

28 June 2006

Initiate Coverage

SERIAL SYSTEM

Unexciting Prospects

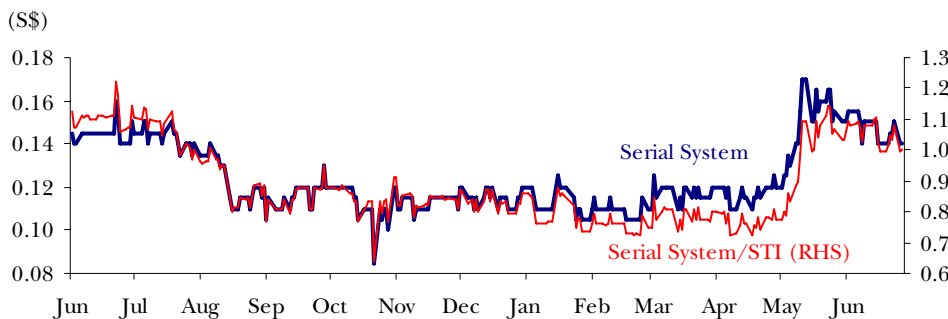
HOLD | S\$0.14

Serial System distributes semiconductors and components. The Group has an established network in Asia Pacific offering design support, materials planning, inventory management and assembly services. Sales to China and South Korea represent 75% of the Group's revenue. Singapore accounts for a mere 10%.

**Dismal 2005 earnings on impairment charges and inventories writedown.** Sales contracted 3% in FY05 to S\$304m from S\$314m in FY04. Net loss of S\$6m was also a 53% jump over FY04's loss of S\$3.9m. The spike in losses was due to a provision of impairment loss on goodwill and properties, a currency translation loss and inventories writedown in the consumer digital appliances business. These amounted to S\$4.0m. The consumer digital appliances business has since been sold.

**Sales may rebound, but margin remains under pressure.** Management is confident that sales are likely to rebound in FY06, stemming largely from stronger demand in China. China contributes over 40% of the Group's revenue. However, there is limited visibility to the Group's earnings prospects in view of the stiff competition among semiconductor and components distribution players. We project the Group to breakeven in FY06.

**No near-term catalyst but undemanding valuation of 0.67x P/B likely to limit downside.** Serial is presently trading close to its all-time low P/B of 0.6x. However, we believe the depressed share price is likely to stay unless there is a convincing turnaround in the Group's operations. Initiate coverage with a HOLD.



Sector Technology  
 Bloomberg SERL SP  
 Website www.serialsystem.com.sg

Exchange Rate S\$1.5955/US\$

52-Wk Range (S\$) 0.17/0.085  
 52-Wk Avg Daily Vol. ('000) 117

No. of Shares (m) 364.6  
 Market Cap (S\$m) 51.1  
 (US\$m) 32.0

Major Shareholders (%)  
 Derek Goh Bak Heng 18.8  
 Goi Seng Hui 11.6

Book NTA per Share (S\$) 0.20  
 ROE (%) (7.6)  
 Net Debt per Share (S\$) 0.09

Alternate Instruments  
 Serial System 090206; Ex-Pr: \$0.12

Results Due  
 1Q: n.a 1H: Aug  
 3Q: n.a Final: Feb

Market PE - STI (x)  
 2005 11.8  
 2006F 14.0

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Year to 31 Dec	Turnover (S\$m)	EBITDA (S\$m)	Net Profit (S\$m)	EPS (¢)	EPS Growth (%)	PE (x)	EV/EBITDA (x)	DPS (¢)
2004	313.6	(2.5)	(4.0)	(1.32)	n.a.	n.a.	n.a.	0.3
2005	303.7	(1.3)	(6.0)	(1.97)	n.a.	n.a.	n.a.	0.0
2006F	332.1	4.6	(0.0)	(0.00)	n.a.	n.a.	18.4	0.0
2007F	348.7	4.6	0.6	0.15	n.a.	90.5	18.5	0.0
2008F	366.1	5.7	1.7	0.46	196.1	30.6	14.9	0.0

Consensus net profit – n.a.

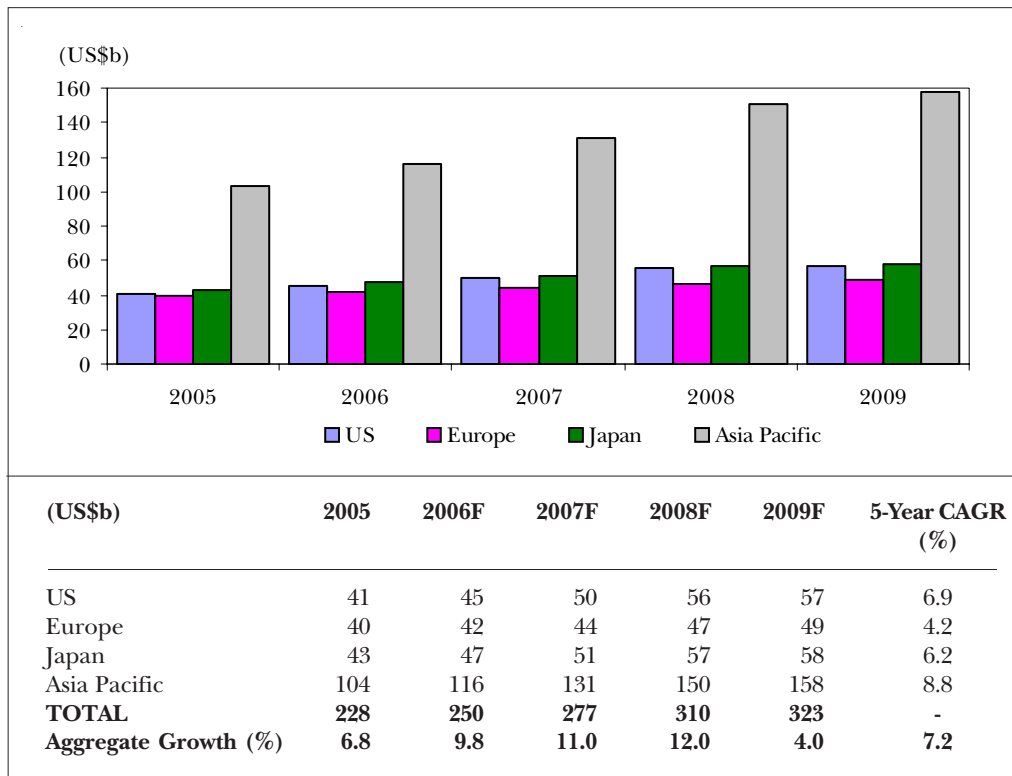
## Investment Highlights

**Footprints in North Asia.** The Group's distribution business is largely entrenched in the PC, Telecom and Consumer Electronics segments. Management plans to focus its efforts in North Asia such as China, Taiwan and Korea. In FY05, semiconductor and components distribution represented 99% of sales with the remaining 1% from consumer digital appliances sales. This segment has since been sold.

**Sales likely to rebound in FY06.** The Group has an established network of operations in Asia Pacific, with exposure to Greater China (47% of sales), South Korea (32%) and South East Asia (17%). The last three years have been a trying period for the Group with sales contracting by a CAGR of 3%. Management is, however, confident revenue will rebound in FY06. Growth is expected to stem largely from China and Taiwan. China offers a lucrative component distribution market for international players, with market watchers projecting this segment to expand by between 7% and 9% in 2006.

**Worldwide semiconductor sales forecast to expand by a 5-year CAGR of 7.2%.** The Semiconductor Industry Association (SIA) is projecting worldwide sales of semiconductors to expand by 9.8% to US\$250b in 2006. Against this backdrop, we assume Serial's distribution sales to expand by the same quantum in FY06. SIA projects global semiconductor sales to grow by 11% in 2007, 12% in 2008 and 4% in 2009. The 5-year CAGR is projected at 7.2%.

**Figure 1: Worldwide Semiconductor Sales By Region**



Source: Semiconductor Industry Association

**Figure 2: Segmental Breakdown**

Year to 31 Dec (S\$m)	2004	2005	2006F	2007F	2008F
<b>Revenue</b>					
Semiconductors/Components Distribution	309.3	301.9	332.1	348.7	366.1
Consumer Digital Appliances	4.3	1.8	0.0	0.0	0.0
Other Operations	0.0	0.0	0.0	0.0	0.0
<b>Net Profit</b>					
Semiconductors/Components Distribution	8.7	(3.4)	0.0	0.6	1.7
Consumer Digital Appliances	(7.1)	(5.4)	0.0	0.0	0.0
Other Operations	0.0	0.0	0.0	0.0	0.0
<b>Net Profit Margin (%)</b>					
Semiconductors/Components Distribution	2.8	(1.1)	0.0	0.2	0.5
Consumer Digital Appliances	(165.1)	(300.0)	0.0	0.0	0.0
Other Operations	n.m	n.m	0.0	0.0	0.0

Source: Serial System, UOB Kay Hian

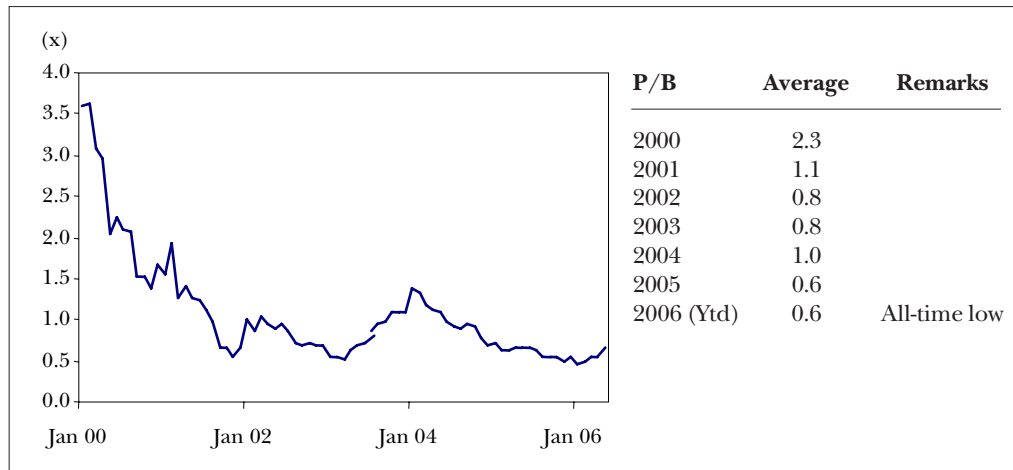
## Valuation

**No near-term catalyst but undemanding valuation of 0.67x P/B likely to limit downside.** Serial is presently trading close to its all-time low P/B of 0.6x. However, we believe the depressed share price is likely to stay unless there is a convincing turnaround in the Group's operations. Initiate coverage with a HOLD.

**Figure 3: Peer Comparison**

	Price @ 13/6/06 (\$)	Market Cap (S\$m)	PE Hist (x)	PE Fwd (x)	Hist EPS (¢)	Total Yield (%)	Price/ NTA (x)	ROE (%)	Net Gearing (%)
Serial Systems	0.15	54.7	n.a.	n.a.	(1.97)	0.0	0.8	(7.6)	(48.4)
Nucleus Electronics	0.145	31.9	6.3	n.a.	2.30	5.2	1.0	12.0	29.4
Excelpoint Technology	0.13	63.2	50.0	n.a.	0.26	1.9	0.9	1.8	11.0
Achieva	0.065	32.5	14.1	n.a.	0.46	0.0	0.5	3.6	(24.0)
Esmart Holdings	0.09	14.1	n.a.	n.a.	(1.06)	0.0	3.0	(18.0)	9.1
Flextech Holdings	0.21	47.1	7.6	n.a.	2.75	0.0	1.1	10.6	(10.1)
SNF Corp	0.10	15.5	10.5	n.a.	0.95	0.0	0.8	7.9	(5.0)
Ultron Technologies	0.075	15.1	n.a.	n.a.	(13.29)	0.0	0.7	(80.6)	(8.8)
Willas-Array Electronics	0.125	38.3	7.6	n.a.	1.65	9.6	0.6	7.4	(32.8)
Westech Electronics	0.20	22.5	6.3	3.8	3.17	7.5	0.7	12.2	21.1
Unidux Electronics	0.055	6.6	8.9	n.a.	0.62	0.0	0.5	5.4	29.6
Gates Electronics	0.065	4.5	11.0	n.a.	0.59	0.0	0.5	4.6	(4.1)
<b>Average (Excl Serial)</b>			<b>13.6</b>				<b>0.9</b>		

Source: Bloomberg

**Figure 4: Price-to-Book Ratio**

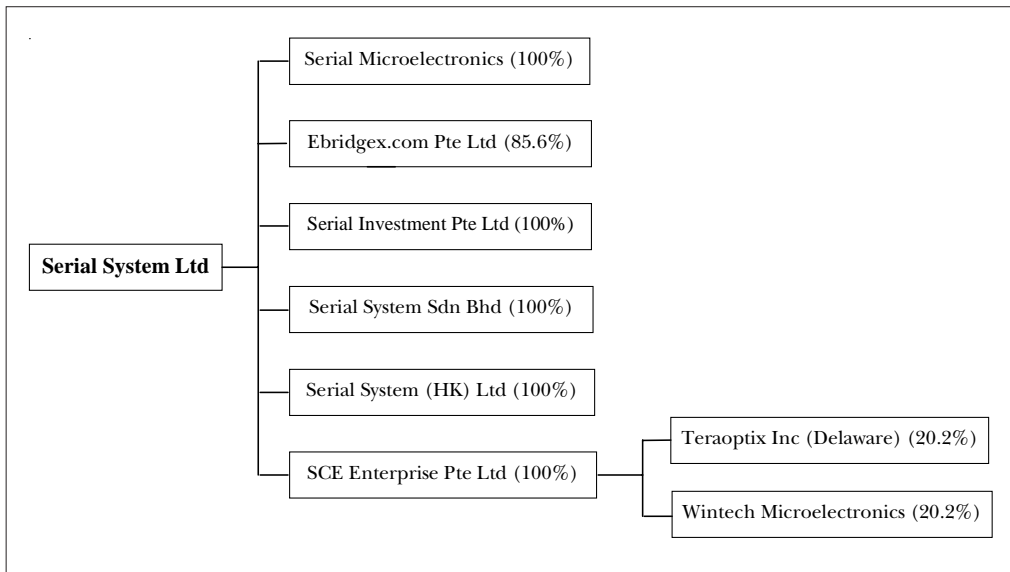
Source: Datastream

## ***Company Background***

**Serial System was established in Singapore in 1998** as a distributor of electrical and electronic components. It was incorporated in Apr 92 as a private limited entity, admitted to SESDAQ in 1997 and upgraded to the Mainboard in Jul 2000. The Group has an established network of offices, operations and representations in Singapore, China, Hong Kong, Malaysia, South Korea, Taiwan, and Thailand.

**Serial Microelectronics (SMPL)** is the Group's wholly-owned subsidiary largely responsible for the distribution business in Singapore, Malaysia and Thailand. It focuses on the distribution of semiconductor and passive electronics components, provides local sales and marketing support, value-added and design-in services to customers in the electronics manufacturing base and maintains supplier-brand focus and market share for their franchise partners. SMPL posted a S\$0.9m loss in FY05, and a loss of S\$2.2m in FY04. The improvement came on the back of higher-margin sales.

**Suppliers include well-established names** such as Texas Instruments, Silicon Storage Technology, Agilent Technologies, Philips Semiconductors, Tyco Electronics, TT Electronics, Genesis Microchip, Analog Devices, Hitachi Global Storage Technologies, Micron Semiconductor Asia, and Wolfson Microelectronics.

**Figure 5: Corporate Structure**

Source: Serial System

## SERIAL SYSTEM DESIGN CENTRES

Serial consolidates its investments in research and development in a single agency known as Design Center Advocacy Programmer (DCAP). DCAP promotes R&D and cross-territory sales of products and integrates the Group's various businesses and design centres, with the common objective of securing design wins. Apart from showcasing the technical competency of the Group, DCAP also helps to create new demand, enhance margins and increase strategic leverage to key suppliers for the Group's semiconductors and components distribution business.

The Group has three design centres strategically located within Asia Pacific: Singapore, Korea and China (Shenzhen).

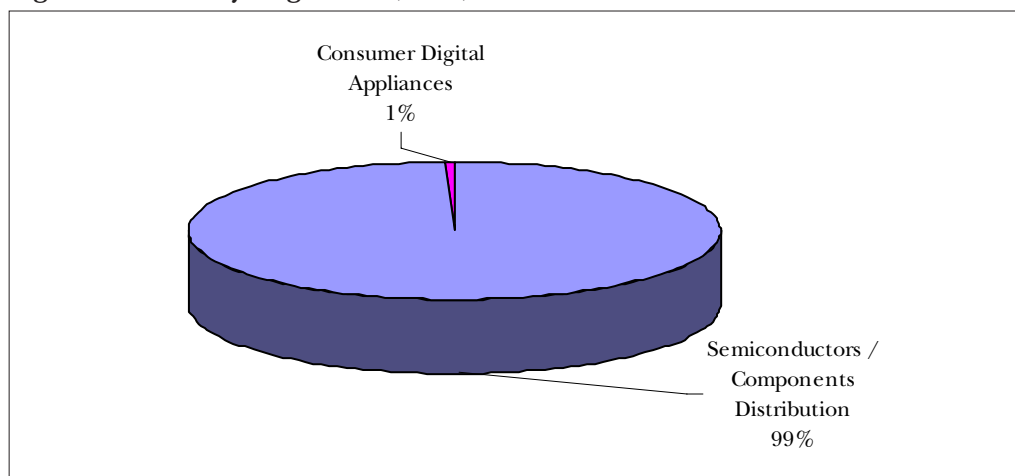
**Singapore.** This centre is entrenched in the design and development of embedded digital audio and video appliances. It was established in 1995 with Video CD player development, and now provides state-of-the-art high definition digital video display solutions. Its technical solutions have appeared in many international consumer electronics products in the form of VCD players, DVD players, VCD+SEGA gaming machines, SVCD players, VCD Recorders, Audio CD recorders and MP3 CD Recorder solutions.

The centre is now working with high definition video formats, using advance video processors and scalar to enable high quality video display on LCD or Plasma panel. Supplemented with sophisticated software application development, the design centre now provides complete LCD TV reference solution, which can be customised to suit the requirement of any OEM manufacturers.

**Korea.** BONA Technology Inc (Korea), a subsidiary of the Group, focuses on developing complete solutions and products in the communication segment. BONA is also the authorised Value Added Reseller (VAR) of Texas Instruments (T.I.) and works very closely with T.I. in developing reference designs and solutions based on T.I. core processor chips (ARM/MIPS/DSP). Core technical competency has been developed in the area of Voice over Internet Protocol (VoIP), Data/Voice over Cable Modem (VoCM) and Global Position System (GPS) Receiver.

**China (Shenzhen).** The centre provides value-added design services to the many Original Equipment Manufacturers (OEM) and Original Design Manufacturers (ODM) in China and Hong Kong. The team is capable of creating and customising solutions to meet customers' requirements.

**Figure 6: Sales By Segments (2005)**



*From FY06, sales will be fully derived from semiconductors / components distribution.*

Source: Serial System

**Figure 7: Management Team**

Manager	Current Appointment	Other Information
Derek Goh Bak Heng	Executive Chairman / Group CEO	Founded Serial System in 1988. Oversees the Group's components distribution business. Conferred the "Entrepreneur of the Year Award" in 1996 by the Rotary Club of Singapore and Association of SME. Also conferred the "ASEAN Best Young Entrepreneur Award" in 1999 by the ASEAN Secretariat.
Chin Yeow Hon	Group Senior Vice President/Acting CEO	n.a
Roland Chan	Group Senior Vice President	n.a
Alex Wui	Group Financial Controller	n.a

Source: Serial System

**Figure 8: Profit & Loss**

Year to 31 Dec (\$m)	2004	2005	2006F	2007F	2008F
<b>Sales</b>	<b>313.6</b>	<b>303.7</b>	<b>332.1</b>	<b>348.7</b>	<b>366.1</b>
Cost of sales	(282.9)	(270.2)	(295.6)	(310.3)	(325.9)
<b>Gross Profit</b>	<b>30.7</b>	<b>33.5</b>	<b>36.5</b>	<b>38.4</b>	<b>40.3</b>
Other Operating Income	6.9	4.1	4.1	4.0	4.0
Distribution Costs	(16.5)	(20.8)	(19.9)	(20.9)	(22.0)
Administrative Expenses	(6.0)	(5.4)	(6.0)	(6.3)	(6.6)
Other Operating Expenses	(19.6)	(15.4)	(14.9)	(15.0)	(14.6)
Net Finance Costs	(1.6)	(2.4)	(2.3)	(2.1)	(1.9)
<b>Pre-tax Profit</b>	<b>(1.9)</b>	<b>(5.1)</b>	<b>(0.0)</b>	<b>0.6</b>	<b>1.7</b>
Taxation	(2.0)	(0.9)	0.0	0.0	0.0
<b>Profit After Tax</b>	<b>(3.9)</b>	<b>(6.0)</b>	<b>(0.0)</b>	<b>0.6</b>	<b>1.7</b>
Minority Interests	(0.1)	0.0	0.0	0.0	0.0
<b>Net Profit</b>	<b>(3.9)</b>	<b>(6.0)</b>	<b>(0.0)</b>	<b>0.6</b>	<b>1.7</b>

Source: Serial System, UOB Kay Hian

**Figure 9: Balance Sheet**

Year to 31 Dec (\$m)	2004	2005	2006F	2007F	2008F
<b>Non-Current Assets</b>	<b>69.5</b>	<b>67.9</b>	<b>66.4</b>	<b>65.3</b>	<b>64.2</b>
Property, Plant & Equipment	19.6	17.1	16.3	16.2	16.5
Intangible Assets	12.8	9.5	11.5	12.1	12.7
Investment in Associate Company	34.4	38.1	35.5	34.0	32.0
Others	2.8	3.1	3.0	3.0	3.0
<b>Current Assets</b>	<b>83.2</b>	<b>127.9</b>	<b>128.3</b>	<b>138.4</b>	<b>147.3</b>
Stocks	36.2	49.8	44.4	46.6	48.9
Trade and Other Receivables	37.4	62.2	59.8	62.8	65.9
Cash & Equivalents	9.2	14.5	20.0	25.0	30.5
Others	0.4	1.4	4.1	4.1	2.0
<b>Current Liabilities</b>	<b>70.7</b>	<b>88.5</b>	<b>78.9</b>	<b>81.3</b>	<b>86.6</b>
Borrowings	39.7	34.0	34.7	35.0	38.0
Trade and Other Payables	29.7	53.7	43.0	45.1	47.4
Current Tax Liabilities	1.3	0.7	1.2	1.2	1.2
<b>Non-Current Liabilities</b>	<b>2.6</b>	<b>21.6</b>	<b>21.3</b>	<b>21.3</b>	<b>21.3</b>
Borrowings	0.9	19.9	19.9	19.9	19.9
Deferred Tax Liabilities	1.0	1.0	1.0	1.0	1.0
Others	0.7	0.6	0.4	0.4	0.4
<b>Shareholders' Funds</b>	<b>75.4</b>	<b>81.5</b>	<b>90.5</b>	<b>95.1</b>	<b>99.6</b>
Share Capital	30.4	36.5	38.0	40.0	42.0
Share Premium	49.1	50.0	50.0	50.0	50.0
Others	(4.1)	(5.0)	2.5	5.1	7.6
Minority Interests	3.9	4.3	3.9	6.0	4.0
<b>Total Equity</b>	<b>79.4</b>	<b>85.8</b>	<b>94.4</b>	<b>101.1</b>	<b>103.6</b>

Source: Serial System, UOB Kay Hian

Figure 10: Cash Flow

Year to 31 Dec (S\$m)	2004	2005	2006F	2007F	2008F
<b>Operating</b>	<b>(6.9)</b>	<b>(9.6)</b>	<b>5.8</b>	<b>6.0</b>	<b>7.4</b>
Pre-tax Profit	(6.1)	(6.4)	(0.0)	0.6	1.7
Depreciation & Amortisation	1.5	1.8	1.8	1.6	1.7
Working Capital Changes	(8.4)	(12.5)	(2.9)	(3.1)	(3.2)
Income Tax Paid	(2.6)	(1.6)	0.0	0.0	0.0
<b>Investing</b>	<b>(9.4)</b>	<b>(4.8)</b>	<b>(3.0)</b>	<b>(3.5)</b>	<b>(4.1)</b>
Capex	(7.8)	(0.5)	(1.0)	(1.5)	(2.0)
Proceeds From Sale of Plant and Equipment	0.5	0.1	0.2	0.4	0.6
Others	(2.1)	(4.3)	(2.2)	(2.4)	(2.7)
<b>Financing</b>	<b>12.2</b>	<b>20.7</b>	<b>2.8</b>	<b>2.5</b>	<b>2.3</b>
Net Borrowings	14.9	(6.5)	5.0	5.0	5.0
Dividends Paid	(1.0)	(0.6)	(1.0)	(1.3)	(1.5)
Others	(1.6)	27.9	(1.2)	(1.2)	(1.2)
<b>Net Cash Inflow/(Outflow)</b>	<b>(4.1)</b>	<b>6.3</b>	<b>5.5</b>	<b>5.0</b>	<b>5.5</b>
<b>Cash &amp; Cash Equivalent at Start of Year</b>	<b>12.2</b>	<b>8.2</b>	<b>14.5</b>	<b>20.0</b>	<b>25.0</b>
<b>Cash &amp; Cash Equivalent at End of Year</b>	<b>8.2</b>	<b>14.5</b>	<b>20.0</b>	<b>25.0</b>	<b>30.5</b>

Source: Serial System, UOB Kay Hian

Figure 11: Ratios

Year to 31 Dec (%)	2004	2005	2006F	2007F	2008F
<b>Growth</b>					
Sales	(3.4)	(3.2)	9.3	5.0	5.0
EBITDA	n.m	(47.6)	n.m	(0.4)	24.2
Pre-tax Profit	n.m	(163.2)	99.7	n.m	196.1
Net Profit	n.m	(52.9)	99.7	n.m	196.1
EPS	41.1	(40.9)	99.7	n.m	196.1
<b>Profitability</b>					
EBITDA Margin	(0.8)	(0.4)	1.4	1.3	1.5
Pretax Margin	(0.6)	(1.7)	(0.0)	0.2	0.5
Net Margin	(1.2)	(2.0)	(0.0)	0.2	0.5
ROA	(2.6)	(3.1)	(0.0)	0.3	0.8
ROE	(4.9)	(7.0)	(0.0)	0.6	1.6
<b>Leverage</b>					
Long-Term Debt/Equity	1.2	24.5	22.0	21.0	20.0
Total Debt/Total Assets	26.6	27.6	28.1	27.0	27.4
Total Debt/Equity	53.8	66.2	60.4	57.8	58.2
Net Debt (Cash)/Equity	41.7	48.4	38.2	31.5	27.5
Interest Cover (x)	(2.5)	(1.5)	(0.1)	0.1	0.5
<b>Working Capital Management (Days)</b>					
Debtors' Turnover	44	75	66	66	66
Creditors' Turnover	35	65	47	47	47
Inventory Turnover	47	67	55	55	55

Source: Serial System, UOB Kay Hian

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