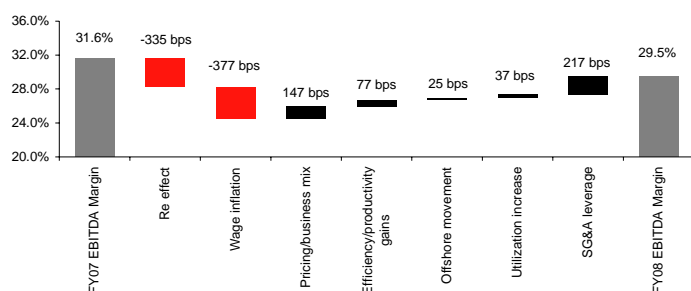
- **Stronger rupee (-ve):** Taking into account Macquarie’s rupee forecast of 40.3 for FY08 and the natural and artificial hedge, the applicable rupee appreciation for FY08 ranges from 6% to 9.3% for different companies. This could affect FY08 margins by 248bp for Satyam, 335bp for Infosys, 351bp for TCS and 467bp for Wipro. We believe that the effect is a one-time event.
- **Wage inflation (-ve):** A 15% increase in offshore wages and a 4% increase in onsite wages could erode margins by 377bp for Infosys, by 399bp for TCS, by 443bp for Wipro and by 466bp for Satyam. The difference in the effect is due to the different base effects. This could be ongoing in nature.
- **Pricing/business mix improvement (+ve):** Indian companies clearly need to swiftly move up the value chain and attract higher pricing to offset the ‘sorrow’ factors. For FY08, we project that Infosys will have an across-the-board price improvement of 3%, resulting in margin improvement of 147bp. For TCS, Wipro and Satyam, we estimate that the corresponding price improvement will be 2.5%, 2% and 3%, respectively, resulting in margin improvement of 122bp, 111bp and 163bp, respectively.
- **Other ‘joy’ factors (+ve):** We estimate that the combined effect of other ‘joy’ factors such as efficiency/productivity gains (arising from a build-out of the software products business and fixed price contracts), shifting work to offshore, better utilization and SG&A leverage could be margin improvement of 356bp for Infosys, 367bp for TCS, 410bp for Wipro and 289bp for Satyam.

We expect substantial margin erosion in FY08 and a drop in INR-based revenue growth rates

The combined effect of the above factors is that there is likely to be substantial margin erosion in FY08 and a drop in INR-based revenue growth rates. However, this drop may be a one-time event given the steep one-time rupee appreciation expected in FY08.

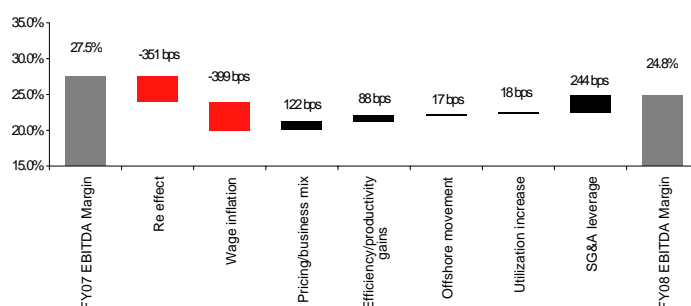
- For Infosys, margin erosion will be 210bp and INR-based revenue growth will be 28%.
- For TCS, margin erosion will be 261bp and INR-based revenue growth will be 24%.
- For Wipro, margin erosion will be 388bp and INR-based revenue growth will be 20%.
- For Satyam, margin erosion will be 261bp and INR-based revenue growth will be 31%.

Fig 1 Infosys EBITDA margin erosion in FY08: 210bp



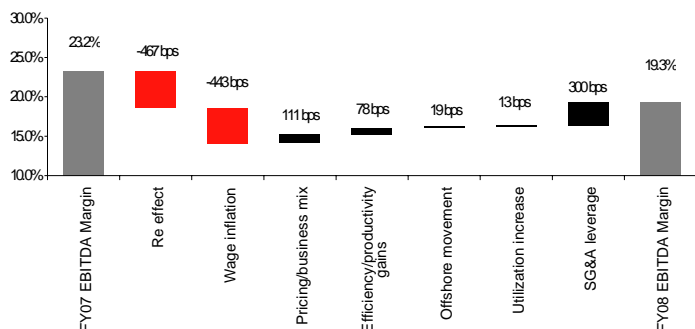
Source: Macquarie Research, June 2007

Fig 2 TCS EBITDA margin erosion in FY08: 261bp



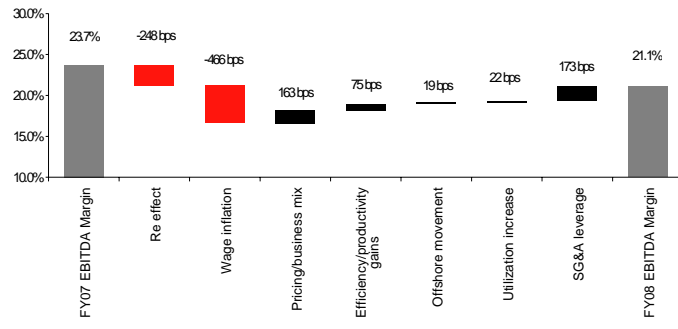
Source: Macquarie Research, June 2007

Fig 3 Wipro EBITDA margin erosion in FY08: 388bp



Source: Macquarie Research, June 2007

Fig 4 Satyam EBITDA margin erosion in FY08: 261bp



Source: Macquarie Research, June 2007

Call to action – depends on who you are

We reaffirm our long-term accumulate on Infosys & TCS, but there could be short-term trading opportunities

Long term: We reaffirm our long-term accumulate recommendation for Infosys and TCS based on their ability to adjust to the new paradigm and to deliver strong earnings for the long term. We view Satyam as a candidate for crossing the tier-1 valuation chasm. We downgrade Wipro to Neutral because we believe that it has limited capabilities to survive the storm.

Short term: With the rupee showing strength in the near term, we see some unwarranted fear building up in the investor community. In addition, most companies are reducing their FY08 guidance after 1Q results. It might be a good strategy to book profits in the short term and to re-enter on any weakness.

Risks – can swing either way

Indian IT firms have huge cash piles...to make small opportunistic acquisitions overseas.

Apart from surprise about the rupee moving above or below our forecast, there is an upside risk if these companies make opportunistic overseas acquisitions. Indian IT firms have huge cash piles – US\$1.4bn for Infosys, US\$1.2bn for Wipro, US\$1bn for Satyam and US\$0.6bn for TCS. Such acquisitions could help the Indian players in market coverage (penetration in Eastern Europe and Japan) and/or to climb up the value chain (software products and consulting). On the other hand, there is a downside risk if any MNC IT firms make a large acquisition in India, thus stiffening the competitive landscape.

Valuations and recommendation change

For the long term, we maintain Outperform recommendations on Infosys, TCS and Satyam. We are downgrading Wipro from Outperform to Neutral.

Fig 5 Earnings revisions and recommendation change

	Old		New					
	FY08E EPS	FY09E EPS	Price Target	Recommendation	FY08E EPS	FY09E EPS	Price Target	Recommendation
Infosys	83.7	113.4	2671	Outperform	77.2	104.1	2437	Outperform
TCS	54.7	73.1	1654	Outperform	47.8	62.9	1399	Outperform
Wipro	25.2	31.1	673	Outperform	19.8	23.4	492	Neutral
Satyam	25.8	31.7	597	Outperform	24.0	29.1	542	Outperform

Source: Macquarie Research, June 2007

Fig 6 Valuation snapshot

	Bbg. code	Stock rec.	Market cap (m US\$)	Current Price (Loc Ccy)	Target Price (Loc Ccy)	Upside	FY3/07A EPS	FY3/08E EPS	FY3/09E EPS	Target		
										FY3/09E PER (x)	FY3/09E PER (x)	FY3/07 ROE (%)
Infosys	INFO IN	OP	27,502	1957	2437	25%	69.3	77.2	104.1	18.8	23.4	42.3%
TCS	TCS IN	OP	27,444	1145	1399	22%	42.2	47.8	62.9	18.2	22.2	55.8%
Wipro	WPRO IN	N	18,728	524	492	-6%	20.4	19.8	23.4	22.4	21.1	32.3%
Satyam	SCS IN	OP	7,642	467	542	16%	21.5	24.0	29.1	16.0	20.5	27.9%

Source: Macquarie Research, June 2007

Despite margin squeeze...

We have used our proprietary margin analysis framework to quantify the margin effect of 'sorrow' and 'joy' factors

We have used our proprietary margin analysis framework to quantify the margin effect of 'sorrow' factors such as a stronger rupee and wage inflation as well as 'joy' factors such as pricing/business mix improvement, offshore shift, better utilization and SG&A leverage. We also give our opinion about which of these factors we think are sustainable and which may be one-time events.

We conclude that, despite the forecast margin squeeze for FY08, the long-term growth story remains strong. With a combined market share of less than 3% and a large market size of close to US\$1tr, Indian IT firms have prospects for long-term growth visibility, high ROE and world-class corporate governance standards.

Margin erosion due to a stronger rupee

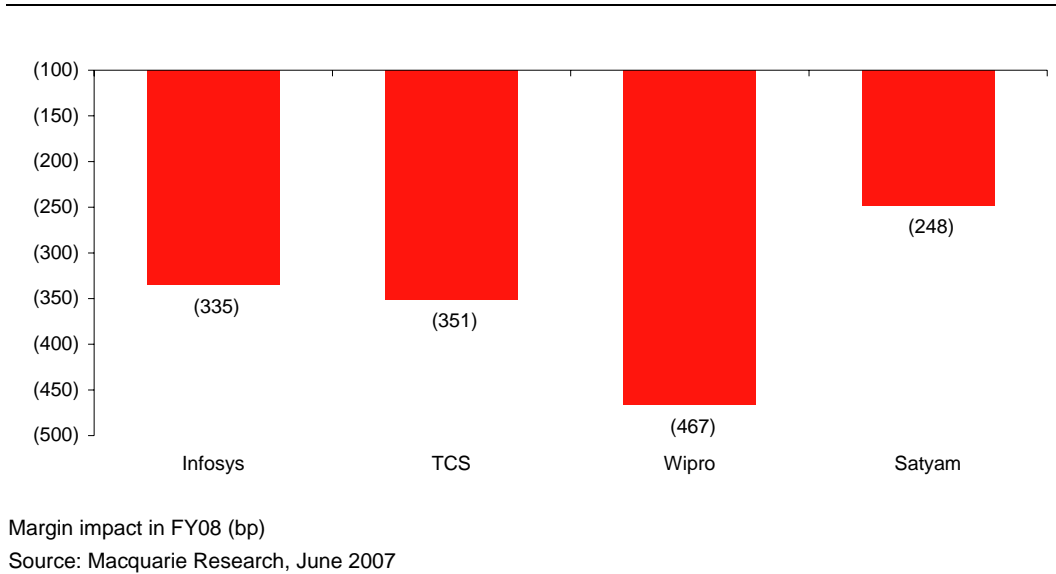
We arrive at the net effect of the stronger rupee by integrating the average realized rate for FY08 into our proprietary margin analysis framework. Satyam is likely to be the least affected because of its strong artificial and natural hedge (margin erosion of 248bp for FY08). On the other hand, Wipro could be the most affected due to relatively inferior artificial and natural hedge (margin erosion of 467bp). FY08, margin erosion for Infosys and TCS is estimated at 335bp and 351bp, respectively.

The effect of a stronger rupee will be largely absorbed in FY08

Given that post FY09, the rupee is likely to depreciate to some extent; the effect of a strong rupee will be largely absorbed in FY08, making this largely a one-time effect.

For details on the Macquarie forecast, natural/artificial hedge and calculations for the average realized forex rate for FY08, please see 'Elusive rupee' on page 16.

Fig 7 Rupee effect differs due to different hedge quantum and natural hedge



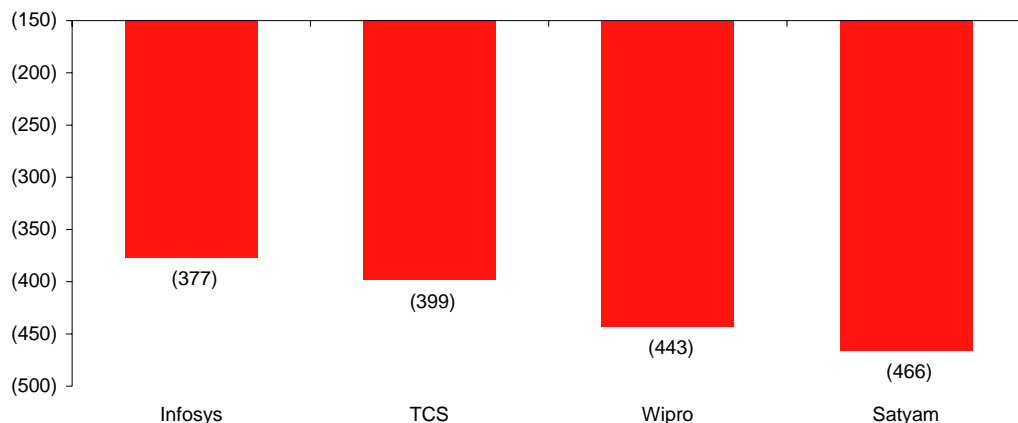
Margin erosion due to wage inflation

We have forecast a 15% across-the-board wage increase in offshore salaries and a 4% increase in onsite salaries, but the margin effect differs because of different base effects. Satyam should be the most affected because its employee costs as a percentage of revenues is the highest. Infosys, on the other hand, is the least affected by wage inflation.

We believe that wage inflation is here to stay and that it will produce similar movement each year in the medium term.

We believe that wage inflation is here to stay

Fig 8 15% offshore wage inflation, 4% onsite wage inflation



Margin impact in FY08 (bps)
Source: Macquarie Research, June 2007

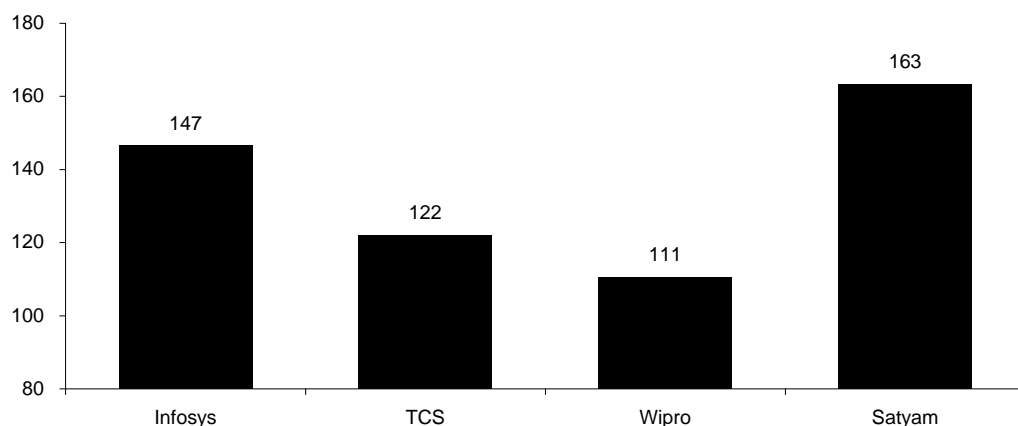
Margin gains due to pricing/business mix improvement

One source of this margin improvement leverage is the ability of a company to climb up the value chain to charge more dollars per unit of work, to improve its business mix and to pass on part of the negative effect of a stronger rupee based on client relationships. For FY08, we forecast price increases of 3%, 2.5%, 2% and 3% for Infosys, TCS, Wipro and Satyam, respectively, which should result in the previously noted margin improvement. We believe that Satyam will be able to improve its pricing because its current levels are fairly low.

We believe that the effect of this leverage is sustainable for the long term as Indian players build out their higher value-added services such as consulting.

We believe that the effect of pricing leverage is sustainable for the long term

Fig 9 For Infosys, price increase of 3% leads to margin improvement of 147bp



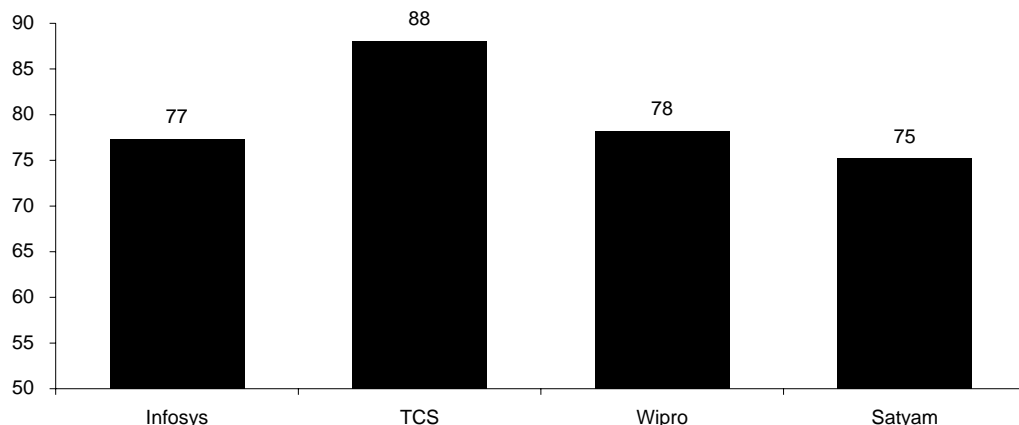
Margin impact in FY08 (bps)
Source: Macquarie Research, June 2007

The source of this margin leverage is a ramp-up in the software products business, higher proportion of fixed-price contracts

Margin gains due to efficiency/productivity gains

Also contributing to margin leverage is a ramp-up in the software products business (applicable to Infosys and TCS), a higher proportion of fixed-price contracts and an improvement in internal efficiency (building solution blueprints and common framework), all of which are sustainable over time, in our view. It also includes non-sustainable drivers such as increasing the base of the employee pyramid (using more less-experienced people).

Fig 10 Margin gains from ramping up software products and fixed-priced contracts



Margin impact in FY08 (bps)
Source: Macquarie Research, June 2007

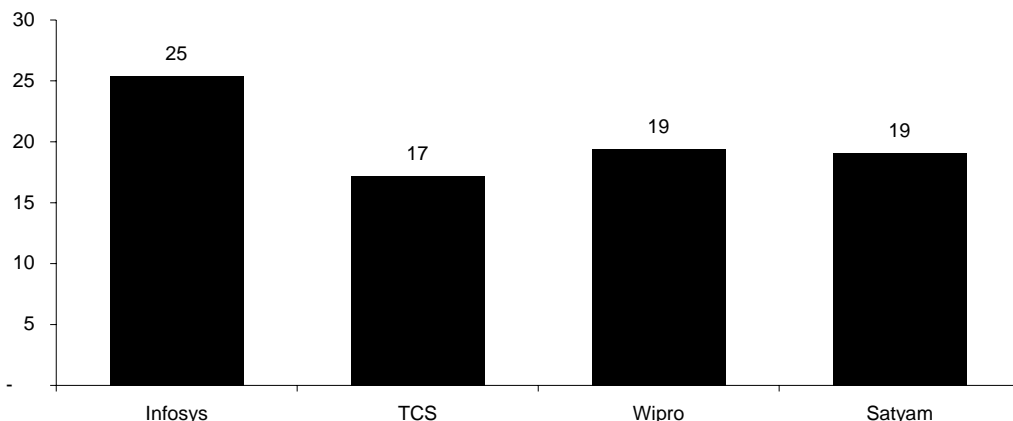
We believe that the benefits of this leverage could fade in the near term

Margin gains due to offshore shift

Another source of this leverage is the shift of work from onsite locations to offshore locations. We believe that the benefits of this could fade in the near term as companies reach the optimal levels of offshoring (around 75%) and as labour arbitrage fades away.

In fact, some companies are considering ramping up onsite services because that gives better account control, increases billing and is as profitable (because offshore wages are increasing at a faster pace coupled with a stronger rupee).

Fig 11 Gains from shifting work to offshore/low-cost locations



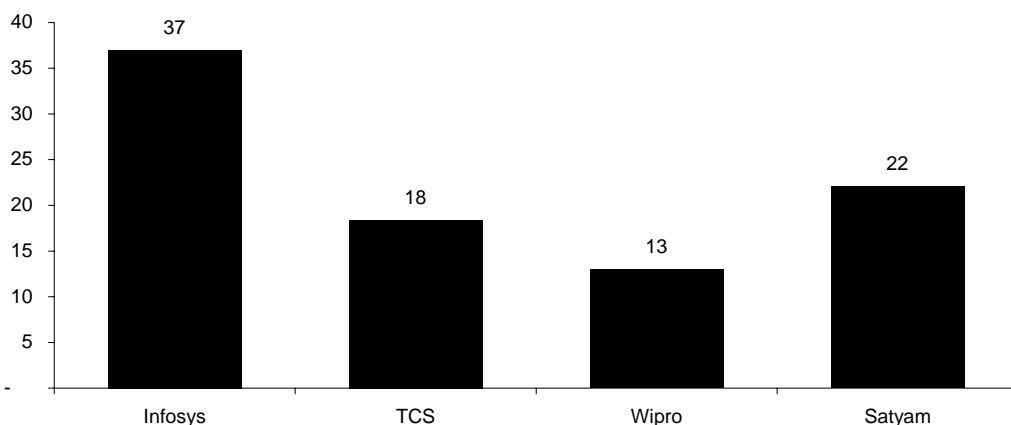
Margin impact in FY08 (bps)
Source: Macquarie Research, June 2007

The benefits of this leverage could also fade in the near term

Margin gains due to better utilization

This leverage occurs as companies improve their employee utilization levels. The benefits of this could fade in the near term as companies reach the optimal levels of utilization, which is around 80%.

Fig 12 Gains from utilization would eventually peak as levels reach 80%



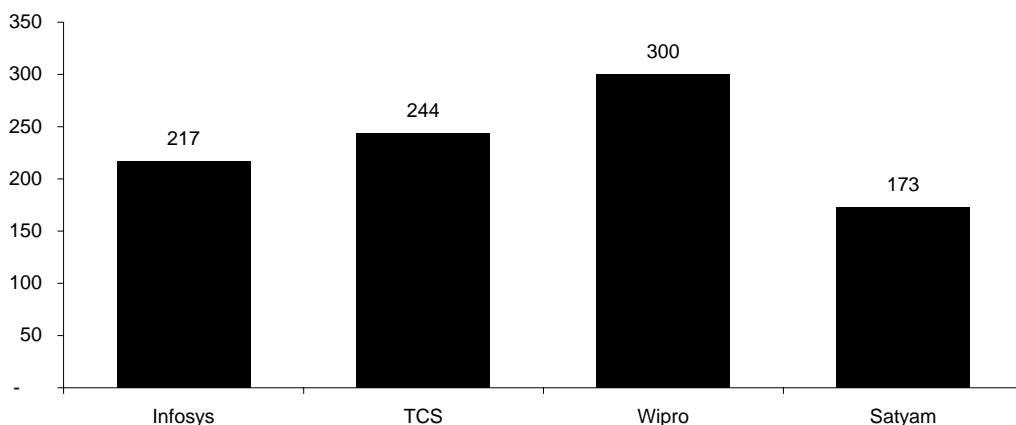
Margin impact in FY08
Source: Macquarie Research, June 2007

This benefit should continue to accrue as the average deal size increases

Margin gains due to SG&A leverage

Scale benefits also contribute to leverage as the average contract size increases and as companies consolidate G&A expenses. This benefit should continue to accrue for the next 3–5 years as the average deal size increases.

Fig 13 Gains from increase in average deal size and G&A consolidation



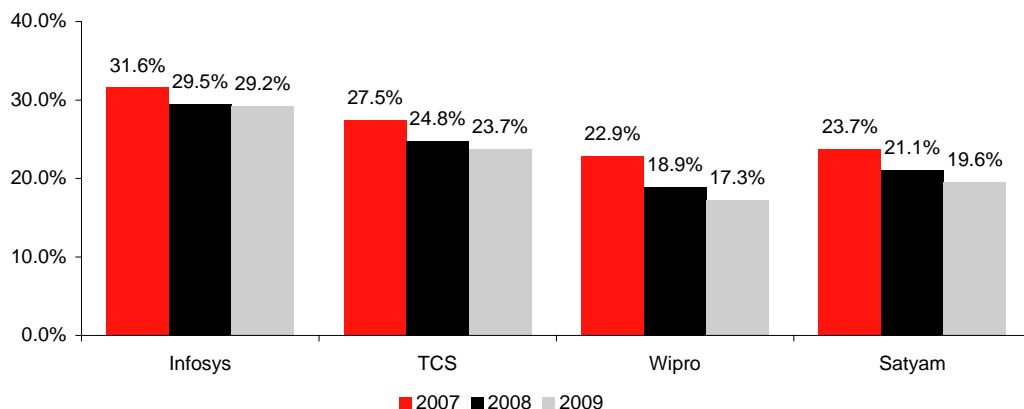
Margin impact in FY08
Source: Macquarie Research, June 2007

The drop in margins could occur more in FY08 largely due to a one-time rupee appreciation

Aggregate EBITDA margin movement

The combined effect of all the 'joy' and 'sorrow' factors is shown in Figure 14. Clearly, the drop in margins is most severe in FY08, largely due to a one-time steep rupee appreciation.

Fig 14 Margins drop highest in FY08



Source: Macquarie Research, June 2007

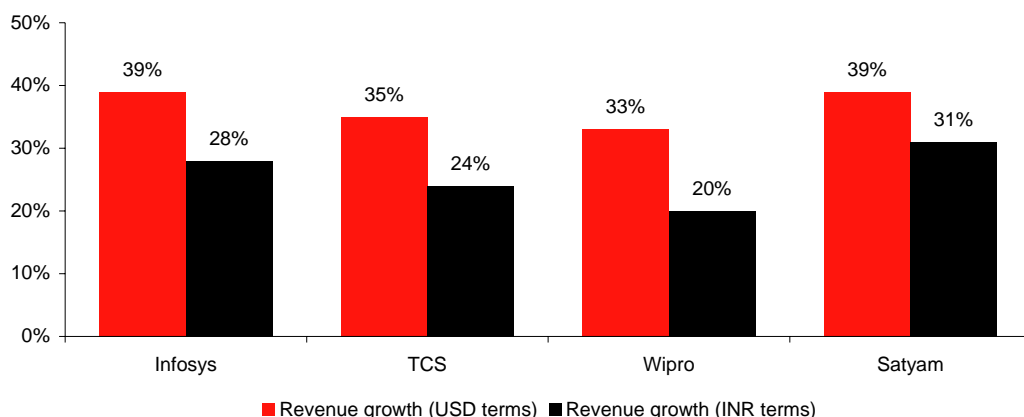
For detailed margin windfall analysis, please see the accompanying notes on individual companies.

Revenue growth

Because of the rupee appreciation, growth gets muted in INR terms. But again, we see this more as a one-time effect

Companies should continue to experience a robust demand environment going into FY08 and after. Because of the rupee appreciation, however, growth may become muted in INR terms. Again, however, we view this more as a one-time effect.

Fig 15 Strong USD-based growth, muted INR-based growth...one-time effect



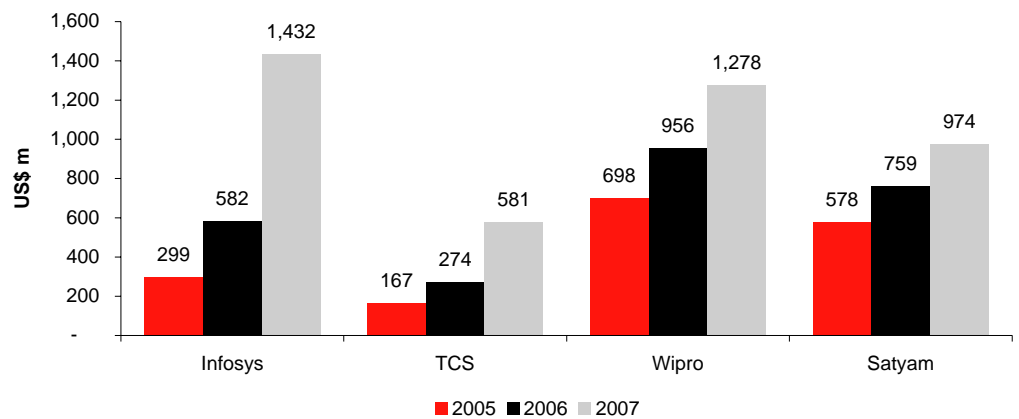
Source: Macquarie Research, June 2007

Growing cash on the books of these companies, providing a huge war chest for acquisitions

Inorganic potential – giving strategic direction

Figure 16 shows the growing cash and cash equivalents on the books of these companies that are providing a huge war chest for acquisitions. Clearly, keeping them on the books is not the most efficient use of the capital. All companies in our coverage would gain by flexing their inorganic growth muscle by making small opportunistic acquisitions to compete more effectively with MNCs. These acquisitions could help the Indian players in market coverage (penetration in Eastern Europe and Japan) and/or to climb up the value chain (software products and consulting). In the past, TCS and Wipro have been fairly active in acquiring companies. Infosys may shed its risk aversion and show some traction in acquisitions.

Fig 16 Building war chest for inorganic growth



Cash and cash equivalents on the balance sheet, calculated at INR/USD rate of 41

Source: Macquarie Research, June 2007

Valuations & recommendations

We have made significant changes in valuations in the wake of our revisions in revenue and margin numbers, based on the incorporation of new exchange realities.

Infosys – Target price lowered to Rs2437, Outperform

We have adjusted our revenue and margin forecasts based on the realized exchange rate for FY3/08 and on US\$/INR exchange-rate forecasts provided by our regional economist. This has resulted in our DCF-based target price being reduced from Rs2671 to Rs2437. We maintain our Outperform rating on the stock.

TCS – Target price lowered to Rs1399, Outperform

We have valued TCS at 23.43x, a 5% discount to Infosys's FY3/09E PER. A cut in our EPS estimates has led to a downward revision in our price target from Rs1654 to Rs1399. We continue to have an Outperform rating on the stock.

Wipro – Target price lowered to Rs492, Neutral

We have valued Wipro at 21.09x, a 10% discount to Infosys's FY3/09E PER. A sharp reduction in our EPS estimates due to a weak hedging position, limited pricing power and the lack of software-product offerings has led to a downward revision in our price target from Rs673 to Rs492. We have downgraded the stock from Outperform to Neutral.

Satyam – Target price lowered to Rs542, Outperform

We have valued Satyam at 18.74x, a 20% discount to Infosys's FY3/09E PER. This has resulted in a downward revision in our price target from Rs673 to Rs492. We maintain our Outperform rating on the stock.

Ways to play the IT sector

Long term: We reaffirm our long-term accumulate recommendation on Infosys and TCS based on their ability to adjust to the new paradigm and to deliver strong earnings in the medium term, despite the odds. We regard Satyam as a candidate for crossing the tier-1 valuation chasm. We turn tables on Wipro because we believe that it has limited capabilities to survive the storm.

Short term: With the rupee showing strength in the near term, we see some unwarranted fear building up in the investor community. In addition, most companies are reducing their FY08 guidance in the wake of 1Q results. It might be a good strategy to book profits in the short term and to re-enter on any weakness.

Fig 17 Earnings revisions and recommendation change

	FY08E EPS		FY09E EPS		Old	Recommendation	FY08E EPS		FY09E EPS		New	Recommendation
					Price Target						Price Target	
Infosys	83.7	113.4			2671	Outperform	77.2	104.1			2437	Outperform
TCS	54.7	73.1			1654	Outperform	47.8	62.9			1399	Outperform
Wipro	25.2	31.1			673	Outperform	19.8	23.4			492	Neutral
Satyam	25.8	31.7			597	Outperform	24.0	29.1			542	Outperform

Source: Macquarie Research, June 2007

Fig 18 Valuation snapshot

	Bbg. code	Stock rec.	Market cap (m US\$)	Current price	Target price	Upside	FY3/07A	FY3/08E	FY3/09E	FY3/09E	Target
							EPS	EPS	EPS	PER (x)	PER (x)
TCS	TCS IN	OP	27,499	1146	1399	22%	42.2	47.8	62.9	18.2	22.3
Infosys	INFO IN	OP	27,375	1954	2437	25%	69.3	77.2	104.1	18.8	23.4
Wipro	WPRO IN	N	18,669	522	492	-6%	20.4	19.8	23.4	22.4	21.4
Satyam	SCS IN	OP	7,724	472	542	15%	21.5	24.0	29.1	16.0	20.5

Source: Macquarie Research, June 2007

Risks – swing both ways

The figure below captures the source, effect and likelihood of key risk areas.

Fig 19 Upside and downside risks

Risk source	Business effect	EPS effect	Likelihood
The Indian rupee bounces back to 42-43 levels by FY08 end	The margins and rupee growth will be better than expected.	Strong Positive	30%
An Indian player wins a couple of large deals in the US\$200–500m range	Revenue growth will be stronger coupled with long-term visibility.	Positive	70%
An Indian player makes a couple of small, opportunistic acquisitions in continental Europe/Japan and/or in high-end IT consulting or products business.	Time to market underpenetrated geographic regions will be reduced, implying stronger revenue growth and/or margin expansion, due to rise in the value chain.	Positive	50%
The Indian rupee appreciates to 38 level in the next 2–3 years.	Margins will further squeeze and rupee growth will be retarded.	Strong negative	30%
MNCs such as IBM, Accenture, EDS make a large acquisition (like Patni or Satyam)	Competitive environment will get tougher, slowing down US\$ terms growth.	Negative	50%

Source: Macquarie Research, June 2007

INDIA

Infosys Technologies

25 June 2007

INFO IN Outperform

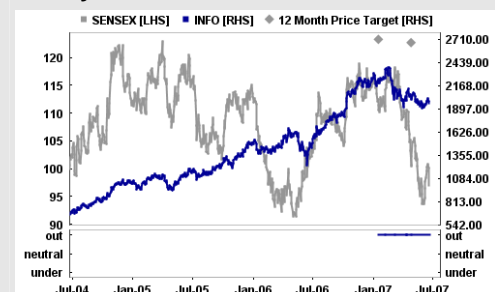
Stock price as of 21 Jun 07	Rs	1,956.50
12-month target	Rs	2,437.00
Upside/downside	%	+24.6
Valuation	Rs	2,437.00
- DCF		

GICS sector		software & services
30-day avg turnover	US\$m	93.5
Market cap	US\$m	27,550
Number shares on issue	m	571.2

Investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	138.9	178.2	245.4	350.8
EBITDA	bn	43.9	52.6	71.7	104.6
EBITDA growth	%	35.9	19.8	36.4	45.9
Reported profit	bn	38.6	44.7	60.7	76.1
EPS rep	Rs	69.25	77.16	104.06	130.44
EPS rep growth	%	53.7	11.4	34.9	25.3
PE rep	x	28.3	25.4	18.8	15.0
ROE	%	42.3	35.3	36.5	33.9
EV/EBITDA	x	25.1	21.6	15.9	10.9
Net debt/equity	%	-52.2	-48.6	-50.3	-44.8

INFO IN rel SENSEX performance, & rec history



Source: Datastream, Macquarie Research, June 2007 (all figures in INR unless noted)

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Strong pricing power

Event

- Using our proprietary margin analysis framework, we conclude that for FY08 there will be an EBITDA margin erosion of 210 bps for Infosys.
- However, we believe Infosys can adjust to the new paradigm thanks to its pricing power, initiatives in the products business and inorganic growth potential.
- Despite cutting our FY08 EPS forecast by 8.1%, we maintain our Outperform rating on the stock.

Impact

- In our proprietary margin analysis, we quantified the effect of 'sorrow' factors like a stronger rupee regime (Macquarie's forecast for FY08 is Rs40.3/US\$) and wage inflation, and 'joy' factors like pricing power and various productivity gain levers.
- Infosys has US\$1bn of hedging on its books. Based on the natural hedge available to the company and our economics team's exchange rate forecasts, our calculations suggest that the realised Re rate for Infosys in FY3/08 will be Rs41.6/US\$.
- Re appreciation will shave off 335bps from the EBITDA margin in FY3/08. Meanwhile, rising wages will dent this by a further 377bps. We have assumed a 15% rise in offshore wages and 4% increase in onsite wages.
- The above negatives will be partially offset by levers like pricing (147bps), productivity gains (77bps), further offshore movement of work (25bps), an increase in utilisation (37bps) and SG&A leverage (217bps).

Earnings revision

- Because of adverse exchange rate movement, our FY3/08E EPS has been cut from Rs83.7 to Rs76.9, and our FY3/09E EPS been lowered from Rs113.4 to Rs103.9.

Price catalyst

- 12-month price target: Rs2,437.00 based on a DCF methodology.
- Catalyst: Winning a couple of greater than US\$ 100m deals or acquisition around Europe/Japan penetration.

Action and recommendation

- We have cut our earnings forecasts marginally and revised our price target from Rs2,671 to Rs2,437. We maintain our Outperform rating on the stock, with 25% upside from the current level.
- In the short term, there could be some share price weakness as Infosys may cut its guidance for FY3/08 when announcing 1Q FY3/08 results in the second week of July. However, for long-term investors, it remains an attractive pick in our view.

Realised exchange rate

Infosys holds US\$1.0bn of foreign exchange forward and option contracts for hedging purposes. Gains on these contracts result in the realised exchange rate for export revenues being higher than the average spot rate.

To assess the average realised exchange rate, we calculated Infosys's natural hedge (forex outflow as a percentage of forex inflows) - which we found to be 45%. Then we worked out the net forex inflow as a percentage of total revenue averaged over the past three years – which is 50%. We adjusted the current hedging position against what will be consumed by net receivables in FY07. Finally we worked out the weighted average of the company's available hedge for FY08 with the average spot rate for FY08 to arrive at an average realised exchange rate of Rs41.7/US\$ for FY08.

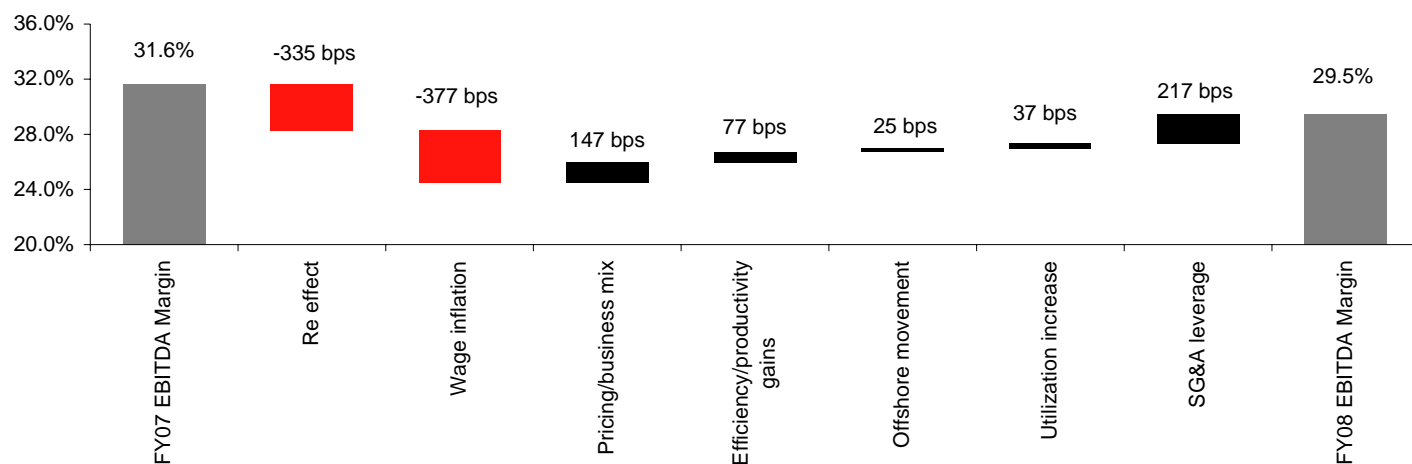
Margin windfall

Our assumptions for calculating the margins are as follows:

- Realised Rs/US\$ rate: Rs41.7 (described above)
- Wage increase: 15% offshore, 4% onsite (for all companies)
- Pricing increase: 3% (Infosys has stronger pricing discipline and power)
- Efficiency/productivity gains: 1.5% (due to software products business)
- Offshore shift: From 73.8% to 74.1% (standard)
- Utilisation increase: From 68.6% to 69.4% (high because of low base)
- SG&A leverage (% of sales): From 14.7% to 14.6% (fairly optimised)

The effect is shown below:

Fig 20 EBITDA margin erosion in FY08: 210bps



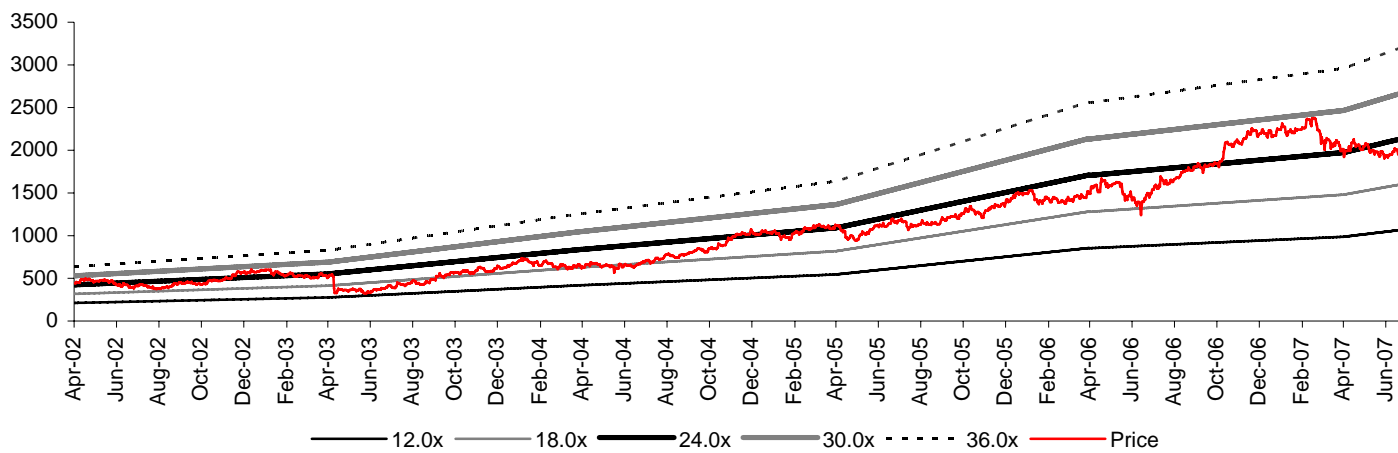
Source: Macquarie Research, June 2007

Fig 21 Valuation snapshot

	Bloomberg code	Stock rec	Market cap (US\$m)	Current price (Lcy)	Target price (Lcy)	Upside (%)	FY3/07A EPS	FY3/08E EPS	FY3/09E EPS	FY3/09E PER (x)	Target FY3/09E PER (x)	FY3/07 RoE (%)
Infosys	INFO IN	OP	27,502	1957	2437	25%	69.3	77.2	104.1	18.8	23.4	42.3%
TCS	TCS IN	OP	27,444	1145	1399	22%	42.2	47.8	62.9	18.2	22.2	55.8%
Wipro	WPRO IN	N	18,728	524	492	-6%	20.4	19.8	23.4	22.4	21.1	32.3%
Satyam	SCS IN	OP	7,642	467	542	16%	21.5	24.0	29.1	16.0	20.5	27.9%

Source: Macquarie Research, June 2007

Fig 22 Infosys – 1yr forward PER chart



Source: Macquarie Research, June 2007

Infosys Technologies (INFO IN, Outperform, Target price: Rs2,437.00)

Quarterly Results					Profit & Loss						
	4Q/07A	1Q/08E	2Q/08E	3Q/08E		2007A	2008E	2009E	2010E		
Revenue	m	37,720	37,266	42,154	47,257	Revenue	m	138,930	178,223	245,394	350,794
Gross Profit	m	17,510	16,438	18,594	20,845	Gross Profit	m	64,350	78,613	106,572	153,029
Cost of Goods Sold	m	20,210	20,829	23,560	26,412	Cost of Goods Sold	m	74,580	99,610	138,822	197,766
EBITDA	m	11,970	11,453	12,753	13,987	EBITDA	m	43,910	52,593	71,727	104,620
Depreciation	m	1,450	1,120	952	2,473	Depreciation	m	5,140	6,625	7,617	15,340
Amortisation of Goodwill	m	0	0	0	0	Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0	Other Amortisation	m	0	0	0	0
EBIT	m	10,520	10,333	11,801	11,514	EBIT	m	38,770	45,968	64,110	89,279
Net Interest Income	m	0	0	0	0	Net Interest Income	m	0	0	0	0
Associates	m	0	0	0	0	Associates	m	0	0	0	0
Exceptionals	m	10	0	0	0	Exceptionals	m	40	0	0	0
Forex Gains / Losses	m	0	0	0	0	Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	1,190	1,190	1,190	1,190	Other Pre-Tax Income	m	3,720	4,760	4,760	4,760
Pre-Tax Profit	m	11,720	11,523	12,991	12,704	Pre-Tax Profit	m	42,530	50,728	68,870	94,039
Tax Expense	m	-270	-1,354	-1,526	-1,493	Tax Expense	m	-3,860	-5,961	-8,092	-17,867
Net Profit	m	11,450	10,169	11,465	11,211	Net Profit	m	38,670	44,768	60,778	76,172
Minority Interests	m	-10	-10	-10	-10	Minority Interests	m	-110	-40	-40	-40
Reported Earnings	m	11,440	10,159	11,455	11,201	Reported Earnings	m	38,560	44,728	60,738	76,132
Adjusted Earnings	m	11,430	10,159	11,455	11,201	Adjusted Earnings	m	38,520	44,728	60,738	76,132
EPS (rep)		20.33	17.53	19.76	19.32	EPS (rep)		69.25	77.16	104.06	130.44
EPS (adj)		20.31	17.53	19.76	19.32	EPS (adj)		69.12	77.16	104.06	130.44
EPS Growth yoy (adj)	%	66.0	21.6	18.0	9.5	EPS Growth (adj)	%	53.5	11.6	34.9	25.3
						PE (rep)	x	28.3	25.4	18.8	15.0
						PE (adj)	x	28.3	25.4	18.8	15.0
EBITDA Margin	%	31.7	30.7	30.3	29.6	Total DPS		0.00	0.00	0.00	0.00
EBIT Margin	%	27.9	27.7	28.0	24.4	Total Div Yield	%	0.0	0.0	0.0	0.0
Earnings Split	%	29.7	22.7	25.6	25.0	Weighted Average Shares	m	557	580	584	584
Revenue Growth	%	39.9	23.6	22.1	29.3	Period End Shares	m	563	580	584	584
EBIT Growth	%	38.2	32.0	19.6	9.1						
Profit and Loss Ratios					Cashflow Analysis						
	2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E		
Revenue Growth	%	43.8	28.3	37.7	43.0	EBITDA	m	43,911	52,593	71,727	104,620
EBITDA Growth	%	35.9	19.8	36.4	45.9	Tax Paid	m	-3,860	-5,961	-8,092	-17,867
EBIT Growth	%	38.8	18.6	39.5	39.3	Chgs in Working Cap	m	-9,680	-6,877	-7,898	-15,572
Gross Profit Margin	%	46.3	44.1	43.4	43.6	Net Interest Paid	m	0	0	0	0
EBITDA Margin	%	31.6	29.5	29.2	29.8	Other	m	3,760	4,760	4,760	4,760
EBIT Margin	%	27.9	25.8	26.1	25.5	Operating Cashflow	m	34,131	44,515	60,497	75,941
Net Profit Margin	%	27.8	25.1	24.8	21.7	Acquisitions	m	0	0	0	0
Payout Ratio	%	0.0	0.0	0.0	0.0	Capex	m	-20,530	-18,379	-22,697	-45,711
EV/EBITDA	x	25.1	21.6	15.9	10.9	Asset Sales	m	7,300	0	0	0
EV/EBIT	x	28.4	24.7	17.8	12.8	Other	m	0	0	0	0
Balance Sheet Ratios					Investing Cashflow	m	-13,230	-18,379	-22,697	-45,711	
ROE	%	42.3	35.3	36.5	33.9	Dividend (Ordinary)	m	-7,510	-7,010	-9,431	-12,065
ROA	%	34.0	30.3	32.4	33.8	Equity Raised	m	12,398	-9,328	0	0
ROIC	%	97.8	75.3	78.0	75.7	Debt Movements	m	0	0	0	0
Net Debt/Equity	%	-52.2	-48.6	-50.3	-44.8	Other	m	-1,197	-40	-0	0
Interest Cover	x	nmf	nmf	nmf	nmf	Financing Cashflow	m	3,691	-16,378	-9,431	-12,065
Price/Book	x	9.8	8.0	5.9	4.5	Net Chg in Cash/Debt	m	24,592	9,758	28,368	18,165
Book Value per Share		200.0	243.2	329.4	439.2						
					Balance Sheet						
		2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E	
Cash	m	58,724	68,436	96,764	114,889	Cash	m	58,724	68,436	96,764	114,889
Receivables	m	24,360	33,289	43,438	63,877	Receivables	m	24,360	33,289	43,438	63,877
Inventories	m	0	0	0	0	Inventories	m	0	0	0	0
Investments	m	250	250	250	250	Investments	m	250	250	250	250
Fixed Assets	m	37,710	49,464	64,545	94,916	Fixed Assets	m	37,710	49,464	64,545	94,916
Intangibles	m	0	0	0	0	Intangibles	m	0	0	0	0
Other Assets	m	13,060	17,510	21,222	28,797	Other Assets	m	13,060	17,510	21,222	28,797
Total Assets	m	134,104	168,949	226,219	302,729	Total Assets	m	134,104	168,949	226,219	302,729
Payables	m	14,690	21,192	27,156	39,598	Payables	m	14,690	21,192	27,156	39,598
Short Term Debt	m	0	0	0	0	Short Term Debt	m	0	0	0	0
Long Term Debt	m	0	0	0	0	Long Term Debt	m	0	0	0	0
Provisions	m	6,810	6,810	6,810	6,810	Provisions	m	6,810	6,810	6,810	6,810
Other Liabilities	m	0	0	0	0	Other Liabilities	m	0	0	0	0
Total Liabilities	m	21,500	28,002	33,966	46,408	Total Liabilities	m	21,500	28,002	33,966	46,408
Shareholders' Funds	m	112,562	140,947	192,253	256,320	Shareholders' Funds	m	112,562	140,947	192,253	256,320
Minority Interests	m	40	0	0	0	Minority Interests	m	40	0	0	0
Other	m	0	0	0	0	Other	m	0	0	0	0
Total S/H Equity	m	112,602	140,947	192,253	256,320	Total S/H Equity	m	112,602	140,947	192,253	256,320
Total Liab & S/H Funds	m	134,102	168,949	226,219	302,728	Total Liab & S/H Funds	m	134,102	168,949	226,219	302,728

All figures in INR unless noted.

Source: Macquarie Research, June 2007

INDIA

Tata Consultancy Services

25 June 2007

TCS IN **Outperform**

Stock price as of 21 Jun 07	Rs	1,144.65
12-month target	Rs	1,399.00
Upside/downside	%	+22.2
Valuation	Rs	1,399.00
- PER		

GICS sector		software & services
30-day avg turnover	US\$m	42.9
Market cap	US\$m	27,614
Number shares on issue	m	978.6

Investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	186.3	230.9	313.9	438.4
EBITDA	bn	51.2	57.5	74.7	104.2
EBITDA growth	%	39.8	12.2	30.0	39.6
Reported profit	bn	41.3	46.8	61.5	79.7
EPS rep	Rs	42.22	47.81	62.86	81.46
EPS rep growth	%	41.3	13.2	31.5	29.6
PE rep	x	27.1	23.9	18.2	14.1
ROE	%	55.8	44.4	43.4	42.2
EV/EBITDA	x	21.9	19.5	15.0	10.7
Net debt/equity	%	-4.3	-14.2	-16.6	-15.5

TCS IN rel SENSEX performance, & rec history



Source: Datastream, Macquarie Research, June 2007 (all figures in INR unless noted)

Analyst

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Diversifying delivery base

Event

- Using our proprietary margin analysis framework, we conclude that for FY08 there will be an EBITDA margin erosion of 261bps for Tata Consultancy Services (TCS).
- However, we believe TCS can adjust to the new paradigm thanks to diversification of its delivery base in near-shore locations like Latin America and Eastern Europe, initiatives in the products business, and inorganic growth potential.
- We maintain our Outperform rating on the stock, but cut our FY08 EPS forecast by 13%.

Impact

- Our proprietary margin analysis quantified the effect of 'sorrow' factors like a stronger rupee regime (Macquarie: FY08E Rs40.3/US\$) and wage inflation, and 'joy' factors like pricing power and various productivity gain levers.
- WTCS started the current financial year with US\$ 1.1bn of currency forwards and options. This, coupled with 42% of natural hedging provided by its foreign exchange expenses and investments, is enough to shield margins until July 2007. Our calculations suggest that the realised foreign exchange rate for TCS will be Rs41.4/US\$ in FY3/08.
- The adverse impact of Re appreciation will result in a lowering of its EBITDA margin by 351bps in FY3/08. An increase in onsite wages (4%) and offshore wages (15%) will have a further negative impact of 399bps.
- The good news is the positive impact of levers like pricing (122bps), productivity gains (88bps), further offshore movement of work (17bps), an increase in utilisation (18bps) and SG&A leverage (244bps).

Earnings revision

- Primarily due to the adverse exchange rate movement, our FY3/08E and FY3/09E EPS have been cut from Rs54.7 and Rs73.1, to Rs47.8 and Rs62.9, respectively.

Price catalyst

- 12-month price target: Rs1,399.00 based on a PER methodology.
- Catalyst: US listing or an acquisition to penetrate Europe/Japan, or some large deal wins (>US\$100m).

Action and recommendation

- We have cut our earnings forecasts and revised our price target from Rs1,654 to Rs1,399. We maintain our Outperform rating on the stock, with 22% upside from the current level.
- In the short term, there could be some weakness as TCS may guide for slow EPS growth for FY3/08. However, for long-term investors, the stock remains attractive in our view.

Realised exchange rate

TCS holds US\$1.1bn of foreign exchange forward and option contracts for hedging purposes. Gains on these contracts result in the realised exchange rate for export revenues being higher than the average spot rate.

To assess the average realised exchange rate, we calculated Infosys's natural hedge (forex outflow as a percentage of forex inflows) - which we found to be 42%. Then we worked out the net forex inflow as a percentage of total revenue averaged over the past three years – which is 44%. We adjusted the current hedging position against what will be consumed by net receivables in FY07. Finally we worked out the weighted average of the company's available hedge for FY08 with the average spot rate for FY08 to arrive at an average realised exchange rate of Rs41.4/US\$ for FY08.

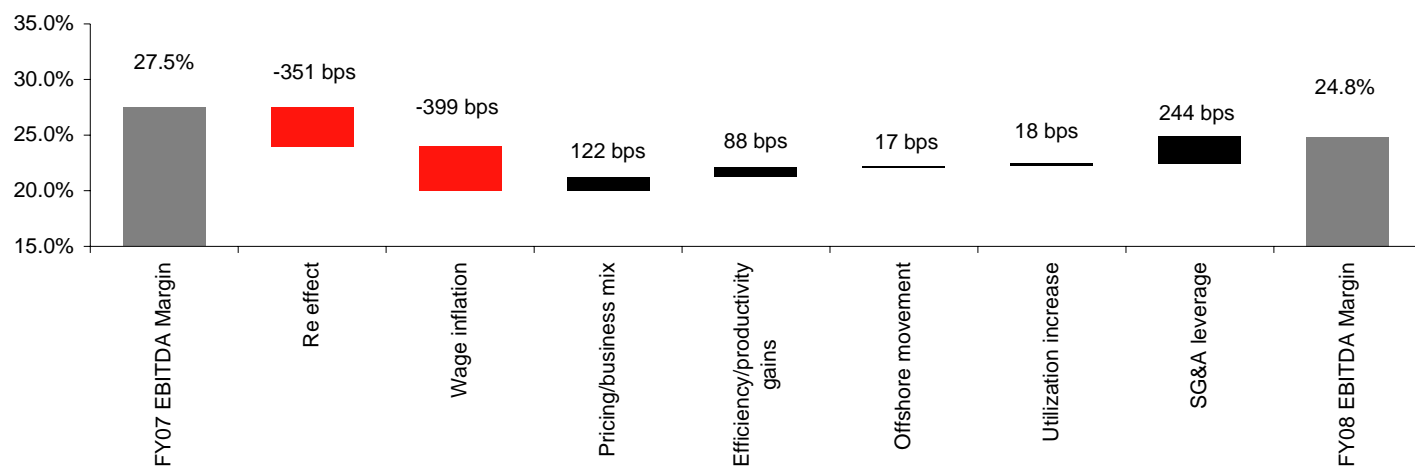
Margin windfall

Our assumptions for calculating the margins are as follows:

- Realised Rs/US\$ rate: Rs41.4 (described above)
- Wage increase: 15% offshore, 4% onsite (for all companies)
- Pricing increase: 2.5% (our perception)
- Efficiency/productivity gains: 1.3% (due to software products business)
- Offshore shift: From 70.0% to 70.3% (standard)
- Utilisation increase: From 76.0% to 76.4% (standard)
- SG&A leverage (% of sales): From 20.0% to 19.2% (high due to high scope)

The effect is shown below:

Fig 23 EBITDA margin erosion in FY08: 261bps



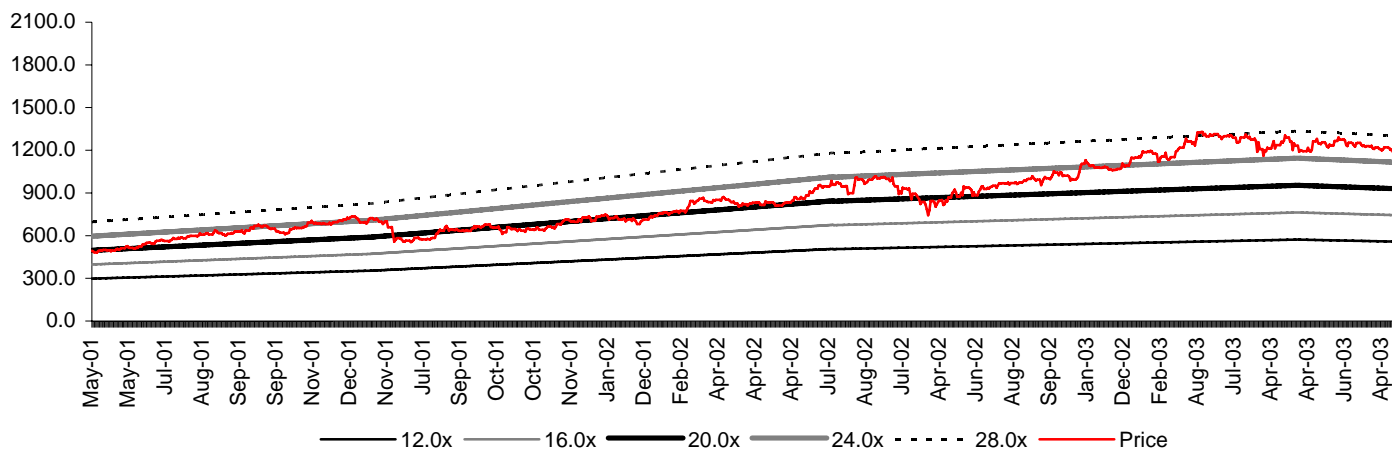
Source: Macquarie Research, June 2007

Fig 24 Valuation snapshot

	Bloomberg code	Stock rec.	Market cap (US\$m)	Current price (Lcy)	Target price (Lcy)	Upside (%)	FY3/07A EPS	FY3/08E EPS	FY3/09E EPS	FY3/09E PER (x)	Target FY3/09E PER (x)	FY3/07 RoE (%)
Infosys	INFO IN	OP	27,502	1957	2437	25%	69.3	77.2	104.1	18.8	23.4	42.3%
TCS	TCS IN	OP	27,444	1145	1399	22%	42.2	47.8	62.9	18.2	22.2	55.8%
Wipro	WPRO IN	N	18,728	524	492	-6%	20.4	19.8	23.4	22.4	21.1	32.3%
Satyam	SCS IN	OP	7,642	467	542	16%	21.5	24.0	29.1	16.0	20.5	27.9%

Source: Macquarie Research, June 2007

Fig 25 TCS – 1yr forward PER chart



Source: Macquarie Research, June 2007

Tata Consultancy Services (TCS) (TCS IN, Outperform, Target price: Rs1,399.00)

Quarterly Results					Profit & Loss						
	4Q/07A	1Q/08E	2Q/08E	3Q/08E		2007A	2008E	2009E	2010E		
Revenue	m	51,464	50,817	55,854	60,385	Revenue	m	186,334	230,914	313,936	438,432
Gross Profit	m	24,715	22,501	24,732	26,738	Gross Profit	m	88,396	102,248	134,625	186,633
Cost of Goods Sold	m	26,749	28,315	31,122	33,647	Cost of Goods Sold	m	97,938	128,667	179,311	251,798
EBITDA	m	14,568	13,368	13,690	14,140	EBITDA	m	51,215	57,451	74,664	104,209
Depreciation	m	1,395	587	1,289	1,159	Depreciation	m	4,769	3,925	4,729	7,982
Amortisation of Goodwill	m	0	0	0	0	Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0	Other Amortisation	m	0	0	0	0
EBIT	m	13,173	12,781	12,401	12,980	EBIT	m	46,446	53,527	69,934	96,227
Net Interest Income	m	0	0	0	0	Net Interest Income	m	0	0	0	0
Associates	m	4	0	0	0	Associates	m	44	0	0	0
Exceptionals	m	0	0	0	0	Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0	Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	898	525	551	579	Other Pre-Tax Income	m	1,943	2,263	2,750	3,343
Pre-Tax Profit	m	14,074	13,306	12,952	13,559	Pre-Tax Profit	m	48,433	55,790	72,685	99,570
Tax Expense	m	-2,188	-1,996	-1,943	-2,034	Tax Expense	m	-6,701	-8,369	-10,539	-19,217
Net Profit	m	11,886	11,310	11,009	11,525	Net Profit	m	41,732	47,421	62,145	80,353
Minority Interests	m	-158	-158	-158	-158	Minority Interests	m	-417	-633	-633	-633
Reported Earnings	m	11,728	11,152	10,851	11,367	Reported Earnings	m	41,315	46,788	61,513	79,720
Adjusted Earnings	m	11,728	11,152	10,851	11,367	Adjusted Earnings	m	41,315	46,788	61,513	79,720
EPS (rep)		11.98	11.40	11.09	11.62	EPS (rep)		42.22	47.81	62.86	81.46
EPS (adj)		11.98	11.40	11.09	11.62	EPS (adj)		42.22	47.81	62.86	81.46
EPS Growth yoy (adj)	%	37.2	29.3	9.4	2.9	EPS Growth (adj)	%	41.4	13.2	31.5	29.6
						PE (rep)	x	27.1	23.9	18.2	14.1
						PE (adj)	x	27.1	23.9	18.2	14.1
EBITDA Margin	%	28.3	26.3	24.5	23.4	Total DPS		12.51	13.81	18.16	23.53
EBIT Margin	%	25.6	25.2	22.2	21.5	Total Div Yield	%	1.1	1.2	1.6	2.1
Earnings Split	%	28.4	23.8	23.2	24.3	Weighted Average Shares	m	979	979	979	979
Revenue Growth	%	19.1	22.6	24.6	24.2	Period End Shares	m	979	979	979	979
EBIT Growth	%	36.4	38.0	9.4	2.4						
Profit and Loss Ratios					Cashflow Analysis						
	2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E		
Revenue Growth	%	40.7	23.9	36.0	39.7	EBITDA	m	46,446	57,453	74,665	104,210
EBITDA Growth	%	39.8	12.2	30.0	39.6	Tax Paid	m	-6,701	-8,369	-10,539	-19,217
EBIT Growth	%	37.0	15.2	30.7	37.6	Chgs in Working Cap	m	-8,074	-6,060	-13,084	-18,981
Gross Profit Margin	%	47.4	44.3	42.9	42.6	Net Interest Paid	m	0	0	0	0
EBITDA Margin	%	27.5	24.9	23.8	23.8	Other	m	3,608	-3,139	-1,807	-2,019
EBIT Margin	%	24.9	23.2	22.3	21.9	Operating Cashflow	m	35,280	39,885	49,235	63,993
Net Profit Margin	%	22.4	20.5	19.8	18.3	Acquisitions	m	-2,122	-1,830	-3,286	-4,631
Payout Ratio	%	29.6	28.9	28.9	28.9	Capex	m	-13,296	-9,869	-15,018	-23,465
EV/EBITDA	x	21.9	19.5	15.0	10.7	Asset Sales	m	-5,437	0	0	0
EV/EBIT	x	24.1	20.9	16.0	11.6	Other	m	0	0	0	0
Balance Sheet Ratios					Investing Cashflow	m	-20,855	-11,698	-18,303	-28,096	
ROE	%	55.8	44.4	43.4	42.2	Dividend (Ordinary)	m	-13,989	-15,441	-20,300	-26,308
ROA	%	43.0	35.4	34.9	36.1	Equity Raised	m	0	0	0	0
ROIC	%	67.9	51.8	56.6	56.7	Debt Movements	m	4,274	0	0	0
Net Debt/Equity	%	-4.3	-14.2	-16.6	-15.5	Other	m	4,483	-0	0	-0
Interest Cover	x	nmf	nmf	nmf	nmf	Financing Cashflow	m	-5,231	-15,441	-20,300	-26,308
Price/Book	x	12.5	9.3	6.9	5.2	Net Chg in Cash/Debt	m	9,193	12,746	10,632	9,589
Book Value per Share		91.6	123.7	165.8	220.4						
					Balance Sheet						
	2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E		
Cash	m	11,120	24,711	34,538	40,875	Cash	m	11,120	24,711	34,538	40,875
Receivables	m	58,036	72,853	99,629	137,368	Receivables	m	58,036	72,853	99,629	137,368
Inventories	m	0	0	0	0	Inventories	m	0	0	0	0
Investments	m	12,711	12,711	12,711	12,711	Investments	m	12,711	12,711	12,711	12,711
Fixed Assets	m	37,060	46,928	61,946	85,410	Fixed Assets	m	37,060	46,928	61,946	85,410
Intangibles	m	0	0	0	0	Intangibles	m	0	0	0	0
Other Assets	m	11,661	14,315	20,015	27,601	Other Assets	m	11,661	14,315	20,015	27,601
Total Assets	m	130,588	171,518	228,839	303,965	Total Assets	m	130,588	171,518	228,839	303,965
Payables	m	31,604	31,652	44,253	61,028	Payables	m	31,604	31,652	44,253	61,028
Short Term Debt	m	603	603	603	603	Short Term Debt	m	603	603	603	603
Long Term Debt	m	6,599	6,599	6,599	6,599	Long Term Debt	m	6,599	6,599	6,599	6,599
Provisions	m	0	0	0	0	Provisions	m	0	0	0	0
Other Liabilities	m	0	9,534	13,038	17,977	Other Liabilities	m	0	9,534	13,038	17,977
Total Liabilities	m	38,806	48,388	64,494	86,207	Total Liabilities	m	38,806	48,388	64,494	86,207
Shareholders' Funds	m	89,661	121,010	162,224	215,638	Shareholders' Funds	m	89,661	121,010	162,224	215,638
Minority Interests	m	2,121	2,121	2,121	2,121	Minority Interests	m	2,121	2,121	2,121	2,121
Other	m	0	0	0	0	Other	m	0	0	0	0
Total S/H Equity	m	91,782	123,131	164,345	217,759	Total S/H Equity	m	91,782	123,131	164,345	217,759
Total Liab & S/H Funds	m	130,588	171,518	228,839	303,965	Total Liab & S/H Funds	m	130,588	171,518	228,839	303,965

All figures in INR unless noted.

Source: Macquarie Research, June 2007

INDIA

Wipro

25 June 2007

WPRO IN Neutral

Stock price as of 21 Jun 07	Rs	523.85
12-month target	Rs	492.00
Upside/downside	%	-6.1
Valuation - PER	Rs	492.00

GICS sector	software & services	
30-day avg turnover	US\$m	18.6
Market cap	US\$m	18,837
Number shares on issue	m	1,459

Investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	149.4	180.2	239.9	328.3
EBITDA	bn	34.2	34.2	41.5	54.7
EBITDA growth	%	29.2	0.1	21.4	31.7
Reported profit	bn	29.2	28.8	34.1	42.2
EPS rep	Rs	20.36	19.76	23.35	28.95
EPS rep growth	%	41.0	-2.9	18.1	24.0
PE rep	x	25.7	26.5	22.4	18.1
ROE	%	32.3	25.6	24.8	25.3
EV/EBITDA	x	22.2	22.2	18.3	13.9
Net debt/equity	%	-43.9	-48.9	-42.1	-35.7

WPRO IN rel SENSEX performance, & rec history

Source: Datastream, Macquarie Research, June 2007 (all figures in INR unless noted)

Analyst

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Holding onto the storm**Event**

- Using our proprietary margin analysis framework, we have quantified the effect of 'sorrow' factors such as a stronger Rupee regime (Macquarie forecast for FY08 is at Rs40.3/US\$), wage inflation and 'joy' factors such as pricing power and various productivity gain levers. We conclude that for FY08, there will be an EBITDA margin erosion of 388bp for Wipro.
- This large impact (relative to its peers) is due to its weak hedging position (2 months of net forex inflows compared with the 4 months for Infosys and 7 months for Satyam); coupled with absence of software business and limited pricing power.
- We downgrade the stock to Neutral from Outperform and cut our FY08 EPS forecasts by 20.3%.

Impact

- Wipro has the least amount (US\$600m) of hedge available among the Tier-1 IT companies. This is sufficient to protect margins only till June 2007. For the full FY3/08, the average realised US\$/Rs exchange rate works out to Rs41.1.
- The rupee appreciation should reduce the EBITDA margin in FY3/08 by 467bp, which is the highest compared with its peers. Rising employee cost, both onsite (4%) and offshore (15%), will result in further decrease in EBITDA margins by 443bp in FY3/08.
- Coming to some rescue of the EBITDA margin are the levers such as higher price realisation (111bp), productivity gains (78bp), further offshore movement of work (19bp), increase in utilisation (13bp) and SG&A leverage (300bp). We note that Wipro's margin protection levers are small primarily due to a weaker pricing power and absence of software products business.

Earnings revision

- Owing to the negative exchange rate movement, we reduce our EPS estimates for FY3/08 and FY3/09 from Rs25.2 and Rs31.1 to Rs19.8 and Rs23.4, respectively.

Price catalyst

- 12-month price target: Rs492.00 based on a PER methodology.
- Catalyst: Initiatives in the products space or winning large deals (>US\$100m) or acquisition to penetrate Europe/Japan.

Action and recommendation

- We have cut our earnings forecast and revised our price target from Rs673 to Rs499. We downgrade Wipro to Neutral from Outperform, and we expect a negative surprise in the 1Q FY3/08 results.
- There are news reports that the company is looking at a major acquisition in Germany to expand its business in Europe's largest economy. This may pose an upside risk to our recommendation.

Realised exchange rate – inferior to its peers

Wipro holds US\$600m of foreign exchange forward and option contracts for hedging purposes. Gains on these contracts result in realized exchange rate on export revenues to be higher than the average spot rate.

To assess the average realised exchange rate, we calculated the natural hedge (forex outflow as a percentage of forex inflows), which we found to be 39%. Then we worked out the net forex inflow as a percentage of total revenue averaged over past three years, which is 41%. We adjusted the current hedging position against what will be consumed by net receivables of FY07. Finally we worked out the weighted average of the company's available hedge for FY08 with the average spot rate for FY08, to arrive at average realised exchange rate of Rs41/US\$ for FY08.

Lack of products business limiting efficiency gains

As discussed earlier in our notes, one of the long-term limiting factors affecting the Indian IT industry is 'linear growth'. That is, since it is based on billing man-hours, revenue and profits grow as employees grow – limiting efficiency/productivity gains, and which would eventually put management challenges. To build non-linearity to the business models, Indian IT companies need to grow into software products space. Unlike Infosys and TCS, Wipro does not have software products in its portfolio of offerings, thereby limiting efficiency gains.

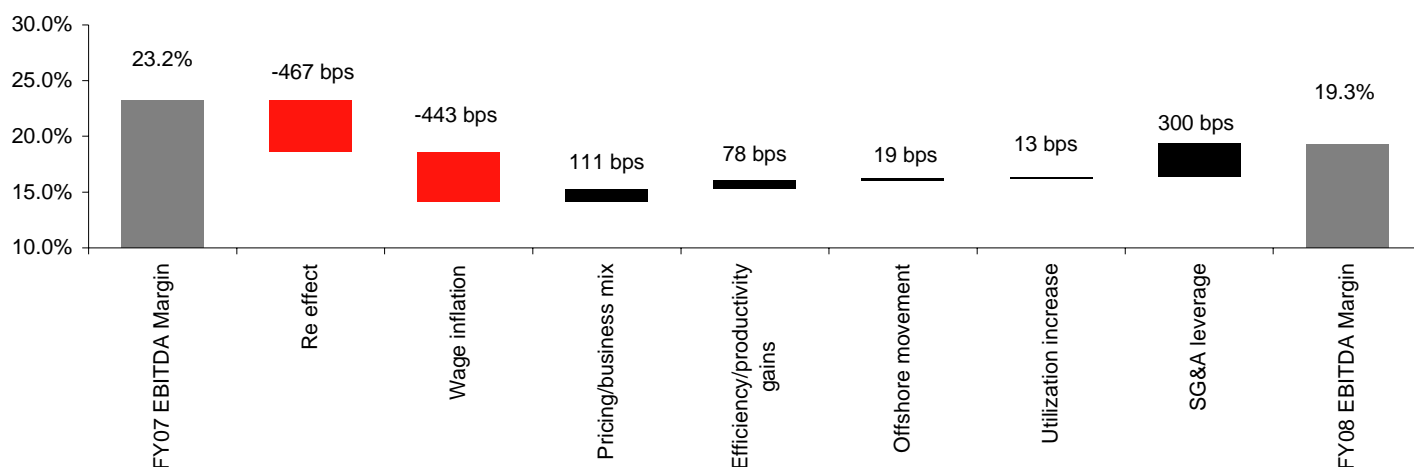
Margin windfall

Following are the assumptions behind the margin calculations:

- Realised US\$/Rp rate: Rs41.1 (described above).
- Wage increase: 15% offshore, 4% onsite (for all companies).
- Pricing increase: 2% (our perception).
- Efficiency/productivity gains: 1% (low because of absence of products business).
- Offshore shift: From 69.0% to 69.3% (standard).
- Utilisation increase: From 64.3% to 64.4% (our perception).
- SG&A leverage (% of sales): From 11.3% to 11.0% (standard).

The effect is shown below:

Fig 26 EBITDA margin erosion in FY08: 388bp



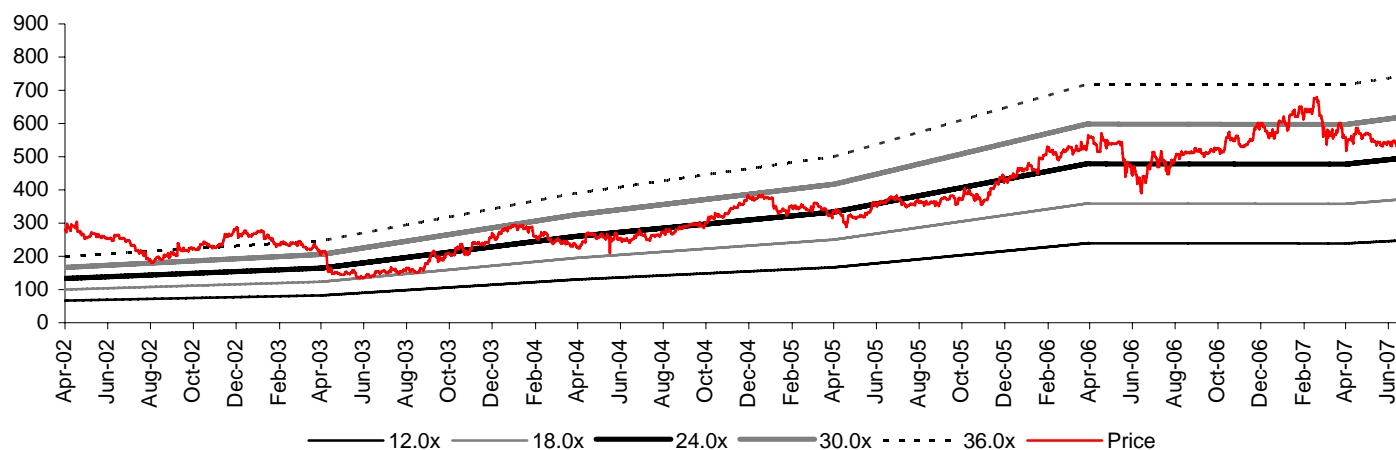
Source: Macquarie Research, June 2007

Fig 27 Valuation snapshot

	Bloomberg code	Stock rec	Market cap (US\$m)	Current price (lc)	Target price (lc)	Upside (%)	FY3/07A EPS (x)	FY3/08E EPS (x)	FY3/09E EPS (x)	FY3/09E PER (x)	Target FY3/09E PER (x)	FY3/07 RoE (%)
Infosys	INFO IN	OP	27,502	1957	2437	25%	69.3	77.2	104.1	18.8	23.4	42.3%
TCS	TCS IN	OP	27,444	1145	1399	22%	42.2	47.8	62.9	18.2	22.2	55.8%
Wipro	WPRO IN	N	18,728	524	492	-6%	20.4	19.8	23.4	22.4	21.1	32.3%
Satyam	SCS IN	OP	7,642	467	542	16%	21.5	24.0	29.1	16.0	20.5	27.9%

Source: Macquarie Research, June 2007

Fig 28 Wipro: 1-year forward PER bands



Source: Macquarie Research, June 2007

Wipro (WPRO IN, Neutral, Target price: Rs492.00)

Quarterly Results					Profit & Loss						
	4Q/07A	1Q/08E	2Q/08E	3Q/08E		2007A	2008E	2009E	2010E		
Revenue	m	43,345	41,249	43,807	46,257	Revenue	m	149,431	180,173	239,878	328,347
Gross Profit	m	14,667	12,522	13,299	14,042	Gross Profit	m	51,540	54,696	68,321	90,712
Cost of Goods Sold	m	28,678	28,727	30,508	32,215	Cost of Goods Sold	m	97,891	125,477	171,557	237,635
EBITDA	m	9,326	8,050	8,175	8,759	EBITDA	m	34,177	34,212	41,530	54,697
Depreciation	m	1,139	1,166	1,238	1,308	Depreciation	m	4,309	5,093	6,781	9,282
Amortisation of Goodwill	m	0	0	0	0	Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0	Other Amortisation	m	0	0	0	0
EBIT	m	8,187	6,884	6,936	7,451	EBIT	m	29,868	29,119	34,749	45,415
Net Interest Income	m	0	0	0	0	Net Interest Income	m	0	0	0	0
Associates	m	39	39	39	39	Associates	m	318	157	157	157
Exceptionals	m	0	0	0	0	Exceptionals	m	39	0	0	0
Forex Gains / Losses	m	0	0	0	0	Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	983	1,033	1,084	1,138	Other Pre-Tax Income	m	2,667	4,451	5,410	6,575
Pre-Tax Profit	m	9,210	7,956	8,060	8,629	Pre-Tax Profit	m	32,892	33,726	40,315	52,147
Tax Expense	m	-596	-1,154	-1,169	-1,251	Tax Expense	m	-3,723	-4,890	-6,249	-9,908
Net Profit	m	8,614	6,802	6,891	7,377	Net Profit	m	29,169	28,836	34,066	42,239
Minority Interests	m	0	0	0	0	Minority Interests	m	0	0	0	0
Reported Earnings	m	8,614	6,802	6,891	7,377	Reported Earnings	m	29,169	28,836	34,066	42,239
Adjusted Earnings	m	8,614	6,802	6,891	7,377	Adjusted Earnings	m	29,130	28,836	34,066	42,239
EPS (rep)		5.90	4.66	4.72	5.06	EPS (rep)		20.36	19.76	23.35	28.95
EPS (adj)		5.90	4.66	4.72	5.06	EPS (adj)		20.31	19.76	23.35	28.95
EPS Growth YoY (adj)	%	39.0	8.4	-3.4	-3.0	EPS Growth (adj)	%	40.7	-2.7	18.1	24.0
						PE (rep)	x	25.7	26.5	22.4	18.1
						PE (adj)	x	25.8	26.5	22.4	18.1
EBITDA Margin	%	21.5	19.5	18.7	18.9	Total DPS		0.00	0.00	0.00	0.00
EBIT Margin	%	18.9	16.7	15.8	16.1	Total Div Yield	%	0.0	0.0	0.0	0.0
Earnings Split	%	29.6	23.6	23.9	25.6	Weighted Average Shares	m	1,433	1,459	1,459	1,459
Revenue Growth	%	40.1	31.7	24.7	16.7	Period End Shares	m	1,459	1,459	1,459	1,459
EBIT Growth	%	20.1	5.8	-7.1	-3.3						
Profit and Loss Ratios					Cashflow Analysis						
	2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E		
Revenue Growth	%	39.2	20.6	33.1	36.9	EBITDA	m	34,177	34,212	41,530	54,697
EBITDA Growth	%	29.2	0.1	21.4	31.7	Tax Paid	m	-3,723	-4,890	-6,249	-9,908
EBIT Growth	%	28.5	-2.5	19.3	30.7	Chgs in Working Cap	m	5,029	5,741	-1,747	-1,636
Gross Profit Margin	%	34.5	30.4	28.5	27.6	Net Interest Paid	m	0	0	0	0
EBITDA Margin	%	22.9	19.0	17.3	16.7	Other	m	-822	-968	-1,215	-2,550
EBIT Margin	%	20.0	16.2	14.5	13.8	Operating Cashflow	m	34,662	34,095	32,319	40,603
Net Profit Margin	%	19.5	16.0	14.2	12.9	Acquisitions	m	-199	0	0	0
Payout Ratio	%	0.0	0.0	0.0	0.0	Capex	m	-15,797	-8,904	-18,520	-24,584
EV/EBITDA	x	22.2	22.2	18.3	13.9	Asset Sales	m	-202	-313	-641	-851
EV/EBIT	x	25.3	26.1	21.9	16.8	Other	m	0	0	0	0
Balance Sheet Ratios					Investing Cashflow	m	-16,198	-9,217	-19,161	-25,435	
ROE	%	32.3	25.6	24.8	25.3	Dividend (Ordinary)	m	-6,891	-6,212	-7,537	-9,264
ROA	%	24.2	18.1	17.6	18.5	Equity Raised	m	6,382	0	0	0
ROIC	%	60.6	43.7	46.3	42.2	Debt Movements	m	1,234	-1,629	0	0
Net Debt/Equity	%	-43.9	-48.9	-42.1	-35.7	Other	m	-5,957	50	0	-0
Interest Cover	x	nmf	nmf	nmf	nmf	Financing Cashflow	m	-5,231	-7,791	-7,537	-9,264
Price/Book	x	7.5	6.2	5.1	4.2	Net Chg in Cash/Debt	m	13,232	17,087	5,621	5,904
Book Value per Share		69.5	85.1	103.3	125.9						
					Balance Sheet						
	2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E		
Cash	m	52,418	69,504	75,125	81,029	Cash	m	52,418	69,504	75,125	81,029
Receivables	m	4,550	4,129	5,625	7,562	Receivables	m	4,550	4,129	5,625	7,562
Inventories	m	33,563	39,473	53,860	72,957	Inventories	m	33,563	39,473	53,860	72,957
Investments	m	1,242	1,242	1,242	1,242	Investments	m	1,242	1,242	1,242	1,242
Fixed Assets	m	41,910	50,814	69,334	93,918	Fixed Assets	m	41,910	50,814	69,334	93,918
Intangibles	m	0	0	0	0	Intangibles	m	0	0	0	0
Other Assets	m	12,419	10,602	13,115	15,942	Other Assets	m	12,419	10,602	13,115	15,942
Total Assets	m	146,102	175,765	218,301	272,650	Total Assets	m	146,102	175,765	218,301	272,650
Payables	m	2,922	2,922	2,922	2,922	Payables	m	2,922	2,922	2,922	2,922
Short Term Debt	m	7,060	8,782	11,669	15,523	Short Term Debt	m	7,060	8,782	11,669	15,523
Long Term Debt	m	859	0	0	0	Long Term Debt	m	859	0	0	0
Provisions	m	0	0	0	0	Provisions	m	0	0	0	0
Other Liabilities	m	33,311	39,919	53,040	70,559	Other Liabilities	m	33,311	39,919	53,040	70,559
Total Liabilities	m	44,152	51,623	67,630	89,004	Total Liabilities	m	44,152	51,623	67,630	89,004
Shareholders' Funds	m	101,468	124,142	150,671	183,646	Shareholders' Funds	m	101,468	124,142	150,671	183,646
Minority Interests	m	0	0	0	0	Minority Interests	m	0	0	0	0
Other	m	0	0	0	0	Other	m	0	0	0	0
Total S/H Equity	m	101,468	124,142	150,671	183,646	Total S/H Equity	m	101,468	124,142	150,671	183,646
Total Liab & S/H Funds	m	145,620	175,765	218,301	272,650	Total Liab & S/H Funds	m	145,620	175,765	218,301	272,650

All figures in INR unless noted.

Source: Macquarie Research, June 2007

INDIA

Satyam Computer Services

25 June 2007

SCS IN Outperform

Stock price as of 21 Jun 07	Rs	466.80
12-month target	Rs	542.00
Upside/downside	%	+16.1
Valuation	Rs	542.00
- PER		

GICS sector		software & services
30-day avg turnover	US\$m	45.6
Market cap	US\$m	7,682
Number shares on issue	m	667.6

Investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	64.9	84.8	114.6	163.6
EBITDA	bn	15.4	17.9	22.5	31.3
EBITDA growth	%	31.9	16.3	25.6	39.3
Reported profit	bn	14.0	16.0	19.5	21.2
EPS rep	Rs	21.48	24.03	29.14	31.81
EPS rep growth	%	38.6	11.9	21.3	9.2
PE rep	x	21.7	19.4	16.0	14.7
ROE	%	27.9	25.1	24.8	22.4
EV/EBITDA	x	19.9	17.4	13.9	10.0
Net debt/equity	%	-66.8	-65.1	-60.7	-51.7

SCS IN rel SENSEX performance, & rec history



Source: Datastream, Macquarie Research, June 2007 (all figures in INR unless noted)

Analyst

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Chasing tier-1 valuations

Event

- Using our proprietary margin analysis framework, we conclude that for FY08, there will be an EBITDA margin erosion of 261bps for Satyam.
- However, we believe Satyam is a good candidate to cross the tier-1 valuation chasm based on strong revenue growth, its converging ROE with Infosys and focus on high-growth engineering services business.
- We maintain our long-term Outperform rating on the stock, but cut our FY08 EPS forecast by 7%.

Impact

- In our proprietary margin analysis, we quantified the effect of 'sorrow' factors like a stronger rupee regime (Macquarie's forecast for FY08 is Rs40.3/US\$) and wage inflation, and 'joy' factors like pricing power and various productivity gain levers.
- Satyam has US\$650m of hedging on its books. Based on the 58% natural hedge available to the company and our economics team's exchange rate forecasts, our calculations suggest that the realised Re rate for Satyam in FY3/08 will be Rs42.5/US\$.
- Re appreciation will shave of 248bps from Satyam's EBITDA margin in FY3/08. Rising wages will dent this by a further 466bps. We have assumed a 15% rise in offshore wages and a 4% increase in onsite wages.
- The above negatives will be partially offset by levers like better pricing power (163bps), productivity gains (75bps), improvement in the offshore-onsite mix (19bps), an increase in utilisation (22bps) and SG&A leverage (173bps).

Earnings revision

- Because of adverse exchange rate movement, we have cut our FY3/08E EPS from Rs25.8 to Rs24.0 and our FY3/09E EPS from Rs31.7 to Rs30.9.

Price catalyst

- 12-month price target: Rs542.00 based on a PER methodology.
- Catalyst: Large deal wins (>US\$ 50m) or an acquisition to penetrate Europe/Japan or building product capabilities.

Action and recommendation

- We have cut our earnings forecasts marginally as well as our price target. We maintain our Outperform rating on the stock, with 16% upside from the current level.
- In the short term, there could be some weakness as Satyam may cut its guidance for FY3/08. However, for long-term investors, it remains an attractive pick in our view.

Realised exchange rate

Satyam has US\$650m of foreign exchange forward and option contracts on its balance sheet for hedging purposes. Gains on these contracts result in the realised exchange rate for export revenues being higher than the average spot rate.

To assess the average realised exchange rate, we calculated Satyam's natural hedge (forex outflow as a percentage of forex inflows) - which we found to be high at 58%. Then we worked out the net forex inflow as a percentage of total revenue averaged over the past three years - which is 36%. We adjusted the current hedging position against what will be consumed by net receivables in FY07. Finally we worked out the weighted average of the company's available hedge for FY08 with the average spot rate for FY08 to arrive at an average realised exchange rate of Rs42.5/US\$ for FY08.

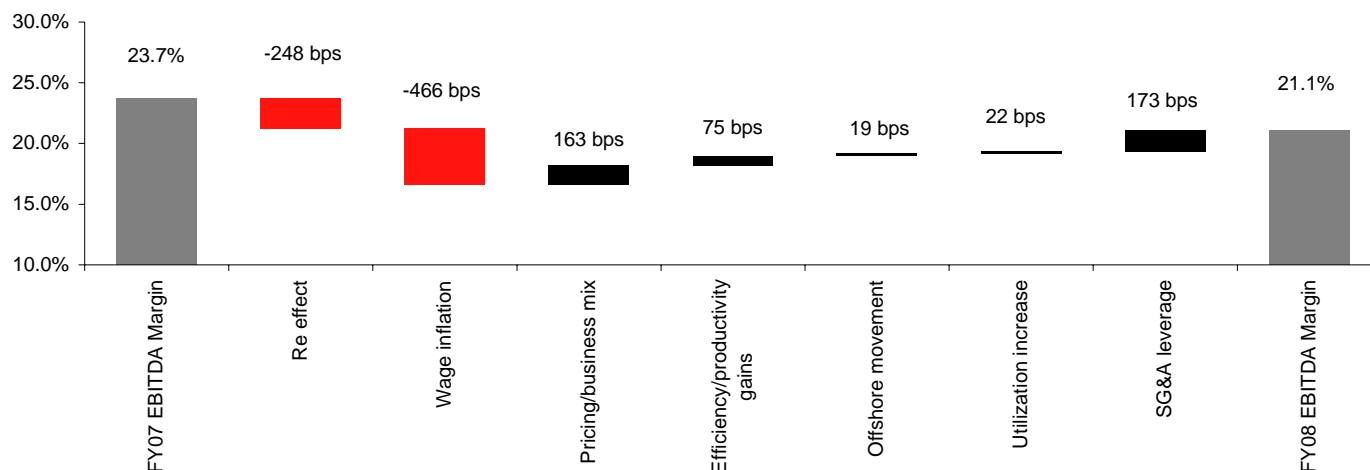
Margin windfall for FY08

Our assumptions for calculating the margins are as follows:

- Realised Rs/US\$ rate: Rs42.5 (described above)
- Wage increase: 15% offshore, 4% onsite (for all companies)
- Pricing increase: 3% (high because Satyam coming from a low base)
- Efficiency/productivity gains: 1% (low because of absence of products business)
- Offshore shift: From 72.3% to 72.6% (standard)
- Utilisation increase: From 77.8% to 78.1% (standard)
- SG&A leverage (% of sales): From 16.8% to 16.1% (high due to high scope)

The effect is shown below:

Fig 29 EBITDA margin erosion in FY08: 261bps



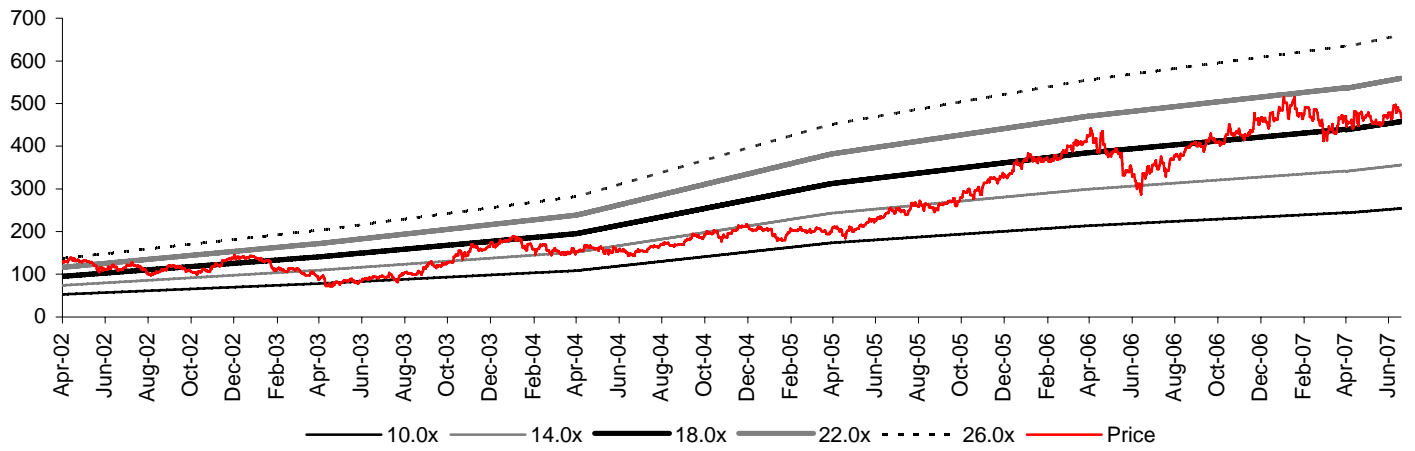
Source: Macquarie Research, June 2007

Fig 30 Valuation snapshot

	Bloomberg code	Stock rec	Market cap (US\$m)	Current price (Lcy)	Target price (Lcy)	Upside (%)	FY3/07A EPS	FY3/08E EPS	FY3/09E EPS	FY3/09E PER (x)	Target FY3/09E PER (x)	FY3/07 RoE (%)
Infosys	INFO IN	OP	27,502	1957	2437	25%	69.3	77.2	104.1	18.8	23.4	42.3%
TCS	TCS IN	OP	27,444	1145	1399	22%	42.2	47.8	62.9	18.2	22.2	55.8%
Wipro	WPRO IN	N	18,728	524	492	-6%	20.4	19.8	23.4	22.4	21.1	32.3%
Satyam	SCS IN	OP	7,642	467	542	16%	21.5	24.0	29.1	16.0	20.5	27.9%

Source: Macquarie Research, June 2007

Fig 31 Satyam – 1yr forward PER chart



Source: Macquarie Research, June 2007

Satyam Computer Services (SCS IN, Outperform, Target price: Rs542.00)

Quarterly Results					Profit & Loss						
		4Q/07A	1Q/08E	2Q/08E	3Q/08E		2007A	2008E	2009E	2010E	
Revenue	m	17,792	18,636	20,694	22,258	Revenue	m	64,851	84,788	114,590	163,557
Gross Profit	m	7,024	6,933	7,698	8,280	Gross Profit	m	26,249	31,542	39,887	55,844
Cost of Goods Sold	m	10,768	11,703	12,995	13,978	Cost of Goods Sold	m	38,602	53,247	74,703	107,712
EBITDA	m	4,102	4,111	4,272	4,547	EBITDA	m	15,377	17,891	22,469	31,311
Depreciation	m	354	568	956	652	Depreciation	m	1,484	2,470	3,165	6,531
Amortisation of Goodwill	m	0	0	0	0	Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0	Other Amortisation	m	0	0	0	0
EBIT	m	3,748	3,543	3,316	3,895	EBIT	m	13,893	15,421	19,304	24,780
Net Interest Income	m	-74	0	0	0	Net Interest Income	m	-159	0	0	0
Associates	m	0	0	0	0	Associates	m	0	0	0	0
Exceptionals	m	0	0	0	0	Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0	Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	704	704	704	704	Other Pre-Tax Income	m	1,833	2,816	2,816	2,816
Pre-Tax Profit	m	4,378	4,247	4,020	4,599	Pre-Tax Profit	m	15,566	18,237	22,120	27,596
Tax Expense	m	-442	-510	-482	-552	Tax Expense	m	-1,520	-2,188	-2,654	-6,347
Net Profit	m	3,936	3,737	3,537	4,047	Net Profit	m	14,046	16,048	19,465	21,249
Minority Interests	m	0	0	0	0	Minority Interests	m	-1	0	0	0
Reported Earnings	m	3,936	3,737	3,537	4,047	Reported Earnings	m	14,045	16,048	19,465	21,249
Adjusted Earnings	m	3,936	3,737	3,537	4,047	Adjusted Earnings	m	14,045	16,048	19,465	21,249
EPS (rep)		6.01	5.59	5.30	6.06	EPS (rep)		21.48	24.03	29.14	31.81
EPS (adj)		6.01	5.59	5.30	6.06	EPS (adj)		21.48	24.03	29.14	31.81
EPS Growth yoy (adj)	%	35.8	3.0	8.2	17.8	EPS Growth (adj)	%	39.7	11.9	21.3	9.2
						PE (rep)	x	21.7	19.4	16.0	14.7
						PE (adj)	x	21.7	19.4	16.0	14.7
EBITDA Margin	%	23.1	22.1	20.6	20.4	Total DPS		0.00	0.00	0.00	0.00
EBIT Margin	%	21.1	19.0	16.0	17.5	Total Div Yield	%	0.0	0.0	0.0	0.0
Earnings Split	%	28.0	23.3	22.0	25.2	Weighted Average Shares	m	654	668	668	668
Revenue Growth	%	35.4	29.2	29.2	34.0	Period End Shares	m	655	668	668	668
EBIT Growth	%	26.1	11.1	2.0	5.1						
Profit and Loss Ratios					Cashflow Analysis						
		2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E	
Revenue Growth	%	35.3	30.7	35.1	42.7	EBITDA	m	15,378	17,891	22,469	31,311
EBITDA Growth	%	31.9	16.3	25.6	39.3	Tax Paid	m	-1,520	-2,188	-2,654	-6,347
EBIT Growth	%	35.0	11.0	25.2	28.4	Chgs in Working Cap	m	-2,925	-1,892	-5,526	-9,203
Gross Profit Margin	%	40.5	37.2	34.8	34.1	Net Interest Paid	m	-159	0	0	0
EBITDA Margin	%	23.7	21.1	19.6	19.1	Other	m	-1,483	-2,470	-3,165	-6,531
EBIT Margin	%	21.4	18.2	16.8	15.2	Operating Cashflow	m	9,291	11,340	11,124	9,229
Net Profit Margin	%	21.7	18.9	17.0	13.0	Acquisitions	m	0	0	0	0
Payout Ratio	%	0.0	0.0	0.0	0.0	Capex	m	-3,041	-3,654	-3,748	-6,775
EV/EBITDA	x	19.9	17.4	13.9	10.0	Asset Sales	m	1,833	2,816	2,816	2,816
EV/EBIT	x	22.0	20.2	16.2	12.6	Other	m	0	0	0	0
Balance Sheet Ratios						Investing Cashflow	m	-1,209	-838	-932	-3,959
ROE	%	27.9	25.1	24.8	22.4	Dividend (Ordinary)	m	-2,700	-3,081	-3,737	-4,080
ROA	%	23.1	20.1	20.5	21.6	Equity Raised	m	3,217	0	0	0
ROIC	%	95.5	71.1	69.0	56.3	Debt Movements	m	452	0	0	0
Net Debt/Equity	%	-66.8	-65.1	-60.7	-51.7	Other	m	-254	0	0	0
Interest Cover	x	87.3	nmf	nmf	nmf	Financing Cashflow	m	715	-3,081	-3,737	-4,080
Price/Book	x	5.3	4.4	3.6	3.0	Net Chg in Cash/Debt	m	8,797	7,421	6,455	1,190
Book Value per Share		87.8	105.5	129.1	154.8						
					Balance Sheet						
		2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E	
Cash	m	39,914	47,335	53,790	54,980	Cash	m	39,914	47,335	53,790	54,980
Receivables	m	17,432	21,105	28,497	40,518	Receivables	m	17,432	21,105	28,497	40,518
Inventories	m	0	0	0	0	Inventories	m	0	0	0	0
Investments	m	0	0	0	0	Investments	m	0	0	0	0
Fixed Assets	m	8,223	9,901	12,804	18,205	Fixed Assets	m	8,223	9,901	12,804	18,205
Intangibles	m	0	0	0	0	Intangibles	m	0	0	0	0
Other Assets	m	3,382	6,418	8,665	12,320	Other Assets	m	3,382	6,418	8,665	12,320
Total Assets	m	68,951	84,759	103,756	126,023	Total Assets	m	68,951	84,759	103,756	126,023
Payables	m	5,745	8,586	11,855	16,953	Payables	m	5,745	8,586	11,855	16,953
Short Term Debt	m	0	0	0	0	Short Term Debt	m	0	0	0	0
Long Term Debt	m	1,479	1,479	1,479	1,479	Long Term Debt	m	1,479	1,479	1,479	1,479
Provisions	m	4,201	4,201	4,201	4,201	Provisions	m	4,201	4,201	4,201	4,201
Other Liabilities	m	0	0	0	0	Other Liabilities	m	0	0	0	0
Total Liabilities	m	11,425	14,266	17,535	22,633	Total Liabilities	m	11,425	14,266	17,535	22,633
Shareholders' Funds	m	57,526	70,493	86,221	103,390	Shareholders' Funds	m	57,526	70,493	86,221	103,390
Minority Interests	m	0	0	0	0	Minority Interests	m	0	0	0	0
Other	m	0	0	0	0	Other	m	0	0	0	0
Total S/H Equity	m	57,526	70,493	86,221	103,390	Total S/H Equity	m	57,526	70,493	86,221	103,390
Total Liab & S/H Funds	m	68,951	84,759	103,756	126,023	Total Liab & S/H Funds	m	68,951	84,759	103,756	126,023

All figures in INR unless noted.

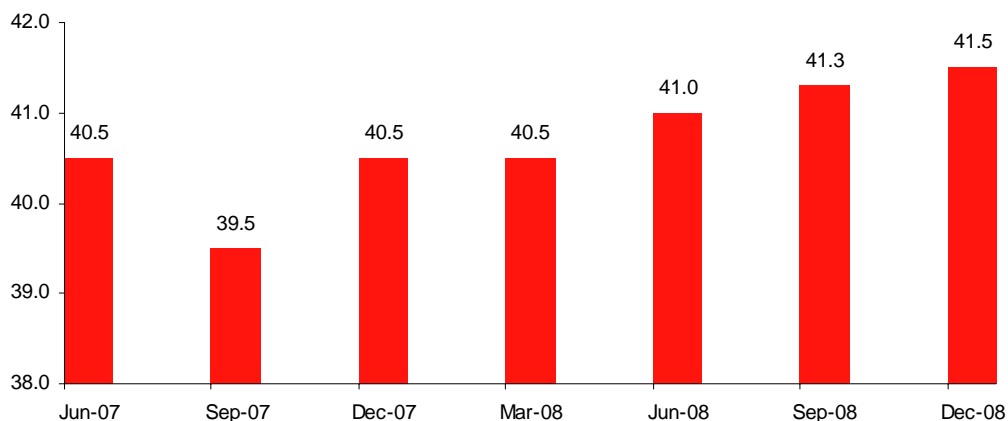
Source: Macquarie Research, June 2007

Appendices

The elusive rupee

Macquarie forecast

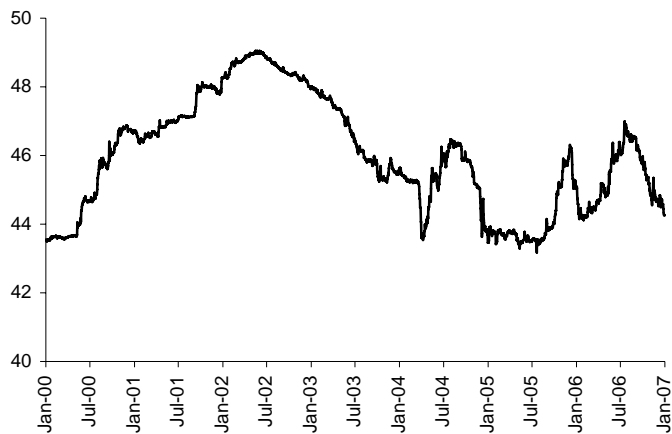
Fig 32 Average for FY08 at 40.3, and depreciating to 41.6 for FY09



Source: Macquarie Research, June 2007

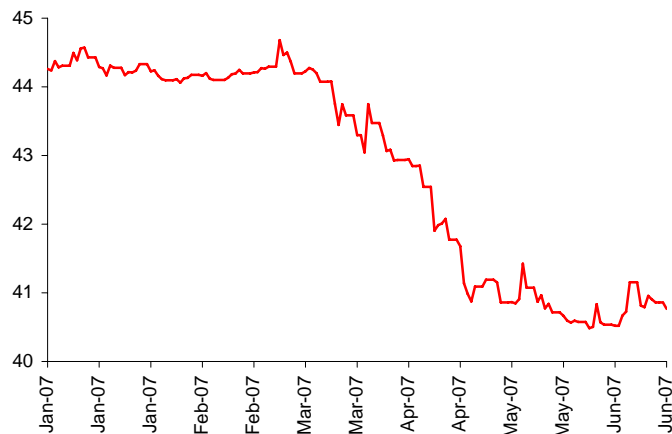
Past currency movement – March–June 2007 looks like an aberration

Fig 33 INR depreciated by 1.6% from 2000 to 2006



Source: Macquarie Research, June 2007

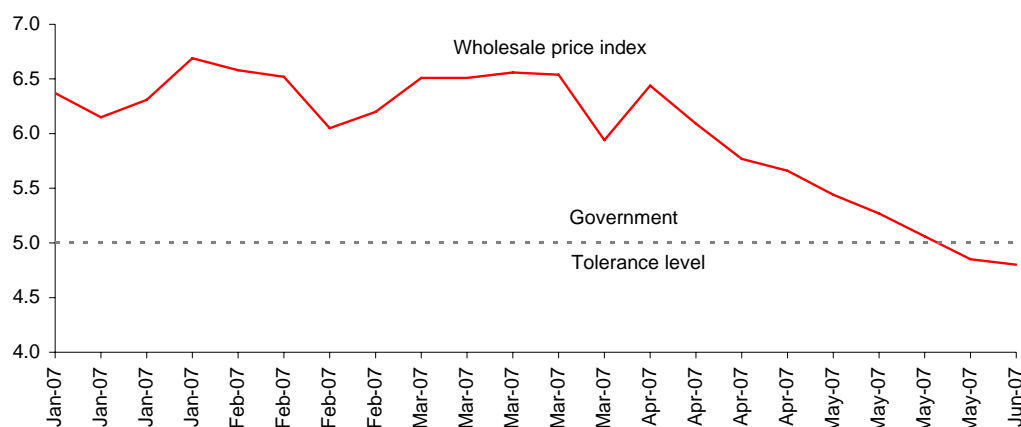
Fig 34 ...but has appreciated by 7.9% since Jan 2007



Source: Macquarie Research, June 2007

Inflation – almost in control; would relieve pressure of rupee appreciation

Fig 35 Inflation going below Government's tolerance level



Source: Macquarie Research, June 2007

Hedging and realized foreign exchange rate

For calculating the average realized exchange rate, we have looked at the natural hedge (forex outflow as a percentage of forex inflow) and arrived at net forex inflow as a percentage of total revenue averaged over the past three years. We then adjusted the current hedging position against what is likely to be consumed by net receivables in FY07. Finally, we did a weighted average of the available hedge for FY08 with the average spot rate for FY08 to arrive at an average realized rate for FY08.

Fig 36 Average realized exchange rate for FY08...better than the spot rate

	Wipro	Infosys	TCS	Satyam
Avg Natural Hedge	39%	45%	42%	58%
Avg Net Forex Earnings as a % of Total Revenue	41%	50%	44%	36%
FY08 Expected Total Revenue	179,734	177,796	230,356	84,788
FY08 Expected Net Forex Earnings	72,969	88,726	100,697	30,283
Hedged Position	24,600	42,000	47,230	27,300
Consumed in FY07 net receivables	12,964	10,962	21,606	10,064
Available for FY08	11,636	31,038	25,624	17,236
Average realized rate for FY08	41.1	41.7	41.4	42.5

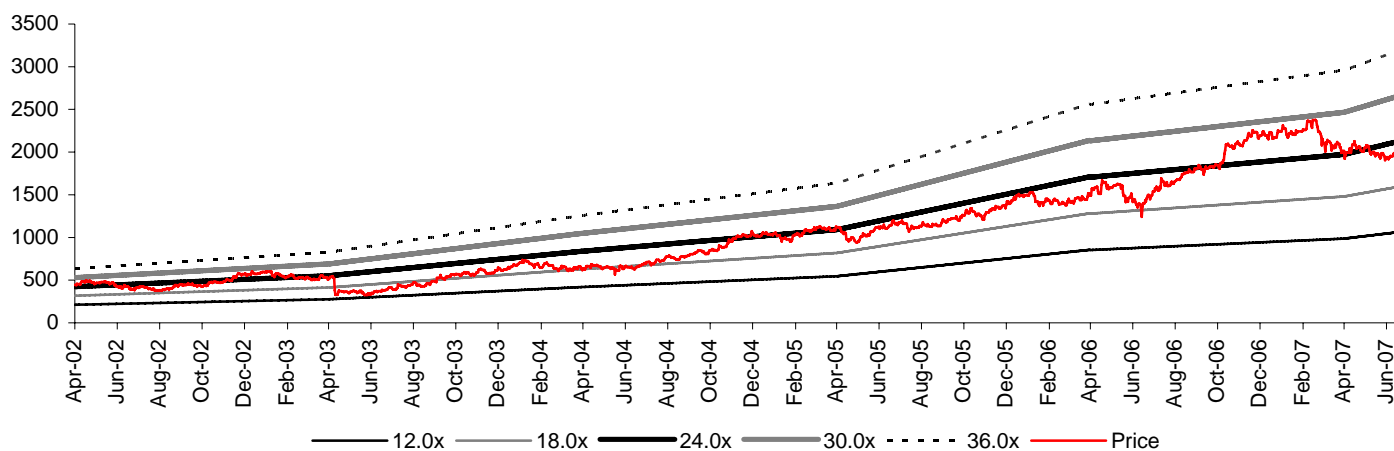
Source: Macquarie Research, June 2007

MNC competition – brewing steadily

Although MNC IT companies have grown their India offshore capabilities substantially during the past few years, this phenomenon has helped Indian IT firms by legitimizing the outsource-offshore model. Although MNCs have a strong brand appeal, they are still not the preferred work place for employees because the quality of work is low-end and on-site work opportunities are limited. In addition, operationally, these MNCs are at least 2–3 years away from building the offshore story into a sales/delivery process.

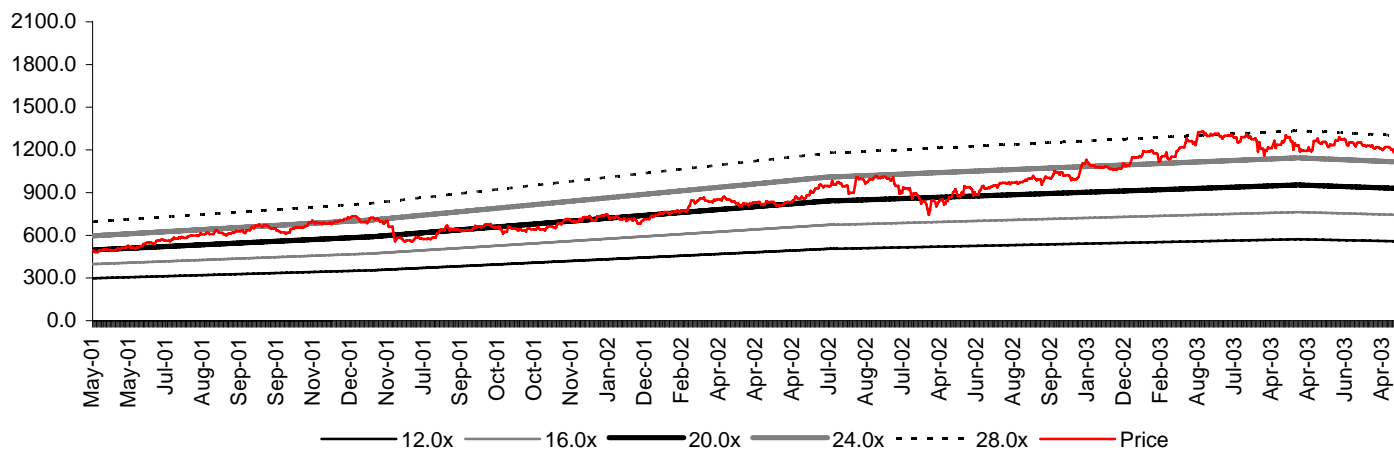
Stock performance

Fig 37 Infosys – 1-Year forward PER chart



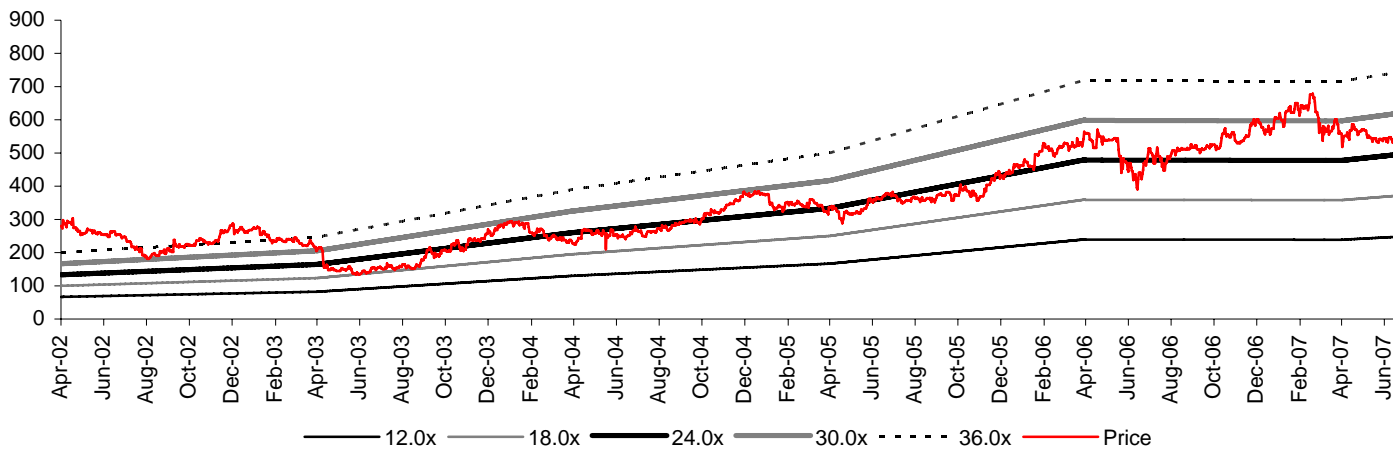
Source: Macquarie Research, June 2007

Fig 38 TCS – 1-Year forward PER chart



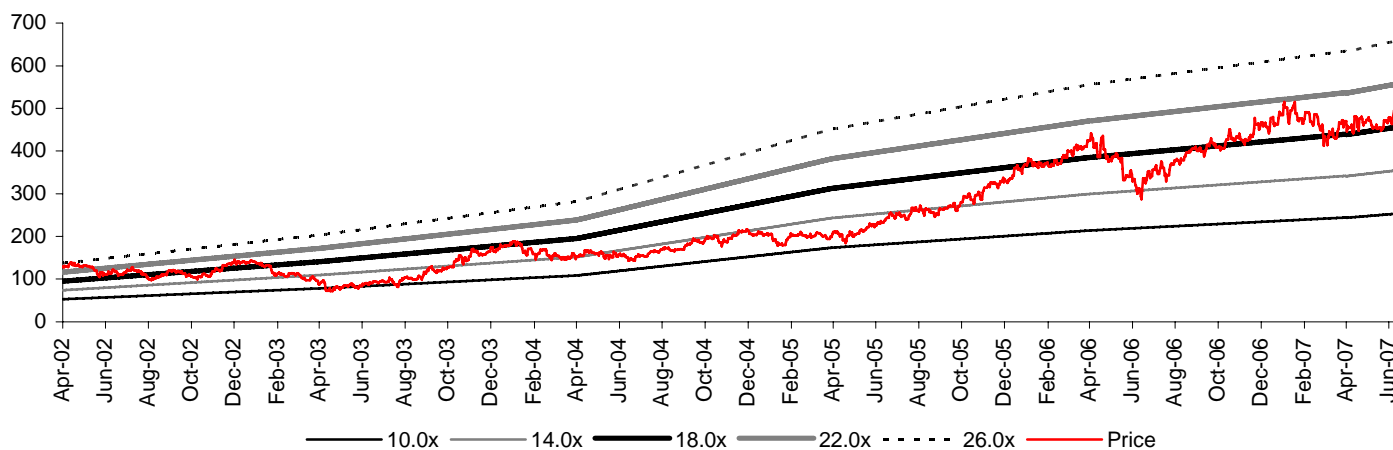
Source: Macquarie Research, June 2007

Fig 39 Wipro – 1-Year forward PER chart



Source: Macquarie Research, June 2007

Fig 40 Satyam – 1-Year forward PER chart



Source: Macquarie Research, June 2007

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%

Macquarie First South Securities (South Africa)

Outperform – expected return >+5%
 Neutral – expected return from -5% to +5%
 Underperform – expected return <-5%

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Recommendation proportions

	AU/NZ	Asia	RSA
Outperform	44.37%	58.37%	42.60%
Neutral	44.01%	21.30%	46.80%
Underperform	11.62%	20.33%	10.60%

For quarter ending 31 March 2007

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).

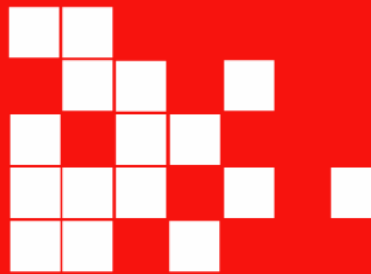
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