Company In-Depth

25 April 2006 | 24 pages

Sasken Communication Technologies (SKCT.BO)

Play on telecom software products

- Initiating with Buy – We rate Sasken Buy/Medium Risk with a target price of Rs430. Products are currently a very small proportion of revenues, but revenue upside from 4Q07E could be a trigger for the stock in 2HFY07 and FY08E.
- Focus on telecom – Sasken's software services business is focused on telecom, a segment that has seen steady growth for offshore vendors. Management estimates an addressable software market of US$110-120m for mobile handsets manufactured by vendors in Taiwan, Korea and China.
- Stable services business – Services contributed 91% of revenues and 165% of EBIT in FY06. Services' 18% operating margin is in line with smaller IT vendors, but lower than tier 1 vendors. Its competitors in telecom services are IT vendors.
- Products success key... Products could provide significant operating leverage, although we have not modeled in significant upside in estimates given low visibility. Contribution from integrated solution products is expected to start from 4Q07E.
- ... but earnings volatile – Losses from products investments are currently a drag on the profitable software services business: FY06E operating loss of Rs206m (69% of EBIT).
- Limited downside risk – Sasken has underperformed the market by 68% since listing in 2005. Excluding products losses, valuations are in line with mid-cap peers (EBIT multiple ~17x FY07E and 14x FY08E). Downside risk from products is limited, as it currently accounts for a small proportion (c.9%) of revenues.

Buy/Medium Risk	1M
Price (25 Apr 06)	Rs357.00
Target price	Rs430.00
Expected share price return	20.5%
Expected dividend yield	1.3%
Expected total return	21.8%
Market Cap	Rs9,973M
	US$223M

Price Performance (RIC: SKCT.BO, BB: SACT IN)

See page 22 for Analyst Certification and important disclosures.

Figure 1. Sasken – Statistical Abstract

Yr to Mar	Recurring PAT	PAT growth (%)	EPS FD	EPS growth (%)	P/E	Div yield (%)	ROAE (%)	EV/Sales	EV/EBITDA
FY05	233	21.50	13.5	12.30	26.4	1.00	18.20	3.6	24.4
FY06	297	27.90	10.2	-24.70	35.0	1.00	11.30	2.8	18
FY07E	406	36.40	13.6	33.60	26.3	1.30	10.20	2.3	13.9
FY08E	541	33.50	17.9	31.30	19.7	1.40	12.50	1.8	10.5
FY09E	696	28.60	21.9	22.50	16.3	1.40	14.60	1.4	8.3

Source: Company Reports and Citigroup Investment Research estimates

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Fiscal year end 31-Mar	2005	2006	2007E	2008E	2009E
Valuation Ratios					
P/E adjusted (x)	26.6	33.5	25.9	19.7	16.1
EV/EBITDA adjusted (x)	27.7	18.4	13.0	10.1	8.0
P/BV (x)	4.1	2.5	2.4	2.3	2.0
Dividend yield (%)	1.0	1.0	1.3	1.4	1.4
Per Share Data (Rs)					
EPS (adjusted)	13.25	10.49	13.61	17.86	21.89
EPS (reported)	13.25	8.11	13.61	17.86	21.89
BVPS	85.09	138.10	145.28	156.41	172.12
DPS	3.63	3.43	4.50	4.80	5.10
Profit & Loss (RsM)					
Net sales	2,418	3,081	3,835	4,859	5,994
Operating expenses	-2,204	-2,781	-3,419	-4,292	-5,255
EBIT	**213**	**300**	**417**	**566**	**739**
Net interest expense	-5	-2	-4	-4	-4
Non-operating/exceptionals	37	68	88	110	135
Pre-tax profit	**245**	**366**	**501**	**672**	**870**
Tax	-17	-69	-95	-131	-174
Extraord./Min.Int./Pref.div.	0	-68	0	0	0
Reported net income	**228**	**230**	**406**	**541**	**696**
Adjusted earnings	228	297	406	541	696
Adjusted EBIT	213	300	417	566	739
Growth Rates (%)					
EPS (adjusted)	14.8	-20.8	29.7	31.3	22.5
EBIT (adjusted)	34.5	40.7	38.8	35.9	30.5
Sales	45.5	27.4	24.5	26.7	23.4
Cash Flow (RsM)					
Operating cash flow	**212**	**34**	**500**	**621**	**784**
Depreciation/amortization	142	182	208	258	299
Net working capital	-146	-248	-101	-166	-199
Investing cash flow	**-218**	**-319**	**-696**	**-528**	**-335**
Capital expenditure	-239	-319	-696	-529	-339
Acquisitions/disposals	0	1	2	3	4
Financing cash flow	**75**	**2,236**	**-72**	**-118**	**-128**
Borrowings	0	0	0	0	0
Dividends paid	-43	-58	-96	-143	-153
Change in cash	**77**	**1,931**	**-303**	**-22**	**324**
Balance Sheet (RsM)					
Total assets	**1,772**	**4,243**	**4,727**	**5,263**	**5,993**
Cash & cash equivalent	109	2,012	1,694	1,657	1,964
Net fixed assets	877	1,011	1,511	1,794	1,847
Total liabilities	**353**	**392**	**611**	**752**	**944**
Debt	15	12	32	52	72
Shareholders' funds	**1,419**	**3,850**	**4,117**	**4,510**	**5,049**
Profitability/Solvency Ratios (%)					
EBITDA margin adjusted	14.7	15.6	16.3	17.0	17.3
ROE adjusted	17.8	11.3	10.2	12.5	14.6
ROIC adjusted	15.4	13.8	14.2	15.4	17.6
Net debt to equity	-6.6	-51.9	-40.4	-35.6	-37.5
Total debt to capital	1.0	0.3	0.8	1.1	1.4

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Cushioned by services, leveraged by products

Sasken's software services business (focused on the telecom segment) contributed 91% of revenues and 165% of EBIT in FY06. Services' 18% EBIT margin is in line with that of smaller IT services vendors, but lower than that of tier 1 vendors'. The products business was volatile in FY06, accounting for 9% of revenues with an operating loss of Rs206m (69% of EBIT). We estimate losses from products to start declining in FY07E. Contribution from integrated solution products – expected to start from 4Q07 and in FY08E – should be a significant driver for the stock.

Macro environment is favorable

Convergence and increasing competition are driving telecom vendors to outsource their product software work to lower-cost geographies.

Convergence and increasing competition are driving telecom vendors to outsource their product software work to lower cost geographies. Going offshore helps to reduce research costs for product development by up to 60%. Consequently, the telecom vertical for companies like TCS, Infosys, Wipro and HCL Tech has already witnessed improved growth rates over the last year.

Sasken well positioned in telecom segment

Sasken focuses primarily on the telecom vertical and derives almost all of its revenues from telecom-related clients. We forecast healthy net profit CAGR of 32% for FY06-09E, driven largely by services and lower losses from investments in products. Better visibility on products and increasing traction in services is also likely to help improve earnings visibility.

Management expects product revenues from application and integrated solutions to start contributing from 4QFY07. We have not modeled any significant upside from products in our FY07E /FY08E estimates and any success in new products could provide significant operating leverage resulting in higher-than-expected earnings growth than we currently forecast .

We recommend accumulating on any weakness in run-up to Mar 07 quarter

Product revenues likely to be back-ended in FY07 and in FY08

The stock has significantly underperformed the market since listing in FY05. We believe volatile product revenues, lack of any near-term triggers and concerns on sub-scale service offerings are in the price and hence limits downside risk to the stock.

Valuations based on sum-of-the-parts of services and products

Our 12-month price target of Rs430 is based on a sum-of-the-parts valuation of the services and products businesses.

Figure 2. Sasken: SOTP Valuation

Shares (M)	27.9	
Services EBIT (12m to Jun07E) (RsM)	651	
EBIT Multiple (x)	18	
Services Value/Share (Rs)		420
Product Rev EBIT (12m to Jun07E) (RsM)	280	
P/Sales (x)	1x	
Products Value/Share (Rs)		10
Target Price (Rs)		**430**

Source: CIR estimates

We apply a target June 07 EV/EBIT of 18x, in line with its mid-cap peers, for services, which gives a value of Rs420. This multiple is in line with that for smaller IT services companies and at the lower end of its own historical trading range of 18x-30x. Products revenues are currently too small and loss making, and we value them off a P/S multiple. We assign a 1x P/Sales multiple to the products business, giving a value of Rs10/share.

We believe sum-of-the-parts remains the most appropriate valuation measure for Sasken given its earnings track record and composition of its software services and products business. As a cross-check, our price target is also supported by FY07E P/Sales multiple of 3.1x, which is within the stock's 1-year historical trading range of 2.2x to 3.6x and consistent with our view that, due to a lack of near term triggers, the stock is likely to trade within its recent trading range.

Figure 3. IT Services – Valuation Comparables

Company	Ticker	Rating	Price 21-Apr (Rs)	Market Cap. (US$ m)	Basic EPS FY06A (Rs)	Basic EPS FY07E (Rs)	FD EPS FY06A (Rs)	FD EPS FY07E (Rs)	FD EPS CAGR FY06-07E(%)	P/E FY06A (x)	P/E FY07E (x)	Net Margin %	ROAE FY06A %
Infosys	INFY.BO	1L	3,296	20,939	90.1	118.1	87.5	115.1	31.5	37.7	28.6	26.5	30.6
TCS	TCS.BO	1M	1,994	22,175	61.7	77.0	61.7	77.0	24.8	32.3	25.9	21.1	47.1
Wipro	WIPR.BO	1L	549	17,796	14.5	18.7	14.5	18.7	29.4	37.9	29.3	19.9	24.7
Satyam	SATY.BO	1M	808	5,976	30.3	39.7	29.2	38.3	31.1	27.7	21.1	20.2	21.7
HCL Tech	HCLT.BO	2L	620	4,551	23.4	30.3	23.4	30.3	29.4	26.5	20.5	18.0	16.0
iflex solutions	IFLX.BO	NR	1,315	2,285	37.5	37.5	37.5	45.7	21.9	35.1	28.8	22.6	22.2
Patni	PTNI.BO	1M	432	1,366	21.1	29.1	21.0	28.3	34.5	20.5	15.3	15.0	16.9
HCL Infosystems	HCLI.BO	3M	170	653	16.3	17.8	15.3	16.8	9.9	11.1	10.1	2.9	16.1
Hexaware	HEXT.BO	3M	158	430	7.9	9.0	7.3	8.6	17.9	21.7	18.4	13.5	17.2

Source: Company Reports and Citigroup Investment Research estimates

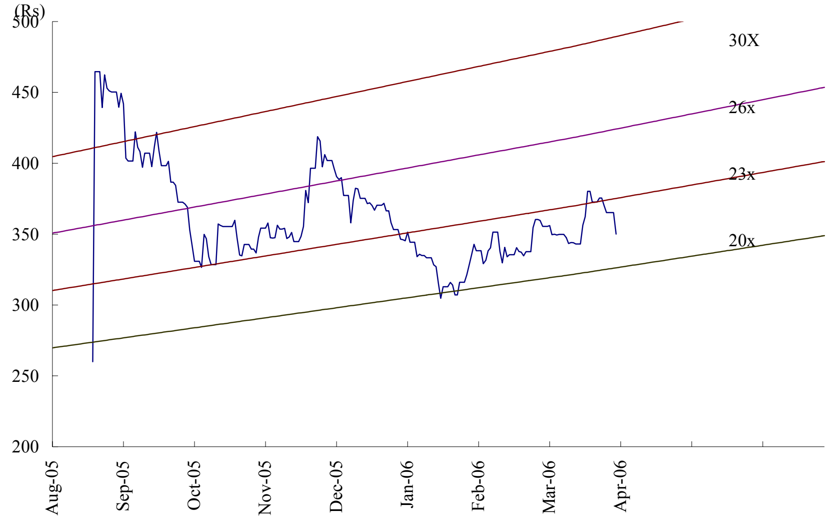
Flextronics Software (unlisted) is similar to Sasken due to its dependence on the telecom vertical, and presence in services and products.

Figure 4. Sasken: Business Metrics vs. Flextronics Software

Rupees Million	Flextronics Q206	Sasken Q406	Sasken FY06
Services (% of Revenues)	81	94.3	91.1
Products (% of Revenues)	15	5.7	8.90
BPO (% of Revenues)	4		
Segment Revenues			
BPO/Services	54	736.3	2806
Telecom/Products	1394	44.2	275
EBIT			
BPO/Services	6	142.5	517.3
Telecom/Products	312	-83	-206
Consolidated			
Revenues	1464	781	3081
Recurring PAT	324	66	300
Net Margin (%)	22.1	8.5	9.7
Other Metrics			
(% of Revenue) from Top 5 clients	69	76	72
(% of Revenue) from Top 10 clients	78	89	84
Active clients	118	39	39
Total Clients	315	na	na
Attrition	20.0	23.3	
US	27	30.6	34.9
Europe	56	37.3	36.5
ROW	17	32.1	28.6
T&M	74	91.55	90.3
FP	26	8.5	9.7
Employees	Approx. 3,500	2,575	2,575
Historical P/E Trading Range since*	15-19X	18-30x	

*Flextronics is not listed; P/E refers to historical trading range
Source: Company Reports, Citigroup Investment Research estimates

Figure 5. Sasken – P/E Band Chart



Source: Company Reports, Bloomberg and Citigroup Investment Research

Delving deeper into the two business segments

Sasken's business model is built around software services that are complementary to its product portfolio. Software services impart an annuity revenue stream to the business, whereas products for vendors in the telecom vertical provide leverage on capitalizing on the market potential of non-linear growth opportunities by making investments in intellectual property, products and solutions. The service-oriented client relationships also help in building skill-sets and market understanding that can be used later in the products business to create differentiation with other vendors and in return attract more services projects

Software products provide a competitive advantage

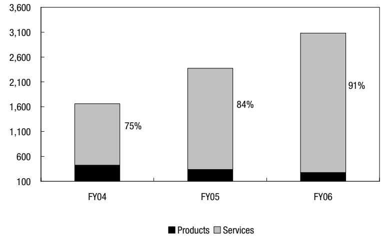
Contribution from service revenues has increased over the last few years but…

Products development is a high risk business, as it entails upfront investments in products research and development but yields recurring revenues over the longer term. The revenue model for products can be classified into: 1) licensing fees; 2) customization fees (non-recurring fees); 3) royalties; 4) sub licensing fees; and 5) fees for annual maintenance contracts.

.. product revenues <10% of total currently are likely to be the main driver for the stock when they start contributing from 4Q07E

Sasken uses a combination of these models. It not only sells products to clients but also licenses it to vendors, who in turn sell end products to customers. In certain cases, royalty-based payments also help in linking revenues with the success of products launched by customers.

Figure 6. Sasken: Revenue Contribution from Products and Services (Rs mn, %)



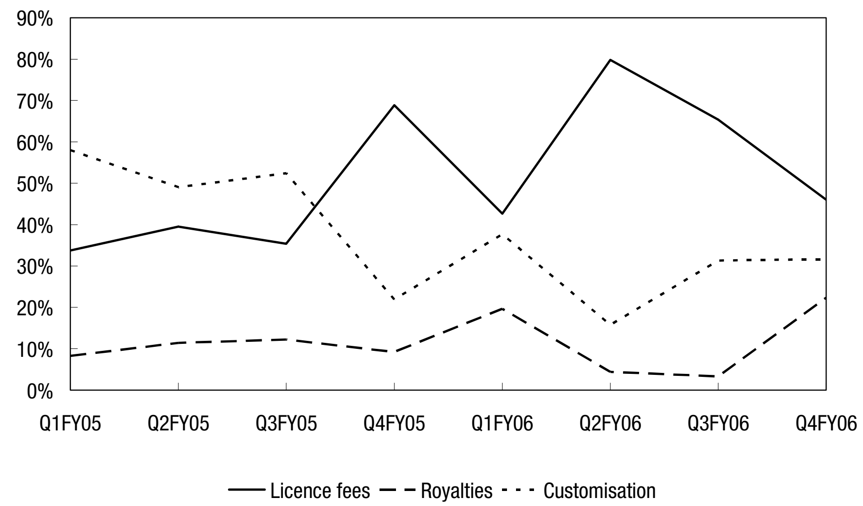
Source: Company, CIR

Over the years, Sasken's management has made a conscious effort to increase the proportion of royalty-linked revenues versus one-time licensing deals for software products. This shift away from licensing deals has resulted in lower upfront revenues from products. Consequently, the proportion of revenues from services has increased from 75% in FY04 to 91% in FY06.

Sasken's product business currently accounts for <10% of consolidated revenues and its revenue model for products is based on both licensing and customization with the two jointly accounting for over 90% of product revenues. However, management plans to increase the percentage contribution from royalties over the coming years. In December 2005, Sasken signed a royalty-based deal with a major Japanese manufacturer for 3G handsets and should be a beneficiary as end users shift from 2.5 to 3G technologies.

Management plans to increase the percentage contribution from royalties over the coming years.

Figure 7. Sasken: Break-down of Product Revenues from Licensing, Royalties and Customization (%)



Source: Company Reports and Citigroup Investment Research

Understanding the products offerings

Sasken's products initiatives are focused on creating solutions/components that can be incorporated in end products and cater mainly to the wireless space with some contribution from wireline space as well. Globally, over 6 million mobiles from manufacturers such as NEC, Panasonic, LG, Hitachi carry Sasken products. A brief description of the product offerings of Sasken is given below

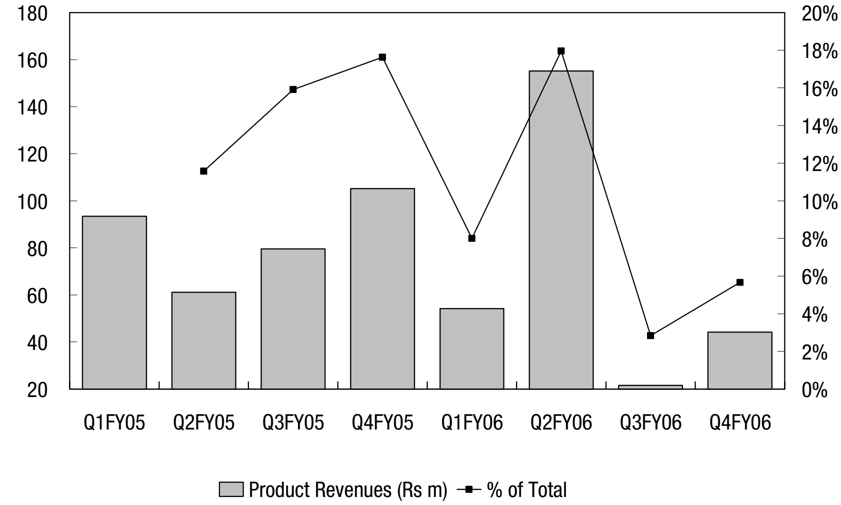
Multimedia applications and codecs — The Strawberra range of multimedia applications and codecs enable handset manufacturers to incorporate multimedia functionalities in mobile handsets.

Wireless protocol stacks — are modular solutions for GSM-GPRS and WCDMA technologies. Its WCDMA protocol stacks are licensed to over 16 semiconductor companies and terminal equipment vendors worldwide. The protocol stacks are used for high-end wireless devices, and support both voice and data.

Integrated solutions — are customized solutions based on customer requirements and are also offered as pre-integrated platform or solutions.

DSL IP licensing – products include broadband software solutions for device manufacturers. Currently, over 2.5 million modems carry Sasken software globally.

Figure 8. Trends in Revenues from Products (Rupees Million, Percent)



Source: Company Reports

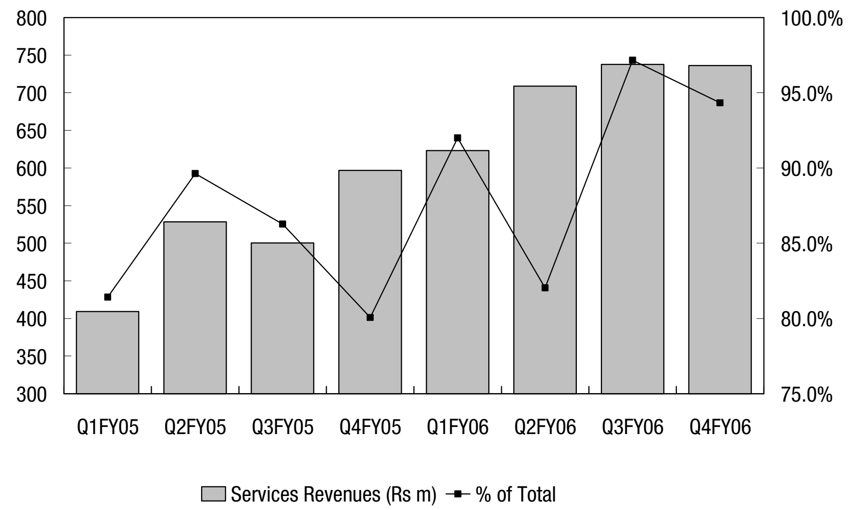
Services business imparts stable revenues

Sasken's services are focused on the telecom vertical and offer embedded research and development services.

Sasken provides software services to large product and semiconductor manufacturers for both wireless and wire-line service providers. It also offers modeling services for development and testing of software for new mobile phones, whereas its subsidiaries cater to the non-R&D outsourcing requirements of its clients.

Sasken's growth strategy for software services is to: 1) Increase its market share by cross-selling new services to its existing customers; 2) Focus on large anchor customers to grow revenues; and 3) Inorganic growth initiatives (acquisitions) to acquire companies that have capabilities beyond its existing services or have access to new customers that can be used for cross-selling existing services.

Figure 9. Trend in Revenues from Services (Rupees Million, Percent)

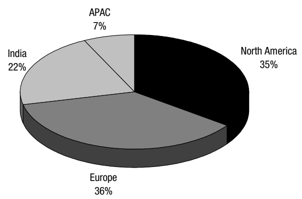


Source: Company Reports

Services' revenues have grown, largely due to an increasing offshore component and cross-selling to existing clients.

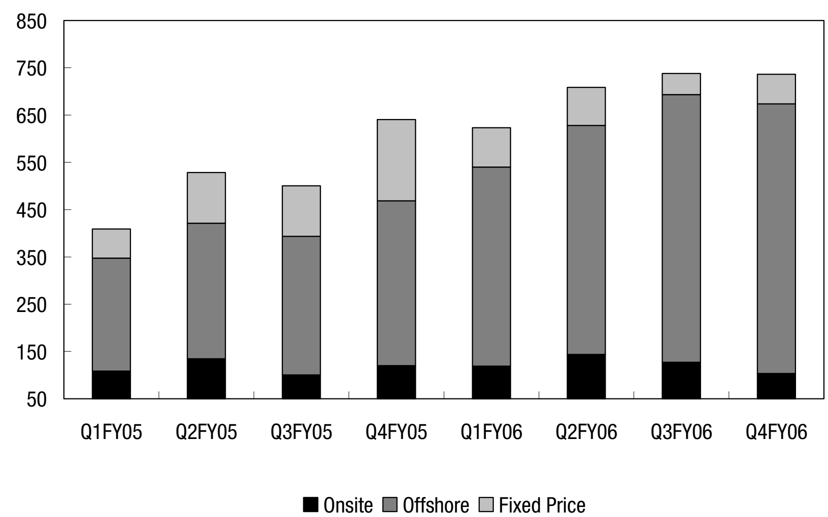
Over the last year, Sasken has established proximity centers near customers to help in smoother delivery of projects. As onsite projects entail lower margins and have higher SG&A expenses, we believe these initiatives are likely to be margin dilutive for the company in the medium term.

Figure 10. Revenues by Geography (FY06)



Source: Company Reports

Figure 11. Contribution of Software Revenues from Onsite, Offshore and Fixed Price (Rs mn)



Source: Company Reports and Citigroup Investment Research

Figure 12. Subsidiaries – Financial Snapshot

SNSL	FY05
Revenues (RsM)	144.4
% of Total Revenues	6.0
Profit after Tax (RsM)	16.9
Net Margin (%)	11.7
SNEL	**FY05**
Revenues (RsM)	24.6
% of Total Revenues	1.0
Net Loss (RsM)	-0.6

Source: Company , CIR

Subsidiaries provide non-R&D services

Sasken has two subsidiaries: (1) SNSL (Sasken Network Systems Limited) started in November 2003 and provides operations and billing support systems, inventory management and assurance services for networks. (2) SNEL (Sasken Network Engineering Limited) started in September 2004 and deals in planning, deployment and managing networks and provides related services. These subsidiaries offer outsourcing services to network equipment manufacturers for non-R&D requirements. Management plans to merge the subsidiaries at a later date and has also set up operations in China and Mexico.

High client concentration remains a concern

Sasken has followed the high-risk strategy of dependence on a few large customers, which is also reflected in its small number of absolute clients. We believe its largest customer accounts for over ~29% of revenues. Sasken's top 5 clients account for 72% of revenues, whereas the top 10 account for over 84%, a very high number compared to other offshore software services vendors.

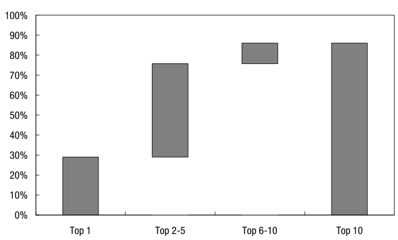
Sasken has long standing relationships with its large clients, who serve as good references for bidding projects and have also imparted good domain knowledge to the company on both semi-conductors and handset businesses.

Figure 13. Trends in Client Metrics

Yr to March	Q1FY05	Q2FY05	Q3FY05	Q4FY05	FY05	Q1FY06	Q2FY06	Q3FY06	Q4FY06
Active clients	31	33	37	43	43	40	46	42	39
< US$1m	5	4	5	9	9	13	13	13	13
US$1-3m	1	3	3	2	2	1	2	2	1
US$3-10m	1	1	1			1	1	1	2
>US$10m	1	1	1	2	2	2	1	1	1
>US$20m							1	1	1

Source: Company Reports

Figure 14. High Client Concentration, FY06



Source: Company, CIR

Technologies - Emergence of 3G technologies for products a positive

The global market is divided into two competing technologies – CDMA 2G/3G and GSM (2G)/UMTS(3G). Based on region, Asia Pacific is the biggest market comprising c.40% of total handset shipments (followed by Europe and the US), where currently GSM/UMTS is the dominant technology.

Increasing volumes for 3G handsets likely

3G handsets account for <10% of total handset shipments, but with increased technology acceptance, equipment volumes for the 3G technologies are expected to rise faster than 2-2.5G. But they may also face steeper price erosion as vendors explore new technologies and low-cost alternatives for product development.

Sasken estimates the addressable market at 110-120 million 3G mobile handsets.

The target customer segment for Sasken's manufactured products includes regional handset vendors in Korea, Taiwan and China. Of the c.700 million handsets shipped globally, over 50% are on 2.5G. Over time, the market is expected to move from 2.5G to 3G. This increase in volumes for 3G handsets is likely to be beneficial for Sasken, as product/vendor partnerships are still evolving in the 3G space and would help it establish its presence. The company estimates the total current handset market size for its products at 110-120 million 3G mobile handsets.

Product revenues likely to start flowing in 4Q07.

On the services side, India's export revenues from R&D services, engineering and offshore product development are estimated to have grown ten-fold, from US$300m in FY02 to US$3.1bn in FY05. As per Nasscom estimates, these are expected to grow 26% yoy in FY06 to US$3.9bn. This represents c.14% of the outsourced product engineering market of US$27bn estimated by IDC. Revenues from only engineering and R&D services sourced from India grew from US$1.7bn in FY04 to US$2.8bn in FY06E. Aggregate revenues of software product development are estimated at around US$910m in FY05, with over 200 MNC-based product companies sourcing a part of their product development activities from India. Therefore, companies like Sasken should benefit from the increasing trend towards offshoring in high-end areas such as product development and engineering.

Recent developments at Sasken

Acquisition of iSoftTech

In April 2006, Sasken acquired Chennai-based Integrated SoftTech Solutions (iSoftTech) (founded by Analog Devices founder –– Raymond Stata and Dr Ashok Jhunjhunwala, Professor at IIT Madras) for US$1.45m (~0.7x historic revenues). iSoftTech's service offerings include embedded and enterprise solutions for VoIP and networking markets, data network support services and a proprietary product iSoftTechTAS. iSoftTech had revenues of $2.2m in FY05 and employed over 110 people at its Chennai centre.

Arbitration with 3G.com

In December 2005, Sasken lost an arbitration case to 3G.com, and had to pay US$1.55m to 3G.com after losing the hearing in London. This resulted in December 2005 quarter results falling by 87% (post-exceptional) to Rs15m. The company has disclosed that there are other cases, but the potential impact of these arbitrations is difficult to estimate. This poses a potential a risk to our earnings estimates.

Update on March-06 quarter results

Product revenues growth was slower than expectations with continuing losses at the operating level.

Figure 15. Sasken: Quarterly Product Revenues & Profits (Rs Million, Percent

	Q4FY05	Q3FY06	Q4FY06	% qoq	% yoy
Product Revenues (Rs m)	**105.2**	**21.5**	**44.2**	**105.4**	**-58.0**
% of Total	17.6%	2.8%	5.7%	*283 bps*	*-1,196 bps*
Licence fees	72.4	14.07	20.35	44.6	-71.9
Royalties	9.7	0.71	9.86	NM	1.8
Customisation	23.1	6.74	14	107.7	-39.3
EBITDA	**-3.56**	**-84.7**	**-74.22**	**-12.4%**	**NM**
EBITDA Margin (%)	NM	NM	NM	*NM*	*NM*
Depreciation	6.8	8.2	8.8	6.5	28.0
EBIT	**(10.40)**	**(92.92)**	**(83.0)**	**-10.7%**	**NM**

NM = Not meaningful   Source: Company Reports, Citigroup Investment Research

Services revenues declined sequentially due to a shift to offshore.

Figure 16. Sasken: Quarterly Software Services Revenues & Profits (Rs Million, Percent)

	Q4FY05	Q3FY06	Q4FY06	% qoq	% yoy
Services (incld. NES)	**596.91**	**737.88**	**736.29**	**-0.2%**	**23.3%**
% of Total	80.1%	97.2%	94.3%	*-283 bps*	*1,427 bps*
Onsite	120.14	127.02	103.39	-18.6%	-13.9%
Offshore	348.35	566.28	570.25	0.7%	63.7%
Fixed Price	171.82	44.58	62.65	40.5%	-63.5%
EBITDA	**145.56**	**205.6**	**179.3**	**-12.8%**	**23.2%**
EBITDA Margin (%)	24.4%	27.9%	24.4%	*-351 bps*	*-3 bps*
Depreciation	35.8	36.2	36.8	1.8%	2.8%
EBIT	**109.7**	**169.4**	**142.5**	**-15.9%**	**29.8%**
EBIT Margin (%)	18.4%	23.0%	19.4%	*-361 bps*	*97 bps*

Source: Company Reports and Citigroup Investment Research

EBITDA margins were impacted by staggered salary hikes of 16% given during the quarter to select employees.

Figure 17. Quarterly Trends in Profit and Loss (Rupees Million, Percent)

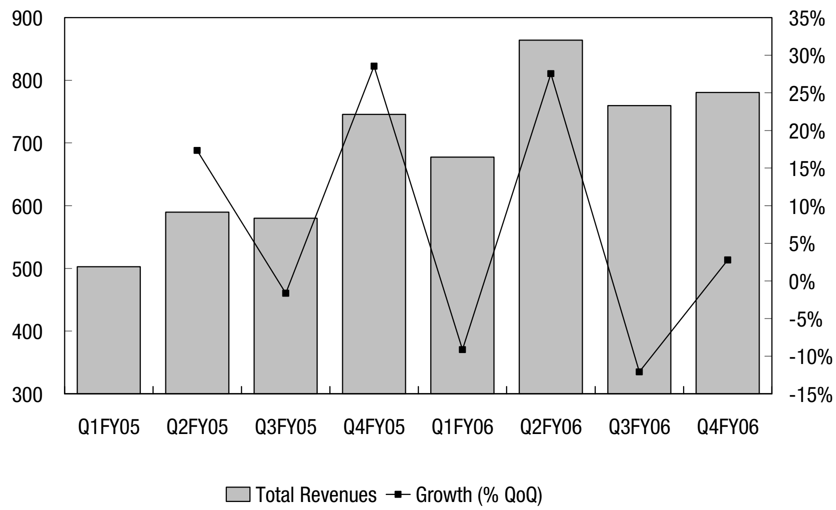
	Q4FY05	Q3FY06	Q4FY06	% qoq	% yoy
Revenues	**745.5**	**759.4**	**780.5**	**2.8%**	**4.7%**
Cost of Revenue	370.0	460	513.69	11.6%	38.8%
R&D Expense	68.0	26	22.28	-14.3%	-67.2%
Gross Profit	**307.5**	**273.2**	**244.6**	**-10.5%**	**-20.5%**
Gross Margin (%)	*41.2%*	*36.0%*	*31.3%*	*-464 bps*	*-992 bps*
Total SG&A	165.4	152.25	139.5	-8.4%	-15.7%
% of sales	22.2%	20.0%	17.9%	*-218 bps*	*-432 bps*
EBITDA	**142.1**	**120.9**	**105.08**	**-13.1%**	**-26.1%**
EBITDA Margins (%)	*19.1%*	*15.9%*	*13.5%*	*-246 bps*	*-560 bps*
Amortisation of non compete fees		3.170	3.13	-1.3%	nm
Depreciation	45	44.2	45	2.4%	0.2%
Total EBIT	**96.9**	**73.5**	**56.7**	**-22.9%**	**-41.5%**
EBIT Margins (%)	*13.0%*	*9.7%*	*7.3%*	*-242 bps*	*-574 bps*
Interest	0.9	0.4	1	132.6%	13.6%
Other Income	29.6	6.94	21.2	204.9%	-28.4%
PBT	**126**	**80**	**77**	**-4.0%**	**-38.8%**
Tax	16	(11)	(10.63)	0.7%	-166.4%
Eff tax rate (%)	*na*	*13.2%*	*15%*	*180 bps*	*1,500 bps*
Recurring PAT	**141.6**	**69**	**66**	**-4.7%**	**-53.3%**
PAT Margins (%)	*19.0%*	*9.1%*	*8.5%*	*-67 bps*	*-1,051 bps*
Exceptional items	n	68	n	nm	nm
Net income	**141.6**	**2**	**66.2**	**nm**	**-53.3%**

Source: Company Reports and Citigroup Investment Research

A look at financials...

Sasken's revenues grew 27%+ yoy over the last year, despite declining revenues in products (-18%yoy), driven largely by growth in software services. Products revenues have been very volatile, with qoq growth rates of -80% to over 180% over the last six quarters. The stronger growth of services has resulted in this division's share of revenues increasing to 91% in FY06 compared to 75% in FY04. We expect revenue CAGR of 25% in FY06-FY09E

Figure 18. Sasken: Trends in Quarterly Revenues (Rupees Million, Percent)



Source: Company Reports, Citigroup Investment research

Sasken's margins are comparable to peers

Management expects software services EBITDA margins to be maintained at 20-22% vs. 23.4%

Sasken's gross margin of 34.5% in FY06 is lower than Satyam's and HCL's, but comparable with smaller companies. The EBITDA margin for Sasken is also comparable to peers in the sector. Lower other income, losses from products and higher tax rates result in a net margin of only 10.8% for the company.

Figure 19. Sasken: Gross Margin vs. Select Peers

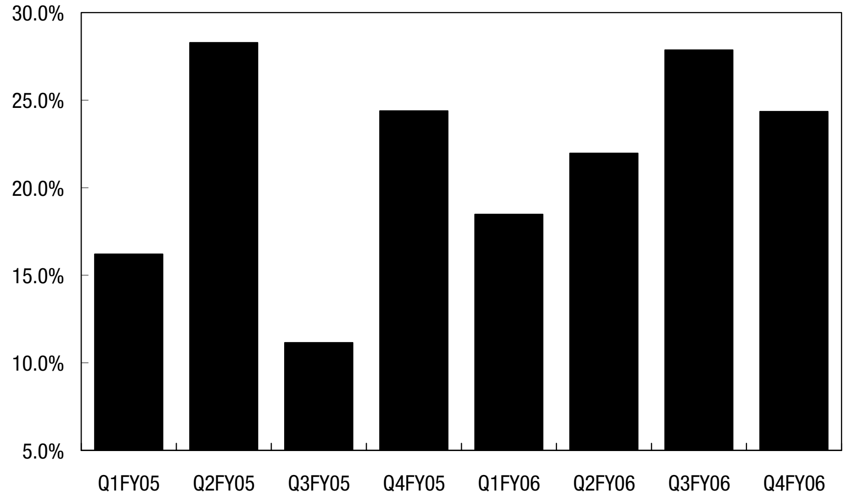
FY06 Company	Gross Margin (%)	EBITDA Margin (%)	Net Margin (%)
Patni	38.0%	18.8%	13.5%
Hexaware	38.5%	16.0%	13.5%
Sasken	34.5%	15.6%	10.8%

Source: Company, CIR

Sasken's margins show considerable volatility on a qoq basis, primarily due to milestones reached in fixed price services projects or license fee/royalties in the products business, which is likely to continue until products reach a mature stage and start yielding a predictable revenue stream.

An increasing proportion of offshore revenues (77% of revenues) and declining fixed price projects (22% in FY05 to <10% of revenues in FY06) have also helped improve software margins in FY06. For the standalone software business, management has guided for 20-22% EBITDA margin on a steady-state basis, which is significantly higher than its peers.

Figure 20. Sasken: EBITDA Margins for Software Services



Source: Company Reports

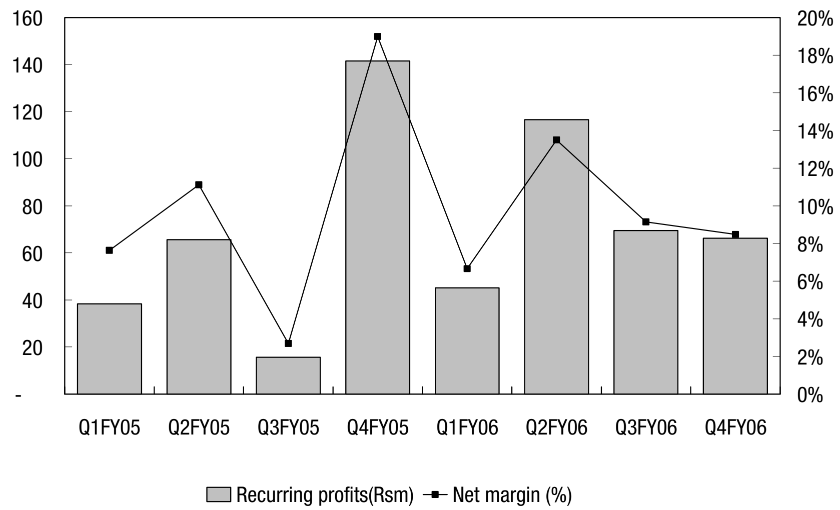
Selling, general and marketing expenses need rationalization

SG&A expenses as percentage of revenues declined from 22.3% in FY05 to 18.9% in FY06 primary, due to lower sales and marketing expenses. General and admin expenses at 12% of revenue are higher than the industry average. We expect SG&A to decline further to 18% of revenues in FY07, driven by a further rationalization of general and administrative expenses and scale economies.

Tax rates likely to be higher

Income tax expense was 7% of revenues during FY05, versus a credit in FY04, as the tax refunds received during FY05 were much lower. The effective tax rate in FY06 increased to 19%, due to a higher contribution from India business resulting in higher domestic tax. We estimate a marginal increase in the effective tax rate of 20bps for FY07 and 50bps for FY08. Overall, we estimate profits to grow at 32% CAGR over FY06-09E.

Figure 21. Sasken: Quarterly Net Profit and Margins (%)



Source: Company Reports

Sasken has US$45m in cash, negligible debt and manageable DSOs at 77 days as at Mar-06. FY06 ROE at 11% is lower than its peers. Sasken currently has a forward FX cover of c.US$44m over the next four quarters. Its accounting policy is to recognize exchange differences on forward contracts in the income statement.

High employee attrition is a concern

Sasken has added c.400-600 employees (20-30% of its employee base) in each of the last two years. Over 70% of the hires are experienced professionals and 30% of the employees are post-graduates or PH.Ds, given the specialized nature of work being done in developing products and delivering services. Sasken has a variable performance incentive built into its pay structure for quarterly performance that is paid on a quarterly basis, and we expect the company to continue facing wage pressure in the medium term due to a flatter employee pyramid structure.

Sasken's attrition rate remains high at over 23%.

Figure 22. Sasken: Trends in Employee Additions

Employees	Q2FY05	Q3FY05	Q4FY05	Q1FY06	Q2FY06	Q3FY06	Q4FY06
Total	1,882	2,086	2,121	2,159	2,466	2,504	2,575
Gross adds	326	338	141	221	474	188	203
Net adds	302	204	35	38	307	38	71
Net as % of Gross adds	93%	60%	25%	17%	65%	20%	35%
Attrition (voluntary %)	24.6%	24.9%	26.3%	24.9%	23.4%	20.9.%	23.3%

Source: Company Reports

Financial Statements

Figure 23. Income Statement (Rupees Million, Percent)

Yr to March	FY05A	FY06	FY07E	FY08E	FY09E
Services	**2035**	**2806**	**3588**	**4529**	**5619**
Products	**339**	**275**	**248**	**329**	**374**
Total Revenues	**2,418**	**3,081**	**3,835**	**4,859**	**5,994**
Growth (% YoY)	*45.5%*	*27.4%*	*24.5%*	*26.7%*	*23.4%*
Cost of Revenue	1,309	1,887	2,355	2,998	3,730
R&D Expense	214	132	173	221	258
Gross Profit	**895**	**1,063**	**1,308**	**1,640**	**2,006**
Gross Margin ("%)	*37.0%*	*34.5%*	*34.1%*	*33.8%*	*33.5%*
Total SG&A	539	581	683	816	968
% of sales	*22.3%*	*18.9%*	*17.8%*	*16.8%*	*16.1%*
EBITDA	**355**	**482**	**625**	**825**	**1,038**
EBITDA Margins (%)	*14.7%*	*15.6%*	*16.3%*	*17.0%*	*17.3%*
Amortisation of non compete fees	0	12	12.4	12.4	12.4
Depreciation	142	170	196	246	287
% of sales	5.9%	5.5%	5.1%	5.1%	4.8%
Total EBIT	**213**	**300**	**417**	**566**	**739**
EBIT Margins (%)	8.8%	9.7%	10.9%	11.7%	12.3%
Growth (% QoQ)	0	0	0	0	0
Growth (% YoY)	0.0%	0.0%	0.0%	0.0%	0.0%
Interest	4.73	2.08	4.00	4.00	4.00
Other Income	37	68	88	110	135
PBT	**250**	**366**	**501**	**672**	**870**
Tax	(17)	(69)	(95)	(131)	(174)
Eff tax rate (%)	*7.0%*	*18.8%*	*19.0%*	*19.5%*	*20.0%*
Recurring PAT	**232.5**	**297.4**	**405.5**	**541.3**	**696.1**
PAT Margins (%)	*9.6%*	*9.7%*	*10.6%*	*11.1%*	*11.6%*
Growth (% YoY)	*21.5%*	*27.9%*	*36.4%*	*33.5%*	*28.6%*
Exceptional items	-	68	-	-	-
Net income	233	230	406	541	696

Source: Company Reports, Citigroup Investment research estimates

Figure 24. Balance Sheet (Rupees Million, Percent)

as at Mar31	FY05A	FY06	FY07E	FY08E	FY09E
Share capital	168	279	283	288	293
Share allocation money	3	-	-	-	-
ESOP outstanding	8	8	8	8	8
Reserves and Surplus	1,240	3,563	3,826	4,214	4,748
Total	1,419	3,850	4,117	4,510	5,049
Loan Funds	15	12	32	52	72
Current liab. And Prov.	338	381	579	701	873
Current Liabilities	254	266	437	529	659
Provisions	84	115	142	172	214
Total Liabilities	**1,772**	**4,243**	**4,727**	**5,263**	**5,993**
Gross Block	1,603	1,895	2,191	2,520	2,859
Less: Accum. Deprn	(733)	(918)	(1,114)	(1,360)	(1,646)
Net Block	870	977	1,077	1,160	1,213
Total	*877*	*1,011*	*1,511*	*1,794*	*1,847*
Capitalised Prod. Costs	-	141	141	141	141
Investments	6	7	9	11	11
Current Assets	-	-	-	-	-
Inventories	2	33	12	14	18
Sundry Debtors	541	653	981	1,216	1,478
Cash and Bank	109	2,012	1,694	1,657	1,964
Loans and Advances	237	385	378	429	534
Others	-	-	-	-	-
Gross Current Assets	889	3,083	3,066	3,316	3,994
Net Current Assets	551	2,702	2,486	2,615	3,122
Total Applications	**1,772**	**4,243**	**4,727**	**5,263**	**5,993**

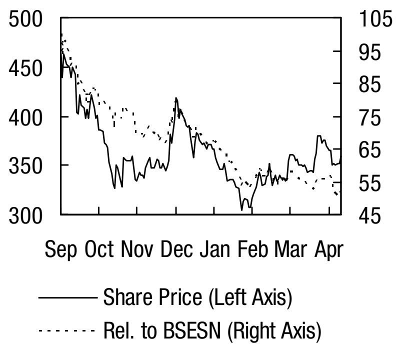
Source: Company Reports and Citigroup Investment Research estimates

Figure 25. Cash Flow (Rupees Million, Percent)

Yr to March	FY05A	FY06	FY07E	FY08E	FY09E
PAT	**233**	**230**	**406**	**541**	**696**
Deprn & amortization	142	170	196	246	287
Interest & dividend income	-	-	-	-	-
Other non-cash adjustments	(12)	(129)	(12)	(12)	(12)
Changes in working capital	(146)	(248)	(101)	(166)	(199)
Operating Cash Flow	**217**	**22**	**488**	**608**	**771**
Purchase of fixed assets	(239)	(319)	(696)	(529)	(339)
Investments in securities	21	(1)	(2)	(2)	-
Investing Cash Flow	**(218)**	**(320)**	**(698)**	**(531)**	**(339)**
Issue of equity (incl stock options)	27	108	4	5	5
Dividends paid	(43)	(58)	(96)	(143)	(153)
Increase/(Decrease) in debt	10	(3)	20	20	20
Reserves	80	2,188	-	0	(0)
Financing Cash Flow	**75**	**2,221**	**(72)**	**(118)**	**(128)**
Others / Impact of FX changes	8	(19)	(35)	3	3
Change in cash/equivalents	**81**	**1,903**	**(317)**	**(38)**	**308**
Yr Beginning cash/equivalents	**27**	**109**	**2,012**	**1,694**	**1,657**
Yr End cash/equivalents	**109**	**2,012**	**1,694**	**1,657**	**1,964**

Source: Company Reports and Citigroup Investment Research estimates

Figure 26. Sasken: Price Performance



Source: Citigroup Investment Research

Figure 27. Stock Performance

(%)	3M	6M	12M
Absolute	6.9	9.8	9.8
Rel. to .BSESN	(14.4)	(27.0)	(41.5)

Source: Citigroup Investment Research

Background

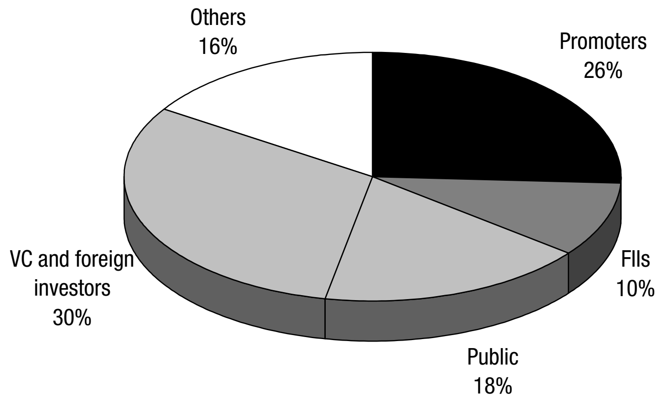
Established in 1989, Bangalore based Sasken had revenues of US$68m (+27% yoy) and 2575 employees in FY06. After initially working on electronic design automation (EDA) projects for few years, Sasken diversified into communication software space in 1993 and now delivers embedded software services to semi conductor vendors, network equipment manufacturers, device manufacturers and service provider in wireless and broadband space. It also offers products/solutions for intellectual property software components, R&D and product development services for clients. Products, currently contribute a small proportion of revenues (9.0% of revenues in FY06 vs. 25.5% in FY04) with software services (91% of revenues in FY06) being the primary revenue driver over the last few years

Management Background

Mr. Rajiv C Mody, Chairman and Chief Executive Officer founded Sasken in 1989. Prior to Sasken, Mr. Mody has worked in companies in US and holds a Masters degree in Computer Science from New York.

Ms. Neeta Revankar, chief financial officer heads the finance, legal and secretarial department at Sasken and has been heading the finance function at Sasken since April 1995. She is a chartered accountant and company secretary by qualification and worked with Microland, Bangalore prior to Sasken.

Figure 28. Sasken: Shareholding Pattern as of Mar-06



Source: Company Reports

Sasken Communication Technologies Ltd

Company Description

Established in 1989, Bangalore-based Sasken had revenues of US$68m (+27% yoy) and 2575 employees in FY06. After initially working on electronic design automation (EDA) projects for a few years, Sasken diversified into communication software space in 1993, and now delivers embedded software services to semiconductor vendors, network equipment manufacturers, device manufacturers and service providers in the wireless and broadband space. It also offers products/solutions for intellectual property (IP) software components, research and development and product development services for clients. Revenues comprise primarily software services (91% of revenues in FY06) and products 9%.

Investment Thesis

We rate Sasken Buy/Medium risk with a 12-month price target of Rs430, based on a sum-of-the-parts valuation of its products and services businesses. Convergence and increasing competition are driving telecom vendors to outsource their product software work to lower cost geographies, as sourcing can help cut research costs for product development by up to 60%.

Consequently, the telecom vertical space for companies like TCS, Infosys, Wipro and HCL Tech has already witnessed improved growth rates with revenues growing 20%-30% over the last year.

Sasken focuses primarily on the telecom vertical space, derives the majority of its revenues from telecom-related clients. We expect Sasken to maintain healthy net profit growth rate of 32% CAGR over FY06-09E, driven largely by services and lower losses from investments in products. Better visibility on products and increasing traction in services is also likely to help improve earnings visibility.

Management expects product revenues from integrated solutions to start contributing from 4QFY07 onwards. We have not modeled any significant upside from products in our FY07E/FY08E estimates. Products currently comprise a small proportion of revenues (9.0% in FY06 vs. 25.5% in FY04). Any success in new products could provide significant operating leverage, resulting in higher-than-expected earnings growth in 2H07 and FY08.

The stock has significantly underperformed the market since listing in FY05. We believe the lack of any near-term triggers, volatility on product revenues and concerns on sub-scale service offerings are currently in the price, and hence see limited downside risk to the stock from current levels.

Valuation

We rate Sasken Buy with a 12-month target of Rs430based on a sum-of-the-parts valuation of the services and products businesses.

We apply a target EV/EBIT of 18x June FY07 EBIT for services, which gives a value of Rs420. This multiple is in line with that for smaller IT services companies and at the lower end of its own historical trading range of 18x-30x. Products revenues are currently too small and loss making and we value them off a P/S multiple. We assign a 1x P/Sales multiple to the products business, giving a value of Rs10/share.

As a cross-check, our price target is also supported by FY07E P/Sales multiple of 3.1x, which is within the stock's 1-year historical trading range of 2.2x to 3.6x and consistent with our view that, due to a lack of near term triggers, the stock is likely to trade within its recent trading range.

Risks

We assign a Medium Risk rating to Sasken. Although Citigroup's quantitative rating system gives a Speculative risk rating, as the trading history is less than 265 days, we believe a Medium risk rating is more appropriate, putting it in line with the risk rating of its peers in our IT services coverage universe. Also, Sasken now has a high proportion of services revenues and a less volatile products revenue contribution.

Following are key risks that may prevent the stock reaching our target price:

1. Dependence on few large customers - if any of these contracts are not renewed or reneged, our estimates may be adversely affected.

2. Sasken derives almost all its revenues from the Telecom vertical space. This focus on one vertical can be a risk in case of a downturn in the telecom industry.

3. Risk of technology obsolescence – Sasken focuses on high-end tech segments in communications. The industry is heavily standards-driven and emerging standards could lead to technology obsolescence of its current offerings.

4. Revenues for products are based on royalties, which are linked to the successes of their customers, thereby exposing Sasken to developments in the global market place. Consequently, higher–than-expected losses from products is a risk that can affect overall earnings.

5. Sasken has issued equity shares to customers (Nortel) at a discounted price and may have to take non-cash charges in future, which is a risk to our estimates.

6. Compensation charges that the company may incur on its income statement because of non-compete agreements signed with employees, restricting them from joining competition for a specified duration after leaving Sasken.

7. Skill-sets and expertise are very domain-client specific, and hence diversification into other verticals will be relatively more difficult.

8. Any significant appreciation of the Rupee could adversely impact margins.

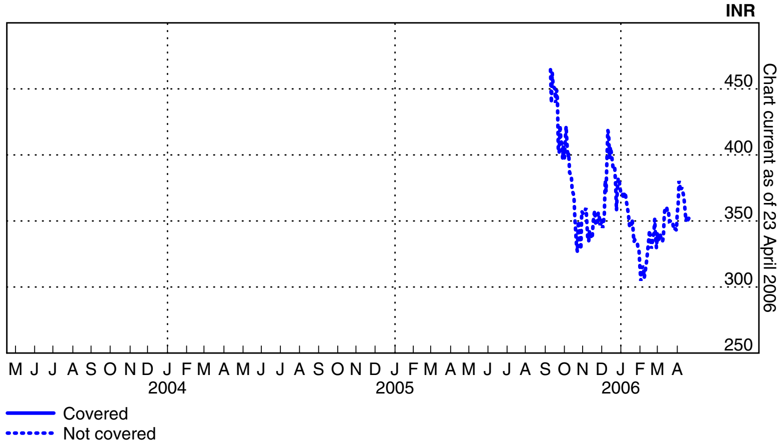
9. Country and legislative risks in regions where Sasken operates, including the US, Europe and India. Any losses arising from arbitration proceedings or disputes can have a financial impact in the near term.

Analyst Certification Appendix A-1

We, Vipin Khare and Pratik Gupta, research analysts and the authors of this report, hereby certify that all of the views expressed in this research report accurately reflect our personal views about any and all of the subject issuer(s) or securities. We also certify that no part of our compensation was, is, or will be directly or indirectly related to the specific recommendation(s) or view(s) in this report.

IMPORTANT DISCLOSURES

Sasken Communication Technologies Ltd (SKCT.BO)
Ratings and Target Price History - Fundamental Research



#	Date	Rating	Target Price	Closing Price

*Indicates change.

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Data current as of 31 March 2006	Buy	Hold	Sell
Citigroup Investment Research Global Fundamental Coverage (2725)	41%	42%	18%
% of companies in each rating category that are investment banking clients	46%	43%	32%
India -- Asia Pacific (108)	45%	22%	32%
% of companies in each rating category that are investment banking clients	49%	58%	49%

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Risk ratings, which take into account both price volatility and fundamental criteria, are: Low (L), Medium (M), High (H), and Speculative (S).
Investment ratings are a function of Citigroup Investment Research's expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating.
For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings are: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).
Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

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