

**Global Technology Team
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Technology

Q1 2006 Global Technology Data Book

Key Additions and Revisions: The majority of 2006 growth estimate revisions made in this edition were overwhelmingly positive, although expectations for 1Q06 appear more muted than a quarter ago. Notably, this is the second consecutive quarter in which our analysts have upwardly revised carrier capex, IT services, and semiconductor capex estimates. Meanwhile, we'd highlight two downward revisions, WLAN revenue and total Interactive Entertainment (Gaming) revenue, both partly due to a stronger than previously expected 2005. In addition, we added more granular storage metrics, including NAS, Networking, and storage software revenue. These three areas are expected to grow in the low to mid-teens in 2006.

Themes for 2006: Our analysts' view of 2006 is being guided by several new product cycles that are expected to impact demand and pricing trends, including Microsoft Vista, and expectations for parts of the hardware food chain are more back-end loaded (i.e. NBs). Our analysts are looking for continued positive revenue growth in many sectors within their industries in 2006, and another upward tweak to global GDP this quarter further supports this view.

Premium and Slower Growth Markets: In 2006, our analysts expect strength in game consoles, iPod units, integrated digital TVs, LCD monitors, Taiwan notebook units, SSL VPN Appliances revenue, messaging security revenue, VoIP revenue, Internet advertising revenue, and software revenue in India. Weakness is expected in inkjet printers, Unix servers, DVD player and digital still camera revenue, and global consulting billing rates.

Please see page 41 of this report for a complete list of our global industry views related to technology.

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Please see analyst certification and other important disclosures starting on page 44.

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Q1 2006 Global Technology Data Book

Introduction

The Global Technology Data Book is a compilation of the most relevant data points for the technology sector from Morgan Stanley's Global Technology Research Team. The report incorporates more than 400 sets of data with thousands of individual data points compiled from seven technology sub-sectors (Computing Hardware, Communications Equipment, Consumer Electronic Devices, Semiconductors, Enterprise Software, Internet & Consumer Software, and IT services) and non-traditional end markets such as the automotive industry. This is an effort comprising more than 30 teams and more than 80 analysts around the world. Historical and projected data on an annual and quarterly basis are provided for most of the categories.

Key Themes for 2006; GTDB revisions and additions

Morgan Stanley's global team of technology analysts are forecasting several new product cycles to emerge in 2006 that should help drive demand and pricing trends. While macro economic issues may depress results in the first half of the year, the new product cycles are likely to emerge in the second half. Some of these product cycle opportunities include virtualization for servers, blade servers and storage aggregation, Microsoft's Vista, 3G cell phones reaching mainstream price points, VoIP merging with cellular technology, 802.11n and 802.16e, new video game platforms, digital TV, high definition video applications, fiber to the home/node/premise, NAND flash enabled portable applications, and RFID. As a result, themes such as the digital living room appear to be gaining traction in 2006, and our analysts are expecting significant strength in various Consumer Electronics products, including game consoles as next-generation products enter the market, iPod units, and integrated digital TVs.

Revisions. We highlight that the majority of 2006 growth estimate revisions made in this edition were overwhelmingly positive, although expectations for 1Q06 appear more muted than a quarter ago. Notably, this is the second consecutive quarter in which our analysts have upwardly revised carrier capex, IT services, and semiconductor capex estimates. Meanwhile, we only find two major negative revisions. 1) WLAN revenue, from double digit growth to single digit

decline, mostly due to a stronger than forecast 2005 and a slight downward revision to 2006 expectations; 2) Total Interactive Entertainment (Gaming) revenue, also partly due to a stronger 2005 than previously expected. Separately, MPU unit forecasts have gone higher, but our analysts now have meaningfully more aggressive ASP pressure expectations that translate into an overall lower revenue estimate for 2006.

New additions to the GTDB. We have added more granular storage metrics, including NAS, Networking, and storage software revenue. These three areas are expected to grow in the low to mid-teens in 2006, but our analysts have a positive bias to these estimates and expect numbers to go higher.

Exhibit 1

Highlighting Some of the Growth Revisions

		2006 Growth
Japan GDP	↑	3.2% from 2.5%
Notebook Revenue	↑	6% from 1%
San Revenue	↑	12% from 9%
Wireline Carrier Capex	↑	4% from 2%
Router Revenue	↑	27% from 5%
PLD Revenue	↑	16.7% from 13.9%
Semiconductor Capex	↑	10.1% from 6.6%
Foundry Capacity Utilization*	↑	91% from 86%
APAC Internet Users	↑	27% from 16.5%
Avg. Daily Internet Page Views	↑	34% from 20%
IT Services Total Revenue	↑	8% from 6%
US Corporate Capex	↓	10.5% from 11.1%
WLAN Revenue	↓	-3% from 22%
Total Gaming Revenue	↓	11% from 17%

*Not growth, but % Utilized

Source: Morgan Stanley Research estimates.

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 2

Estimated Year-Over-Year Growth Outlook by Sub-Sector in 2006

	<u>Strongest</u>	<u>Weakest</u>
Computing Hardware	Taiwan NBs 32%, LCD Monitors 20%, Disk Storage units 20%, Linux servers 20%	Inkjet Printer Revenue -5%; Unix Server Revenue -4%
Communications Equipment	EE Handset Replacement Units 52%, WCDMA products 33%, M.E./Africa Wireless Subscribers 32%, VoIP Revenue 31%, Taiwan Handset PCBs 22%	Non-CDMA or GSM Evolution Wireless Infrastructure Revenue -12%, WLAN Revenue -3%
Consumer Electronics	Integrated Digital TV Revenue 85%, DVD Recorder Revenue 61%, Gaming Hardware Revenue 48%, Flash-based MP3 Player units 49%	DVD Player Revenue -15%, Digital Still Camera Revenue -10%, VCR Revenue -10%, Projection Television Revenue -10%, Global PC Software Revenue -10%
Semiconductors	PLD Revenue 17%	DRAM Revenue 4%
Software	SSL VPN Appliances Revenue 33%, Messaging Security Revenue 31%	IDS/IPS Revenue 3%
Internet	Avg. Daily Page Views 34%, PayPal Payments 33%, Internet Advertising Revenue 30%, APAC Internet users 27%	NA Internet Users 6%
IT Services	India Software Revenue 30%, Offshore headcount 30%	Blended Global Consulting Billing Rate -7%
GDP	Asia ex-Japan 6.3%	Europe 2.2%

E= Morgan Stanley Estimates
Source: Morgan Stanley Research

Exhibit 3

Overview of Stock Market Performance by Sub-Sector

Stock Performance					
Sector	1 Week Performance	1 Month	3 Month	1 Year Performance	Year-to-Date
Cable & Satellite	0.5%	3.0%	4.8%	-1.8%	2.4%
Communications Equipment	0.5%	5.7%	7.8%	25.1%	10.2%
Computer Services & IT Consulting	-0.4%	4.1%	5.7%	21.8%	4.3%
Disti / EMS / VAR	-1.4%	0.3%	5.0%	3.7%	2.6%
Internet	0.0%	-7.5%	-12.4%	25.8%	-7.7%
Security Software	1.3%	1.9%	-3.6%	-7.2%	3.2%
Semiconductor Capital Equipment	-2.5%	3.8%	15.0%	23.4%	20.6%
Semiconductors	-1.7%	2.9%	16.2%	34.7%	15.8%
Software	-0.4%	-2.2%	1.5%	20.3%	0.8%
Systems & PC Hardware	-1.4%	-0.8%	4.9%	5.1%	6.5%
Telecom Services	0.4%	6.3%	7.9%	12.1%	10.0%

Source: Morgan Stanley Research, ModelWare
Results as of February 24, 2006
Note: Industry performance is an average of stocks covered by Morgan Stanley within each category.

PC Supply Chain Update

Morgan Stanley's PC unit forecast for 2006 remains unchanged from the 4Q05 edition, but estimates for the remainder of the foodchain have all ticked up (except for Taiwan NBs on a standalone basis). Taiwan desktop and notebook units went up roughly 400 bps combined, and Microprocessor units were up roughly 5 percentage points. The team continues to expect strong growth in the notebook market, or 18% for the overall market and 32% for Taiwan units, with significant outperformance over desktops in both markets. We note that the Taiwan estimates are looking for stronger growth than the rest of the estimates for the PC supply chain, and that the MPU revision is due to better than expected AMD results in 2005 and a subsequently meaningful upward revision to the 2006 forecast, while numbers for Intel remain unchanged. In addition, our analysts have raised their expectations for hard disk drive unit growth to 13%, although this is still below their original forecast of 14% (see the 3Q05 edition).

Exhibit 4

PC Supply Chain Update

2006E Unit Growth, Global		
	New	Prior
PCs	9.0%	9.0%
Desktop	5.0%	5.0%
Notebook	18.0%	18.0%
Taiwan DT & NB Units	25.4%	21.4%
Taiwan Desktop	23.0%	17.0%
Taiwan Notebook	32.0%	35.0%
Hard Disk Drives	13.0%	12.0%
Microprocessor	15.6%	10.6%
Intel	10.1%	10.1%
AMD	37.6%	13.2%

E = Morgan Stanley Research Estimates as of February 28, 2006
Source: Morgan Stanley Research

Wireless Handset Supply Chain Analysis

Our analysts continue to expect total handset unit sales growth to decelerate in 2006 for the second consecutive year, posting unit growth of about 11% versus unit growth of

about 19% in 2005 and 34% in 2004. New subscribers in developed markets are expected to only drive about 5% of total handset sales, while handset sales from new subscribers in emerging markets are expected to drive about 30% of total handset sales in 2006. Our team projects the overall replacement rate for 2006 will be around 29% of the subscriber base. Overall, our team's analysis suggests it is likely the increased mix of business from developing markets that will help to more than offset the growth of the higher ASP handsets (e.g. 3G), but they now expect a slightly milder decline of 6% (from \$153 to \$144) in the ASP of the total handset market (compared to a prior estimate for a 7% decline from \$150 to \$139 in the 4Q05 edition).

Exhibit 5

Wireless Handset Supply Chain

2005E & 2006E Growth, Global (figures in millions)			
	2005E	2006E	Y/Y Change
Wireless Subscribers	2,067	2,396	16%
Developed Regions	731	771	6%
Developing Regions	1,336	1,625	22%
Wireless Handsets	810	896	11%
New subscribers	318	305	-4%
Replacement units	492	590	20%
Replacement rate	29%	29%	0%
ASPs	\$153	\$144	-6%
Taiwan Handset PCBs	341	420	23%
Wireless Carrier Capex	\$92,175	\$97,435	6%

Source: Morgan Stanley Research as of February 28, 2006
E = Morgan Stanley Estimates

Feedback Is Welcomed

We would like to receive your feedback on how the Global Technology Data Book can be optimized for your needs. Please direct your comments to your Morgan Stanley salesperson or contact:

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Data Book Trends by Sub-Sector

• Communications Equipment

Our analysts have raised the global carrier capex estimates and now model 5% growth in 2006, slightly higher than 3% indicated in their previous model. Most of this positive revision comes from higher wireline capex, where our analysts now expect 4% growth y/y compared to the prior estimate of 2% growth, as several of the carriers included in the model are either reiterating or raising guidance in light of FTTx and IPTV-related network upgrades. AT&T, for example, significantly raised capex guidance for Project Lightspeed. On the wireless front, capex estimates have also been adjusted upwards. Our analysts now expect 6% growth in 2006, up from 3% previously expected due to increased coverage and capacity spending in the Asia Pacific region, as well as 3G spending in EMEA and Asia Pacific.

From a product perspective, our analysts expect the router market to grow 27% in 2006, up from 5% in the prior model, driven by strong demand for high-end carrier routers. Wireless LAN, on the contrary, is expected to decline 3% in 2006, down from 22% growth previously estimated, off of a much stronger than expected 2H05.

Overweight Idea: Motorola (MOT, \$22, Overweight-V, \$26 Price Target, covered by Scott Coleman and John Marchetti)

Our analysts' thesis on Motorola is based on increasing handset market share and improving handset operating margins. Longer term, Motorola's experience across wireless, broadband, and video positions it well for how networks evolve, services converge, and consumers' demand "any content, anywhere." Our analysts also estimate that a robust mix of high- and low-end handsets will minimize the price erosion during the year, and assume other market participants will not initiate significant price discounting to win back market share.

Overweight Idea: Cisco Systems (CSCO, \$21, Overweight-V, \$23 Price Target, covered by Scott Coleman and John Marchetti)

Our analysts' view Cisco as the company best positioned to benefit from transitions across wireline, wireless, enterprise and home networks over the next several years due to its commanding market share in core routing and switching and growing presence in key technology growth areas like VoIP, security, storage, WLAN and the digital living room.

Underweight Idea: Nokia (NOK1V.HE, €16, Underweight, €11 Price Target, covered by Adnaan Ahmad and Peter Dionisio)

Our analysts' thesis on Nokia is based on their view that the company's average selling price (ASP), margins, and market share will decline going forward as Nokia faces increased pressure from the low-end to the mid-to-high-end product segments. They believe that Nokia's leading position is under threat from the big Asian vendors and a reinvigorated Motorola. Assuming their thesis is correct, our analysts believe that management's current operational decisions (while to be applauded) will not alter the course of the handset industry's structural dynamics - i.e., increasing competition at the low-end and a move to consumer electronics at the mid-to-high-end. Our analysts believe that the main impact of relatively new competition at the low-end (including the sub-\$50 segment), primarily from Motorola, will likely appear in the form of price pressure. On the other hand, the impact of consumer electronics traits, such as market fragmentation, short product cycles, and lack of pricing power, would, in our analysts' view, be damaging to Nokia's revenue and margin structure.

• Computing Hardware

Our analysts' view new technology cycles in 2H06 (MSFT Vista, Intel Viiv, dual-core server and PC processors) as potential positive drivers for unit growth. New systems will require higher configurations and could provide ASP relief after 12 months of aggressive pricing. As a result, our analysts have a positive bias on the group in 2006 and look to be opportunistic with any 1H06 seasonal weakness. 4Q05 PC shipments were slightly lower than their forecast, due to weaker than expected Desktop demand (4% YoY growth vs. their forecast of 6%), but Notebook demand continued to be strong and came in line with their forecast of 22% unit growth. Hard Disk Drives demand was better than they had expected (revenues grew 10% vs. a 7% forecast) due to strength in notebook and consumer electronics applications.

For 2006, our analysts are sticking with their 9% PC unit growth estimate, which accounts for tough compares and technology transitions this year. However, they are raising their HDD unit growth forecast from 12% to 13% post tweaking the model to account for 4Q results and 1Q guidance. In storage, our analysts increased their estimates for SAN revenue growth (from 9% to 12% y/y in 2006) to better account for strong 4Q results and new product cycles (namely EMC Symmetrix), and their total 2006 y/y Storage hardware revenue growth estimate shifts from 4% to 5%.

March 3, 2006

Electronic Mfg Services/Distribution/Components

Our analysts continue to believe that AAPL and EMC are the strongest secular growth stories in the group.

Overweight Idea: Apple (AAPL, \$70, Overweight, \$90 Price Target, covered by Rebecca Runkle)

AAPL is evolving into a growth-driven portfolio franchise. With the healthiest business in five years and an impressive product pipeline, our analysts think estimates will continue to trend up through 2006. They believe management is doing the right thing by keeping expectations in check during the Intel transition and they are buyers on any near-term weakness. As the portfolio strategy expands, margins have the potential to increase similarly to other secular growth stories. As a result, upside exists to current expectations and AAPL shares continue to look attractive over the next 12-18 months.

Overweight Idea: EMC Corp. (EMC, \$15, Overweight-V, \$16 Price Target, covered by Rebecca Runkle)

Our analysts' operating leverage/new product thesis on EMC continues to hold in 2006, as Storage remains one of the top five IT priorities and EMC continues to be the leader and innovator in the market. With its product cycles gaining momentum (DMX-3, Clariion), expanded Dell/CSCO distribution, SMB initiatives, and software and services traction, EMC is well positioned to grow faster than the market. Net-net, our analysts expect shares to outperform the group in 2006.

Overweight Idea: Dell (DELL, \$30, Overweight, \$42 Price Target, covered by Rebecca Runkle)

DELL remains a top pick in the group. While not yet back to typical Dell levels, execution improved in the January quarter and our analysts expect further movements in the right direction over the next twelve months. Conservative April quarter guidance sets expectations up for another possible quarter of upside (if the demand environment and execution don't deteriorate) and limits the risk of a major blow-up as management continues to rebalance the business. Meaningful industry/technology drivers should help accelerate revenue growth in 2H06 and our analysts are buyers of the stock.

Overweight Idea: Flextronics (FLEX, \$11, Overweight, \$13 Price Target, covered by Bernie Mahon)

Our analysts are Overweight FLEX as they see a clear path to revenue growth and margin expansion in C2H06, and believe the company is well-positioned to take market share. Flextronics trades at 14x C06 EPS, the low end of the 10-20x range our analysts believe the EMS stocks are likely to trade in. They expect shares to trade up to an average peer multiple of 18x C06, or ~\$13.

Underweight Idea: Lexmark International (LXK, Underweight, \$47.76, covered by Rebecca Runkle)

Printer industry fundamentals could worsen before noticeable stabilization, in our analysts' opinion. They think channel inventory drawdowns and aggressive pricing are systemic problems that will continue to impact the printer industry in the next 2-4 quarters. With 100% exposure to this industry, a less competitive mix of business and the need to restructure over the next 6-12 months, our analysts think upside is limited. The largest risk of remaining Underweight LXK is a major balance sheet restructuring and/or sale of assets. However, our analysts believe management is committed to addressing near-term business and market issues internally before turning to larger strategic decisions.

• **Consumer Electronics**

In 2006, our analysts are expecting significant strength in various Consumer Electronics products, including game console units as next-generation products enter the market, iPod units, and integrated digital TV units. Our analysts remain bearish on the prospects for Digital Still Cameras (DSC) and DVD players. For DSCs, they see 4~5 mega pixel (MP) cameras as being in the "volume zone", as our analysts believe (1) the rise of low-priced SLRs and limited resolution of the PC screen has shrunk the market for greater than 5MP compact cameras; (2) the diffusion rate has hit a considerably high level, and demand is likely to level off. Our analysts expect growth to turn negative in the Japanese market in 2005 as this trend is evident in Japan.

Our analysts also believe that a faster than expected decline in LCD and PDP TV prices has stimulated price elasticity and they have adjusted their numbers accordingly. LCD TV unit growth for 2006 is at 62%, as LCDs hit an attractive price point at US\$2,000 for 32 inch TVs. For PDP TVs, our analysts expect unit growth of 58% in 2006.

• **Software**

Our analysts estimate moderate software growth this year, and they expect consolidation, convergence and commoditization to continue to be prominent factors shaping the industry in 2006. On a more granular level, overall industry growth should be supported by strong low teen security software growth. While security software is experiencing some of the same overall trends as software in general, several significant emerging segments within the industry could see growth in the high teen to low twenty percent levels. Specifically, authentication, authorization, web filtering, messaging security, encryption, embedded technology, suites and appliances (and suites on

March 3, 2006

Electronic Mfg Services/Distribution/Components

appliances/UTM), and endpoint security are expected to be industry growth drivers for 2006.

Throughout the software industry, maturing technology, suite expansion and a desire from enterprises to reduce the number of vendor relationships are driving consolidation. The need to provide security, capacity and reliability embedded as part of a product or a service is driving change in the industry. These trends are leading to convergence across several segments including storage, security and hardware. Larger vendors are expected to continue using their scale to solidify positions as vendors of choice but some of the faster growing and emerging segments still support smaller, more innovative, often private best-of breed vendors.

Overweight Idea: VeriSign (VRSN, \$24, Overweight-V, \$26 Price Target, covered by Peter Kuper):

Our analysts think that the sell off last year represented panic over option conversion by management with the stock price also reflecting the impact of negative sentiment over a decline in Jamba! performance. VeriSign has demonstrated control over costs associated with the volatile content business and appears to be well positioned to take advantage of several key trends they are anticipating. This is driven by a suite of products that include exposure to increasing secure online commerce, technology offering embedded security, an infrastructure to facilitate the movement of information over disparate platforms seamlessly and securely.

Underweight Idea: Check Point (CHKP, \$21, Underweight, \$19 Price Target, covered by Peter Kuper):

Our analysts continue to believe that Check Point belongs below \$20. With weak growth from the core business, declining growth this year is expected. Any meaningful growth would likely be reliant on contribution from the pending SourceFire acquisition. The acquisition is in its own state of uncertainty given the probability of approval from CFIUS in light of a recent increase in public scrutiny over foreign investment in US companies affecting National Security. The Company guided to revenue growth of approximately 14% for 2006 but this number includes SourceFire. Considering our analysts' SourceFire estimates, guidance numbers imply a paltry 7% midrange organic growth for the year. Considering the wide range the company offered for guidance (+/- 5%), growth could even be as low as 2% this year. Check Point struggled in the market with disappointing numbers last year and our analysts expect the struggle to continue for core product in '06.

• **IT Services**

For 2006, our analysts have raised their forecast of global IT services revenue growth to 8% from 6% driven primarily by three factors. First, the U.S. consulting and discretionary IT services spending environment has improved. Second, their European growth expectations remain healthy, given modest volume and price improvements stemming from an improving consulting market and limited supply of qualified IT services professionals. Finally, Indian IT service providers continue to experience strong unit volume growth and our analysts have increased their revenue growth expectations for the offshore providers to 30% from 27%.

During 1H/CY06, our analysts forecast robust IT consulting demand will continue, but remain cautious about the back half of 2006. A potential slowdown of the U.S. economy near the end of the year (due to higher interest rates, a slowing housing market, and potentially high oil prices) may constrain discretionary IT spending. IT outsourcing should grow in the low single-digits and will likely remain a challenging business given its high capital intensity and persistent pricing pressures. Our analysts believe the continued rapid growth offshore of software application development and maintenance should limit pricing power at the multinational IT service companies.

For 2006, IT services earnings growth should improve for top-tier players such as Accenture. Our analysts prefer top-tier US and European consulting companies, selective offshore leaders, and government IT providers focused on homeland security.

Overweight Ideas:

Accenture (ACN, \$33, Overweight, \$36 price target, covered by David Togut)

Cogent (COGT, \$20, Overweight-V, \$32 price target, covered by Julie Santoriello)

Patni Computer Systems (PTNI.BO, Rs 467, Overweight, Rs 575 price target, covered by Anantha Narayan)

Capgemini (CAPP.PA, €42, Overweight-V, €45 price target, covered by James Dawson and Gary Rollo)

Tata Consultancy Services (TCS, Rs 1,742, Overweight, Rs 1,950 price target, covered by Anantha Narayan)

Cognizant Tech Solutions (CTSH.O, \$58, Overweight-V, \$65 price target, covered by Julie Santoriello).

Within the U.S., our analysts prefer top-tier consultants/system integrators and companies exposed to the homeland security market. Given improving demand and pricing for discretionary projects, our analysts prefer Accenture. Additionally, our analysts recommend Cogent, which remains the leader in providing Fingerprint Identification System and other biometric solutions to governments, law enforcement agencies, and other organizations worldwide.

Within Europe, our analysts prefer companies with exposure to the Continent and the improving Consulting and System integration market. They recommend Capgemini.

Within the offshore IT market, our analysts prefer Tata Consulting, Cognizant, and Patni. They believe that offshore momentum remains robust given strong order flow and solid client and employee additions.

Underweight Ideas: Computer Sciences Corp. (CSC, \$55, Underweight, covered by David Togut)

Our analysts believe that IT outsourcing should remain a difficult business due to its high capital intensity and persistent pricing pressures. They maintain an Underweight rating on Computer Sciences Corporation and believe companies within this space will likely face pricing pressure from contract renewals. As the industry continues to mature, our analysts expect the IT outsourcing companies to face long-term challenges in growing their earnings and free cash flows.

• **Internet**

Overview...

- **CQ4 financial results for the Internet leaders were very good, but not great.**
- **C2006 revenue growth rates will likely continue to slow and margins may compress as investments related to the likes of growth in infrastructure, content and mobile rise.**
- **Are there things one can worry about? Sure.**
- **Are there things one can get excited about? You bet.**
- **Net / net, our analysts remain upbeat but their view is more loaded to CH2:06 and 2007 than they had expected as recently as a month ago. The good news is that their discounted cash flow**

valuations (assuming their assumptions are sound) look compelling.

Drilldown...

CQ4 financial results for the Internet leaders were very good, but not great. Revenue growth rates, while still high for mere mortals, slowed and upside could not be found. While currency had an average -2% Y/Y impact, revenue growth rates slowed – Google grew by 97% vs. 108% in CQ3; Yahoo! grew 36% vs. 42% and Amazon.com grew 17% vs. 27%. eBay, the outlier, supported 42% growth vs. 37% Q/Q. EBITDA margins fell – Google came in at 63% vs. 64% Q/Q; eBay was 39% vs. 41% and Amazon.com was 7.4% vs. 7.5%. Yahoo!, the outlier, came in at 43% vs. 41% Q/Q.

C2006 revenue growth rates will likely continue to slow and margins may compress as investments related to the likes of growth in infrastructure, content and mobile rise. For Google, our analysts estimate 64% revenue growth vs. 105% in C2005 and EBITDA margin of 63% vs. 65% Y/Y. For Yahoo!, 31% vs. 43% and margin of 42%, flat Y/Y. For eBay, 29% vs. 39% and margin of 35% vs. 38%. For Amazon.com, 20% vs. 23% and margin of 7% vs. 8%. That said, if the Internet leaders gain traction in emerging trends, 2007 could be a year of strong revenue growth and margin leverage.

Are there things one can worry about? Sure. 1) Plethora of emerging opportunities can create near-term costs; 2) Increasingly competitive landscape (intramural and other) can drive uncertainty; 3) Infrastructure builds can increase costs; 4) Rapid growth of mobile Internet can create transitions; 5) Rapid growth of emerging markets can create challenges; 6) Rising competition for talent can increase costs; 7) Regulatory intervention can slow momentum; 8) Impact of high oil prices and on-going threats of terrorism on economies can create uncertainty.

Are there things one can get excited about? You bet. 1) Broadband penetration remains low; 2) Online advertising spending relative to usage remains low; 3) Online commerce vs. offline commerce penetration remains low; 4) Usage growth of digital content (broadband and mobile) remains robust; 5) Monetization of broadband and wireless content / usage remains relatively low; 6) Global Internet usage growth (including mobile) remains healthy; 7) Internet leaders have gained

March 3, 2006

Electronic Mfg Services/Distribution/Components

significant audience and competitive advantage over the years; 8) 2007 could be a year of leverage.

Net / net, our analysts remain upbeat but their view is more loaded to CH2:06 and 2007 than they had expected as recently as a month ago. The good news is that their discounted cash flow valuations (assuming their assumptions are sound) look compelling. Google's at \$413 (vs. 02/13 closing price of \$346); Yahoo's at \$43 (vs. \$32); eBay's at \$52 (vs. \$40) and Amazon.com's at \$45 (vs. \$38). Our analysts add that their Microsoft DCF is \$36 (vs. \$26). They continue to maintain that a portfolio approach to investing is key. Our analysts maintain their 3-5 year thesis that global broadband / mobile Internet user growth may rise 10-15%; usage growth may rise 20-30% and monetization growth may rise 30%+.

For further details please see the Feb 14 Note *Internet Trends – From Great to Very Good*
(<https://secure.ms.com/ER/eps/2006/ny/mm/mmee021406.pdf>)

Overweight Idea: eBay (EBAY, \$40, Overweight-V, covered by Mary Meeker): Our analysts remain bullish on eBay's position within global e-commerce and believe its prospects for longer-term growth opportunities in emerging markets (including China) and payments continue to be substantial.

Overweight Idea: Google (GOOG, \$376, Overweight-V, covered by Mary Meeker): Google remains a top pick in the group. If Google continues to execute in online advertising as well as Web products/services innovation, it should be well positioned to benefit from (and help drive) ongoing, secular Internet user, usage and monetization growth.

Overweight Idea: Yahoo! (YHOO, \$32, Overweight-V, covered by Mary Meeker): Our analysts remain bullish on Yahoo! and believe that the company should continue to be a beneficiary of the share shift to online advertising, both in branded advertising and sponsored search. In their view, Yahoo! should be primed to capture share of both offline and online ad dollars.

- **Semiconductors**

Semiconductor industry revenue grew 7% in 2005 versus our analysts' revised estimate of 5%-8% (and their original estimate for growth in the 0%-5% range). The team expects industry growth in the 8%-12% range in 2006, with some revenue catalysts beginning to emerge at the end of the year and into 2007. Semiconductor industry revenue in the

month of January was down 5% (led by a 4% decline in average selling prices) from October 2005, virtually in-line with our team's estimate. Microprocessors and NOR flash appeared to be the weakest areas, down 20% and 16% (January 2006 versus October 2005) quarter-to-date, respectively. These results suggest a slow start to Intel's Q1, as the company is heavily exposed to these two markets.

Through the first two months of Q1, the team's checks suggest semiconductor sales are tracking at least to the mid-point of the range of guidance provided by most management teams, although a strong month of March is usually required in the back-end loaded quarter. While inventory levels appear to remain at relatively normal levels, our analysts note semiconductor company bookings and backlog growth in Q4 and so far into Q1 appears to be significantly outperforming end market consumption rates, suggesting cyclical forces may be exaggerating the order patterns. Given their view the cyclical forces were triggered by constraints in back-end (packaging substrates, assembly and test) manufacturing operations, and with a view that these constraints can be relatively quickly resolved, our analysts are cautious about the sustainability of the unusually strong bookings and backlog growth at our companies.

Our analysts are beginning to see a number of new product cycles on the horizon and expect these new product cycles to begin to emerge in the second half of 2006. Some of these product cycle opportunities include virtualization for servers, blade servers and storage aggregation, Microsoft's Vista, 3G cell phones reaching mainstream price points, VoIP merging with cellular technology, 802.11n and 802.16e, new video game platforms, digital TV, high definition video applications, fiber to the home/node/premise, NAND flash enabled portable applications, and RFID. With semiconductor stocks outperforming all other technology industry groups year-to-date (with the exception of semiconductor capital equipment companies), our analysts believe the probability for a weak Q2 for semiconductor stocks is rising.

Overweight Idea: Advanced Micro Devices (AMD, \$41, Overweight-V, \$50 Price Target, covered by Mark Edelstone) Our analysts believe that AMD is benefiting from a strong product cycle leading to market share gains. They believe that the potential for AMD to continue to meaningfully upside earnings expectations with a combination of higher revenues and margins remains solid. Following a 27% sequential unit growth in each of the last two quarters, AMD gained about 550 basis points of MPU

March 3, 2006

Electronic Mfg Services/Distribution/Components

market share from Intel, according to our analysts. While in the past, the vast majority of AMD's MPU business was driven by desktop PCs for the consumer oriented PC markets, our analysts believe that an increasing percentage of servers, notebook PCs, and enterprise-oriented systems will drive a richer and more favorable product mix going forward.

Overweight Idea: Analog Devices (ADI, \$39, Overweight, \$52 Price Target, covered by Louis Gerhardy)

Our analysts' F2006 EPS estimates are 4% above consensus and their F2007 EPS estimates are 15% above consensus. They expect ADI to advance and potentially exceed their \$52 target as investors become more comfortable with their two-phase investment thesis. Phase one of their thesis is about operating margins expanding from 22.9% in F2005 to 31.6% at the end of F2006, and the company demonstrated stronger than expected progress on this front by delivering operating margins of 25.7% for Q1 F2006 (January 2006), 80 basis points above our analysts' street-high estimate. Phase two of their investment thesis involves revenue catalysts (MEMS, power management, TD-SCDMA in China, and advanced consumer) that will begin to drive the company's top line at the end of F2006 and into F2007. The price target is based on a 10-year DCF and 21x our analysts' C2007 proforma EPS estimate. The primary risks to the team's earnings estimate and investment thesis are predicated on the smooth execution of management's product pruning and other restructuring initiatives.

Memory

Short-term optimism should continue a little longer as the supply side adjusts to the creation of new demand segments and DDR2 transition keeps ASP more firm. However, slower PC demand will not be able to absorb the new capacity growth resulting from investments made in 2005. 3Q06 may experience PC consumption declines as the consumers wait for Windows Vista to hit the shelves by August or September. Upside risk to the DRAM industry is more likely in 2007, not 2006. Near-term industry improvement is driven by inventory replenishment, supply side adjustment to satisfy rapid surge in Graphics DRAM and concerted marketing effort by PC OEMs on DDR2 embedded PCs. As the supply side becomes more productive and the lagging producers complete the 90 nano transition, our analysts see little chance of 9% PC growth being able to absorb the forecasted supply growth. Current rally in the global DRAM stocks may come to an end soon. Our analysts would not chase the DRAM stocks up much further.

Equal-weight Idea: Samsung Electronics (005930.KS, Sk 686, Equal-weight, covered by Keon Han and Sunil Gupta)

The handset business will remain stalled. Despite the best efforts, our analysts see only 6% revenue growth but profits should decline due to margin contraction. The silver-lining is that as handset capabilities evolve, Samsung's NAND flash business will benefit. Rise in both embedded and cell phone cards should ensure NAND revenue growth of 42% and OP growth of 17% YoY in 2006. Of the company's handset market sub-segmentation strategy, only music-centric phones will generate value in 2006 by indirectly driving the global NAND demand. TV-centric phones should be a post 2006 story and camera-centric phones parade technological prowess, but are reserved for a niche market.

Foundry Industry

Our analysts expect the foundry industry to outgrow the global semi industry in 2006, with the annual growth rate of 28%, compared with 8-12% for global semi. Our analysts attribute this to 1) more capacity discipline in the industry, which is positive for pricing environment, 2) increasing/resuming outsourcing from IDMs after excess inventory digestion in 2005, and 3) better capex efficiency, which leads to a lighter depreciation burden. As a result, our analysts have modestly revised up their 2006 estimates by 5%.

On the other hand, our analysts believe the semiconductor manufacturing food chain has started to accumulate inventory over the last few months. Furthermore, they expect this inventory to grow further in 1Q06. As a result, our analysts expect the suppliers in the food chain (i.e. Foundries and IC A&T) to experience worse than normal seasonal demand in 2Q06 or 3Q06.

Overweight Idea: TSMC (2330.TW, 62.70, Overweight-V, 79.00 TWD Price Target, covered by Sunil Gupta)

After about a 10% decline in the stock price over the past month, TSMC is now once again trading at our analysts' mid-cycle valuation. They upgraded the stock rating to Overweight-V with price target of NT\$79.0 for the local share and US\$12.6 for the ADR.

In our analysts' view, five factors have changed for the better. 1) Over the past few weeks, expectations of above normal demand in 1Q06 have corrected, particularly in the PC market. 2) TSMC and other foundries have successfully achieved capacity growth targets with lower capex. 3) The foundry industry is showing restraint in capacity addition, which should be positive for the pricing environment. 4) TSMC has been able to secure 0.18u capacity at Vanguard.

March 3, 2006

Electronic Mfg Services/Distribution/Components

5) Most of the NT\$ appreciation is now behind, and recent weakness in NT\$ should be beneficial for TSMC.

Semiconductor Capital Equipment

Our analysts' 2006 global semiconductor capital spending estimate of \$50.7 bn is up 10.1% over 2005. This level of capital investment by the semi industry implies a 50-60% growth in order activity from 4Q05 through 3Q06. Given our analysts' expectation for meaningful new product cycles towards year-end, this suggests a pattern of steady and sustained order growth.

Overweight Idea: Applied Materials (AMAT, \$19, Overweight, \$25 Price Target, covered by Timm Schulze-Melander)

Our analysts foresee strength across all business segments for AMAT in FY06 – semiconductor systems, FPD systems and services. With top quartile revenue and earnings

growth, our analysts expect AMAT to outperform the group as investors focus on better than expected earnings leverage and a more shareholder friendly cash management policy. AMAT's 1Q06 results have shown improving margin leverage that our analysts expect to continue through this current up-cycle into 2007.

Overweight Idea: Teradyne (TER, \$17, Overweight, \$20 Price Target, covered by Timm Schulze-Melander)

Teradyne is the leader in the non-memory semiconductor ATE market with a 35% share. With disposal of its TCS business, Teradyne's financial performance will be driven by improvement in its semi-test business. Our analysts are confident that Teradyne will deliver improvements in operating performance, which will drive profitability during the current cyclical upswing. This should result in further upward revisions to earnings estimates and relative out-performance of the share price.

Contents

- The Data Book.....14**
- Macroeconomics.....14
- Computing Hardware.....16
- Communications Equipment.....22
- Consumer Electronics.....25
- Semiconductors.....28
- Software.....32
- Internet.....34
- IT Services.....38
- Non-Traditional End Markets: Autos40
- Industry Views.....41**

Exhibit 6

Macroeconomics - Annual Key Metrics

	1998	1999	2000	2001	2002	2003	2004	2005E	2006E	2007E
Macroeconomics										
Global Economy										
GDP Growth	2.9%	3.8%	4.8%	2.5%	3.0%	3.7%	4.9%	4.3%	4.2%	3.8%
CPI Inflation	3.4%	2.1%	2.5%	2.4%	2.4%	2.3%	2.8%	2.8%	2.8%	2.4%
Industrial World										
GDP Growth	3.0%	3.3%	3.6%	1.1%	1.2%	1.9%	3.1%	2.6%	2.9%	2.5%
CPI Inflation	1.3%	1.5%	2.2%	2.1%	1.5%	1.8%	2.0%	2.4%	2.1%	1.8%
Europe										
GDP Growth	3.0%	2.9%	3.6%	1.7%	1.0%	1.0%	2.1%	1.6%	2.2%	1.8%
CPI Inflation	1.4%	1.3%	1.9%	2.2%	2.1%	1.9%	1.9%	2.1%	2.0%	1.9%
Emerging Europe										
GDP Growth	-0.7%	3.1%	7.1%	1.9%	4.1%	5.2%	6.2%	5.2%	5.3%	5.0%
CPI Inflation	28.5%	48.3%	19.9%	19.4%	15.9%	11.0%	7.5%	7.8%	6.3%	5.3%
Japan										
GDP Growth	-1.2%	0.2%	2.8%	0.4%	-0.3%	1.8%	2.3%	2.8%	3.2%	2.3%
CPI Inflation	0.6%	-0.3%	-0.9%	-0.8%	-0.8%	-0.3%	-0.1%	-0.1%	0.2%	0.2%
Asia Ex-Japan										
GDP Growth	1.9%	6.7%	7.4%	4.2%	6.2%	7.0%	7.9%	7.4%	6.3%	6.1%
CPI Inflation	6.1%	1.7%	1.5%	2.2%	1.4%	2.1%	3.5%	3.0%	3.5%	2.6%
Latin America										
GDP Growth	2.0%	0.3%	4.1%	0.3%	-0.2%	2.1%	5.7%	4.2%	4.2%	3.8%
CPI Inflation	8.9%	8.2%	6.9%	5.6%	13.4%	6.9%	6.6%	5.9%	6.0%	6.3%
Total US										
GDP (\$BB)	\$8,747	\$9,268	\$9,817	\$10,128	\$10,470	\$10,971	\$11,734	\$12,479	\$13,250	\$14,025
Y/Y Growth	4.2%	4.5%	3.7%	0.8%	1.6%	2.7%	4.2%	3.5%	3.6%	3.3%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Corporate Capex (\$BB)	\$777	\$852	\$919	\$854	\$787	\$806	\$901	\$994	--	--
Y/Y Growth	13.2%	12.7%	9.4%	-4.9%	-6.2%	3.2%	11.9%	10.8%	10.5%	7.5%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
US Corporate IT Spending										
Total Corporate IT Spending (\$BB)	\$363	\$411	\$468	\$437	\$399	\$406	\$447	\$489	--	--
Y/Y Growth	21.9%	21.2%	17.4%	-1.8%	-4.7%	5.1%	13.6%	13.1%	--	--
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
% of GDP	4.2%	4.4%	4.8%	4.3%	3.8%	3.7%	3.8%	3.9%	--	--
% of Corporate Capex	46.7%	48.3%	50.9%	51.2%	50.7%	50.4%	49.6%	49.2%	--	--

Note: Regional GDP aggregate growth is PPP weighted except for Asia ex. Japan which is weighted with nominal GDP; Global CPI excludes EMEA; US data refers to nominal GDP figures and real GDP year-over-year and q/q growth; Corporate capex comprises all private, non residential fixed investment excluding structures; Corporate IT spending is nominal IT capex and real IT capex growth

E = Morgan Stanley Research Estimates

Source: US Bureau of Economic Research, Morgan Stanley Research

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 7

Macroeconomics - Quarterly Key Metrics

	1Q05	2Q05	3Q05	4Q05E	1Q06E	2Q06E	3Q06E	4Q06E	1Q07E	2Q07E	3Q07E	4Q07E	Comments
Macroeconomics													
Global Economy													
GDP Growth	3.3%	3.7%	4.7%	4.3%	4.5%	4.2%	4.3%	4.2%	3.2%	4.0%	3.9%	4.3%	% QoQ annualized
CPI Inflation	--	--	--	--	--	--	--	--	--	--	--	--	
Industrial World													
GDP Growth	2.3%	2.2%	3.0%	1.8%	3.8%	2.8%	3.1%	3.2%	2.0%	2.5%	2.3%	2.4%	% QoQ annualized
CPI Inflation	--	--	--	--	--	--	--	--	--	--	--	--	
Europe													
GDP Growth	--	--	--	--	--	--	--	--	--	--	--	--	
CPI Inflation	--	--	--	--	--	--	--	--	--	--	--	--	
Emerging Europe													
GDP Growth	4.3%	5.2%	5.5%	6.0%	5.8%	5.5%	5.0%	4.8%	4.8%	4.9%	5.3%	5.3%	% QoQ annualized
CPI Inflation	--	--	--	--	--	--	--	--	--	--	--	--	
Japan													
GDP Growth	0.6%	1.1%	1.4%	5.5%	2.6%	3.5%	2.0%	2.4%	2.8%	1.7%	2.0%	2.5%	% QoQ annualized
CPI Inflation	--	--	--	--	--	--	--	--	--	--	--	--	
Asia Ex-Japan													
GDP Growth	5.3%	5.9%	8.1%	7.9%	5.5%	6.4%	6.4%	6.0%	4.9%	6.3%	6.6%	7.5%	% QoQ annualized
CPI Inflation	--	--	--	--	--	--	--	--	--	--	--	--	
Latin America													
GDP Growth	2.0%	4.0%	2.0%	5.7%	4.2%	4.3%	4.3%	3.8%	3.2%	4.6%	3.7%	4.4%	% QoQ annualized
CPI Inflation	--	--	--	--	--	--	--	--	--	--	--	--	
Total US													
GDP (\$BB)	\$12,199	\$12,378	\$12,606	\$12,735	\$12,959	\$13,138	\$13,343	\$13,560	\$13,747	\$13,938	\$14,121	\$14,293	
Y/Y Growth	3.6%	3.6%	3.6%	3.1%	3.5%	3.5%	3.4%	4.0%	3.5%	3.4%	3.3%	3.0%	
Q/Q Growth	0.9%	0.8%	1.0%	0.3%	1.3%	0.8%	0.9%	0.9%	0.8%	0.7%	0.8%	0.7%	
Corporate Capex (\$BB)	\$964	\$988	\$1,009	\$1,014	--	--	--	--	--	--	--	--	
Y/Y Growth	12.8%	11.7%	10.5%	8.3%	10.1%	10.0%	10.1%	11.8%	9.8%	8.4%	6.8%	5.3%	
Q/Q Growth	2.0%	2.6%	2.6%	0.9%	3.7%	2.5%	2.7%	2.5%	1.8%	1.3%	1.2%	1.0%	
US Corporate IT Spending													
Total Corporate IT Spending (\$BB)	\$475	\$487	\$495	\$501	--	--	--	--	--	--	--	--	
Y/Y Growth	11.9%	13.0%	13.7%	13.7%	--	--	--	--	--	--	--	--	
Q/Q Growth	4.7%	3.5%	2.7%	2.2%	--	--	--	--	--	--	--	--	
% of GDP	3.9%	3.9%	3.9%	3.9%	--	--	--	--	--	--	--	--	
% of Corporate Capex	49.2%	49.2%	49.0%	49.4%	--	--	--	--	--	--	--	--	

Note: Regional GDP aggregate growth is PPP weighted except for Asia ex. Japan which is weighted with nominal GDP; Global CPI excludes EMEA; US data refers to nominal GDP figures and real GDP year-over-year and q/q growth; Corporate capex comprises all private, non residential fixed investment excluding structures; Corporate IT spending is nominal IT capex and real IT capex growth

E = Morgan Stanley Research Estimates

Source: US Bureau of Economic Research, Morgan Stanley Research

Exhibit 8

Computing Hardware - Annual Key Metrics

Rebecca Runkle, Ellen Tseng, Frank Wang, Tomohiro Murata, Kathryn Huberty

	1997E	1998E	1999E	2000E	2001E	2002E	2003E	2004E	2005E	2006E	Comments
Personal Computers											
Total											
Revenues (\$MM)	\$160,820	\$166,866	\$186,883	\$215,060	\$179,373	\$161,508	\$168,857	\$193,837	\$199,644	\$198,319	PC unit growth acceleration in 2H06 with dual-core, Vista and EV-DO technology drivers.
Y/Y Growth	-1%	4%	12%	15%	-17%	-10%	5%	15%	3%	-1%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	84,198,950	97,145,160	120,300,818	139,954,004	133,633,460	136,373,068	151,553,645	174,301,169	196,786,380	213,523,764	
Y/Y Growth	16%	15%	24%	16%	-5%	2%	11%	15%	13%	9%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	\$1,910	\$1,718	\$1,553	\$1,537	\$1,342	\$1,184	\$1,114	\$1,112	\$1,015	\$929	
Y/Y Growth	-15%	-10%	-10%	-1%	-13%	-12%	-6%	0%	-9%	-8%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Desktops											
Revenues (\$MM)	\$112,460	\$116,321	\$124,718	\$137,599	\$112,465	\$96,606	\$92,445	\$102,333	\$101,079	\$98,021	
Y/Y Growth	-5%	3%	7%	10%	-18%	-14%	-4%	11%	-1%	-3%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	68,532,392	79,468,150	97,642,927	110,954,134	104,141,640	103,741,220	111,054,282	123,907,619	133,645,691	139,832,390	
Y/Y Growth	16%	16%	23%	14%	-6%	0%	7%	12%	8%	5%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	\$1,641	\$1,464	\$1,277	\$1,240	\$1,080	\$931	\$832	\$826	\$756	\$701	
Y/Y Growth	-17%	-11%	-13%	-3%	-13%	-14%	-11%	-1%	-8%	-7%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
LCD Monitors (MM units)	--	--	4.6	6.7	15.9	32.2	49.2	67.6	102.0	123.4	
Y/Y Growth	--	--	--	48%	137%	102%	53%	37%	51%	21%	
Penetration	--	--	5%	6%	15%	31%	44%	55%	76%	88%	
Taiwan Motherboards (K units)	43560	53731	64,378	84,372	80,565	86,554	98,796	88,486	105,501	129,391	
Y/Y Growth	34%	23%	20%	31%	-5%	7%	14%	-10%	19%	23%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Notebooks											
Revenues (\$MM)	\$35,099	\$34,946	\$43,368	\$54,049	\$47,896	\$47,184	\$55,236	\$67,944	\$74,130	\$78,712	Lower ASPs combined with an aging installed base drove recent notebook acceleration in 2005.
Y/Y Growth	-1%	0%	24%	25%	-11%	-1%	17%	23%	9%	6%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	14,066,397	15,429,520	19,813,696	26,376,989	27,991,451	30,820,012	39,382,632	49,079,648	62,550,761	73,717,302	
Y/Y Growth	19%	10%	28%	33%	6%	10%	28%	25%	27%	18%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	\$2,495	\$2,265	\$2,189	\$2,049	\$1,711	\$1,531	\$1,403	\$1,384	\$1,185	\$1,068	
Y/Y Growth	-17%	-9%	-3%	-6%	-16%	-11%	-8%	-1%	-14%	-10%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
LCD Screens (MM units)	--	--	19.9	26.1	27	30	39	48	62	73	
Y/Y Growth	--	--	--	31%	5%	10%	28%	24%	28%	19%	
Penetration	--	--	101%	99%	98%	98%	98%	98%	98%	99%	
Taiwan NB Units (K units)	--	--	9,701	12,708	14,161	15,467	21,422	28,782	42,014	55,659	
Y/Y Growth	--	--	--	31%	11%	9%	39%	34%	46%	32%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Monitor Mkt Installed base (K)											
LCD Mtr Installed base (K)	--	--	--	--	--	--	--	--	1,564,915	1,723,341	
CRT Mtr Installed base (K)	--	--	--	--	--	--	--	--	767,952	1,063,617	
LCD Mtr Installed base/Mtr Installed base %	--	--	--	--	--	--	--	--	796,964	659,724	
	--	--	--	--	--	--	--	--	49%	62%	
	--	--	--	--	--	--	--	--			
LCD Monitor Screen Size Market Breakdown:											
20" + wide	--	--	--	--	--	--	--	--	6%	7%	
19"	--	--	--	--	--	--	--	--	20%	32%	
17" - 18"	--	--	--	--	--	--	--	--	51%	44%	
15"	--	--	--	--	--	--	--	--	23%	17%	

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research

Exhibit 9

Computing Hardware - Annual Key Metrics

Rebecca Runkle, Ellen Tseng, Frank Wang, Tomohiro Murata, Kathryn Huberty

	1997E	1998E	1999E	2000E	2001E	2002E	2003E	2004E	2005E	2006E	Comments
Printers											
Inkjet											
Revenues (\$MM)				\$10,893,173	\$10,554,317	\$10,710,434	\$11,203,042	\$11,281,103	\$11,094,177	\$10,520,027	Aggressive hardware pricing, channel inventory drawdown of supplies, and softness in end user demand likely to continue into 2006.
Y/Y Growth	--	--	--	--	-3%	1%	5%	1%	-2%	-5%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units				68,491,493	67,529,305	70,673,853	80,510,307	84,892,569	88,341,935	90,263,163	
Y/Y Growth	--	--	--	--	-1%	5%	14%	5%	4%	2%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs				\$159	\$156	\$152	\$139	\$133	\$126	\$117	
Y/Y Growth	--	--	--	--	-2%	-3%	-8%	-5%	-5%	-7%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Laser											
Revenues (\$MM)					\$29,140,043	\$29,224,893	\$29,639,370	\$35,255,851	\$39,045,786	\$41,728,166	Dual-core and virtualization are key server market drivers in 2006 (esp. 2H06).
Y/Y Growth	--	--	--	--	--	0%	1%	19%	11%	7%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units					14,733,454	15,727,909	19,045,699	23,798,096	29,010,085	34,403,664	
Y/Y Growth	--	--	--	--	--	7%	21%	25%	22%	19%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs					\$1,978	\$1,858	\$1,556	\$1,481	\$1,346	\$1,213	
Y/Y Growth	--	--	--	--	--	-6%	-16%	-5%	-9%	-10%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Servers											
Total											
Revenues (\$MM)	\$60,796	\$59,557	\$57,733	\$61,680	\$50,500	\$44,654	\$46,149	\$49,083	\$51,176	\$52,412	Dual-core and virtualization are key server market drivers in 2006 (esp. 2H06).
Y/Y Growth	6%	-2%	-3%	7%	-18%	-12%	3%	6%	4%	2%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	2,358,604	2,999,420	3,767,309	4,372,313	4,277,148	4,442,348	5,278,384	6,304,311	7,176,491	8,112,916	
Y/Y Growth	29%	27%	26%	16%	-2%	4%	19%	19%	14%	13%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	\$25,786	\$19,860	\$15,325	\$14,107	\$11,808	\$10,047	\$8,735	\$7,638	\$6,880	\$6,242	
Y/Y Growth	-18%	-23%	-23%	-8%	-16%	-15%	-13%	-13%	-10%	-9%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Unix Servers											
Revenues (\$MM)	\$23,893	\$24,579	\$25,392	\$29,058	\$22,112	\$18,683	\$17,770	\$17,634	\$17,393	\$16,665	Dual-core and virtualization are key server market drivers in 2006 (esp. 2H06).
Y/Y Growth	17%	3%	3%	14%	-24%	-16%	-5%	-1%	-1%	-4%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	508,456	611,245	692,318	786,177	658,363	628,743	661,562	725,575	736,885	776,585	
Y/Y Growth	17%	20%	13%	14%	-16%	-4%	5%	10%	2%	5%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	\$46,991	\$40,211	\$36,677	\$36,961	\$33,586	\$29,715	\$26,860	\$24,304	\$23,603	\$21,459	
Y/Y Growth	0%	-14%	-9%	1%	-9%	-12%	-10%	-10%	-3%	-9%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Windows Servers											
Revenues (\$MM)	\$6,237	\$7,749	\$10,584	\$13,873	\$12,250	\$12,274	\$13,831	\$15,864	\$17,528	\$18,428	Dual-core and virtualization are key server market drivers in 2006 (esp. 2H06).
Y/Y Growth	63%	24%	37%	31%	-12%	0%	13%	15%	10%	5%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	725,342	1,204,881	1,795,794	2,380,532	2,542,739	2,762,091	3,342,668	4,076,469	4,660,717	5,275,903	
Y/Y Growth	85%	66%	49%	33%	7%	9%	21%	22%	14%	13%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	\$8,599	\$6,431	\$5,894	\$5,828	\$4,818	\$4,444	\$4,138	\$3,891	\$3,761	\$3,493	
Y/Y Growth	-11%	-25%	-8%	-1%	-17%	-8%	-7%	-6%	-3%	-7%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Linux Servers											
Revenues (\$MM)	--	\$251	\$749	\$1,750	\$1,721	\$1,967	\$2,948	\$4,257	\$5,314	\$6,161	Dual-core and virtualization are key server market drivers in 2006 (esp. 2H06).
Y/Y Growth	--	--	199%	134%	-2%	14%	50%	44%	25%	16%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	--	66,204	173,153	436,956	487,408	566,735	826,388	1,120,748	1,409,846	1,685,750	
Y/Y Growth	--	--	162%	152%	12%	16%	46%	36%	26%	20%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	--	\$3,789	\$4,327	\$4,004	\$3,531	\$3,471	\$3,568	\$3,798	\$3,769	\$3,655	
Y/Y Growth	--	--	14%	-7%	-12%	-2%	3%	6%	-1%	-3%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research

Exhibit 10

Computing Hardware - Annual Key Metrics

Rebecca Runkle, Ellen Tseng, Frank Wang, Tomohiro Murata, Kathryn Huberty

	1997E	1998E	1999E	2000E	2001E	2002E	2003E	2004E	2005E	2006E	Comments
Storage and Networking											
Disk Storage Systems											
Revenues (\$MM)	--	--	\$26,245	\$29,499	\$23,360	\$20,991	\$21,525	\$22,617	\$24,415	\$25,738	
Y/Y Growth	--	--	--	12%	(21%)	(10%)	3%	5%	8%	5%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	--	--	1,883,571	2,300,411	2,004,506	2,057,557	2,066,910	2,292,372	2,775,727	3,324,292	
Y/Y Growth	--	--	--	22%	(13%)	3%	0%	11%	21%	20%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	--	--	\$13,934	\$12,823	\$11,654	\$10,202	\$10,414	\$9,866	\$8,796	\$7,742	
Y/Y Growth	--	--	--	(8%)	(9%)	(12%)	2%	(5%)	(11%)	(12%)	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
SAN											
Revenues (\$MM)	--	--	\$3,533	\$5,740	\$6,106	\$6,235	\$7,017	\$8,183	\$9,642	\$10,814	
Y/Y Growth	--	--	--	62%	6%	2%	13%	17%	18%	12%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
NAS											
Revenues (\$MM)	--	--	\$835	\$1,559	\$1,736	\$1,543	\$1,559	\$1,831	\$2,086	\$2,368	
Y/Y Growth	--	--	--	87%	11%	-11%	1%	17%	14%	14%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Networking											
Revenues (\$MM)	--	--	\$437	\$1,319	\$2,177	\$2,309	\$2,628	\$3,048	\$3,585	\$4,085	
Y/Y Growth	--	--	--	202%	65%	6%	14%	16%	18%	14%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Tape Automation											
Revenues (\$MM)	--	--	\$2,976	\$3,202	\$3,029	\$2,859	\$2,553	\$2,519	\$2,554	\$2,672	
Y/Y Growth	--	--	--	8%	-5%	-6%	-11%	-1%	1%	5%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Storage Services											
Revenues (\$MM)	--	--	\$17,250	\$19,501	\$20,552	\$21,171	\$23,360	\$24,929	\$26,639	\$28,224	
Y/Y Growth	--	--	--	13%	5%	3%	10%	7%	7%	6%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Storage Software											
Revenues (\$MM)	--	--	\$4,503	\$5,466	\$6,169	\$5,869	\$6,621	\$7,140	\$7,886	\$8,785	
Y/Y Growth	--	--	--	21%	13%	-5%	13%	8%	10%	11%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Hard Disk Drives											
Hard Disk Drives											
Revenues (\$MM)	--	--	--	--	\$18,867	\$19,582	\$20,393	\$20,484	\$23,418	\$24,925	Near-term fundamentals are stable. Industry dynamics peaked and 1H06 is at risk of typical seasonality.
Y/Y Growth	--	--	--	--	--	4%	4%	0%	14%	6%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Units	--	--	--	--	193,644	219,365	255,581	299,367	361,123	406,541	
Y/Y Growth	--	--	--	--	--	13%	17%	17%	21%	13%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
ASPs	--	--	--	--	\$97	\$89	\$80	\$68	\$65	\$61	
Y/Y Growth	--	--	--	--	--	-8%	-11%	-14%	-5%	-5%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Recording Heads											
Units	--	--	248	272	168	242	328	329	459	526	
Y/Y Growth	--	--	--	10%	-38%	44%	36%	0%	40%	15%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	
Spindle Motors											
Units	--	--	127	154	163	188	225	259	316	380	
Y/Y Growth	--	--	--	21%	6%	15%	19%	15%	22%	20%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	--	

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research

Exhibit 11

Computing Hardware - Quarterly Key Metrics

Rebecca Runkle, Ellen Tseng, Frank Wang, Tomohiro Murata, Kathryn Huberty

	1Q04E	2Q04E	3Q04E	4Q04E	1Q05E	2Q05E	3Q05E	4Q05E	1Q06E	2Q06E	3Q06E	4Q06E
Personal Computers												
Total												
Revenues (\$MM)	\$46,277	\$44,258	\$48,216	\$55,086	\$50,083	\$46,840	\$49,032	\$53,689	\$49,406	\$45,050	\$48,006	\$55,857
Y/Y Growth	15%	16%	14%	14%	8%	6%	2%	-3%	-1%	-4%	-2%	4%
Q/Q Growth	-4%	-4%	9%	14%	-9%	-6%	5%	9%	-8%	-9%	7%	16%
Units	40,717,158	38,926,817	43,836,940	50,820,254	46,206,996	46,223,005	49,195,998	55,160,381	49,382,389	48,873,254	52,894,658	62,373,463
Y/Y Growth	17%	16%	13%	14%	13%	19%	12%	9%	7%	6%	8%	13%
Q/Q Growth	-8%	-4%	13%	16%	-9%	0%	6%	12%	-10%	-1%	8%	18%
ASPs	\$1,137	\$1,137	\$1,100	\$1,084	\$1,084	\$1,013	\$997	\$973	\$999	\$928	\$913	\$901
Y/Y Growth	-2%	1%	0%	0%	-5%	-11%	-9%	-10%	-8%	-8%	-8%	-7%
Q/Q Growth	5%	0%	-3%	-1%	0%	-7%	-2%	-2%	3%	-7%	-2%	-1%
Desktops												
Revenues (\$MM)	\$24,904	\$23,509	\$24,812	\$29,108	\$25,582	\$24,250	\$23,812	\$27,435	\$24,830	\$23,312	\$22,719	\$27,160
Y/Y Growth	10%	12%	9%	12%	3%	3%	-4%	-6%	-3%	-4%	-5%	-1%
Q/Q Growth	-4%	-6%	6%	17%	-12%	-5%	-2%	15%	-9%	-6%	-3%	20%
Units	29,424,074	27,805,300	30,898,296	35,779,949	31,936,937	31,499,032	32,886,082	37,323,640	33,294,565	32,710,866	34,101,790	39,725,169
Y/Y Growth	14%	12%	10%	11%	9%	13%	6%	4%	4%	4%	4%	6%
Q/Q Growth	-9%	-6%	11%	16%	-11%	-1%	4%	13%	-11%	-2%	4%	16%
ASPs	\$846	\$845	\$803	\$814	\$801	\$770	\$724	\$735	\$745	\$714	\$668	\$685
Y/Y Growth	-3%	0%	-1%	1%	-5%	-9%	-10%	-10%	-7%	-7%	-8%	-7%
Q/Q Growth	5%	0%	-5%	1%	-2%	-4%	2%	1%	1%	-4%	-7%	3%
LCD Monitors (MM units)	15.8	15.0	16.9	19.9	22.7	23.6	26.1	29.6	29.7	27.9	30.4	35.4
Y/Y Growth	49%	40%	31%	33%	43%	57%	55%	49%	31%	18%	16%	20%
Penetration	54%	54%	55%	56%	71%	75%	79%	79%	89%	85%	89%	89%
Taiwan Motherboards (K units)	21,560	18,758	22,201	25,968	22,830	23,810	26,830	32,031	28,916	29,903	33,253	37,319
Y/Y Growth	-8%	-16%	-12%	-7%	6%	27%	21%	23%	27%	26%	24%	17%
Q/Q Growth	-22%	-13%	18%	17%	-12%	4%	13%	17%	-13%	3%	12%	12%
Notebooks												
Revenues (\$MM)	\$15,824	\$15,158	\$17,567	\$19,395	\$18,552	\$16,997	\$19,095	\$19,485	\$18,508	\$17,262	\$20,068	\$22,874
Y/Y Growth	26%	24%	24%	19%	17%	12%	9%	0%	0%	2%	5%	17%
Q/Q Growth	-3%	-4%	16%	10%	-4%	-8%	12%	2%	-5%	-7%	16%	14%
Units	11,027,817	10,782,162	12,653,434	14,616,235	13,949,782	14,383,035	16,372,354	17,845,590	16,085,262	16,148,671	18,859,295	22,624,074
Y/Y Growth	29%	24%	22%	24%	26%	33%	29%	22%	15%	12%	15%	27%
Q/Q Growth	-7%	-2%	17%	16%	-5%	3%	14%	9%	-10%	0%	17%	20%
ASPs	\$1,435	\$1,406	\$1,388	\$1,327	\$1,330	\$1,182	\$1,166	\$1,092	\$1,151	\$1,069	\$1,064	\$1,011
Y/Y Growth	-2%	0%	2%	-4%	-7%	-16%	-16%	-18%	-13%	-10%	-9%	-7%
Q/Q Growth	4%	-2%	-1%	-4%	0%	-11%	-1%	-6%	5%	-7%	0%	-5%
LCD Screens (MM units)	10.9	10.8	12.6	13.7	13.9	14.2	16.0	17.5	16.2	16.2	18.6	22.2
Y/Y Growth	29%	25%	26%	19%	28%	31%	27%	28%	17%	14%	16%	27%
Penetration	99%	100%	100%	94%	100%	99%	98%	98%	101%	100%	99%	98%
Taiwan NB Units (K units)	5,594	6,271	7,680	9,237	8,175	9,640	11,238	12,961	11,246	12,697	14,773	16,943
Y/Y Growth	29%	36%	32%	39%	46%	54%	46%	40%	38%	32%	31%	31%
Q/Q Growth	-16%	12%	22%	20%	-11%	18%	17%	15%	-13%	13%	16%	15%
Monitor Mkt Installed base (K)	--	--	--	--	377,048	386,890	395,593	405,384	415,839	425,991	434,785	446,725
LCD Mtr Installed base (K)	--	--	--	--	165,584	181,904	200,377	220,087	239,151	256,364	273,847	294,255
CRT Mtr Installed base (K)	--	--	--	--	211,464	204,986	195,216	185,298	176,688	169,627	160,938	152,470
LCD Mtr Installed base/Mtr Installed base %	--	--	--	--	44%	47%	51%	54%	58%	60%	63%	66%
LCD Monitor Screen Size Market Breakdown:												
20" + wide	--	--	--	--	5%	6%	6%	6%	7%	7%	7%	8%
19"	--	--	--	--	16%	18%	21%	26%	28%	30%	33%	36%
17" - 18"	--	--	--	--	55%	52%	51%	48%	46%	45%	43%	41%
15"	--	--	--	--	24%	25%	22%	20%	19%	18%	17%	15%

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research

Exhibit 12

Computing Hardware - Quarterly Key Metrics

Rebecca Runkle, Ellen Tseng, Frank Wang, Tomohiro Murata, Kathryn Huberty

	1Q04E	2Q04E	3Q04E	4Q04E	1Q05E	2Q05E	3Q05E	4Q05E	1Q06E	2Q06E	3Q06E	4Q06E
Printers												
Inkjet												
Revenues (\$MM)	\$2,614,188	\$2,370,975	\$2,516,582	\$3,779,358	\$2,854,251	\$2,447,067	\$2,310,080	\$3,482,779	\$2,713,136	\$2,314,272	\$2,194,591	\$3,298,029
Y/Y Growth	-4%	4%	-6%	7%	9%	3%	-8%	-8%	-5%	-5%	-5%	-5%
Q/Q Growth	-26%	-9%	6%	50%	-24%	-14%	-6%	51%	-22%	-15%	-5%	50%
Units	19,739,305	17,793,461	19,941,847	27,417,956	21,140,481	18,985,193	20,126,366	28,089,895	21,638,886	19,356,367	20,564,479	28,703,431
Y/Y Growth	7%	10%	0%	5%	7%	7%	1%	2%	2%	2%	2%	2%
Q/Q Growth	-24%	-10%	12%	37%	-23%	-10%	6%	40%	-23%	-11%	6%	40%
ASPs	\$132	\$133	\$126	\$138	\$135	\$129	\$115	\$124	\$125	\$120	\$107	\$115
Y/Y Growth	-10%	-5%	-7%	2%	2%	-9%	-9%	-10%	-7%	-7%	-7%	-7%
Q/Q Growth	-2%	1%	-5%	9%	-2%	-5%	-11%	8%	1%	-5%	-11%	8%
Laser												
Revenues (\$MM)	\$8,334,119	\$8,428,823	\$8,625,212	\$9,867,697	\$9,641,397	\$9,270,008	\$9,419,677	\$10,714,703	\$10,237,489	\$9,862,127	\$10,113,703	\$11,514,847
Y/Y Growth	17%	20%	19%	20%	16%	10%	9%	9%	6%	6%	7%	7%
Q/Q Growth	1%	1%	2%	14%	-2%	-4%	2%	14%	-4%	-4%	3%	14%
Units	5,590,956	5,576,999	5,855,889	6,774,252	6,846,572	6,655,212	7,138,371	8,369,930	8,052,126	7,855,243	8,408,511	10,087,784
Y/Y Growth	28%	29%	21%	23%	22%	19%	22%	24%	18%	18%	18%	21%
Q/Q Growth	2%	0%	5%	16%	1%	-3%	7%	17%	-4%	-2%	7%	20%
ASPs	\$1,491	\$1,511	\$1,473	\$1,457	\$1,408	\$1,393	\$1,320	\$1,280	\$1,271	\$1,255	\$1,203	\$1,141
Y/Y Growth	-9%	-7%	-1%	-3%	-6%	-8%	-10%	-12%	-10%	-10%	-9%	-11%
Q/Q Growth	0%	1%	-3%	-1%	-3%	-1%	-5%	-3%	-1%	-1%	-4%	-5%
Servers												
Total												
Revenues (\$MM)	\$11,500	\$11,544	\$11,555	\$14,484	\$12,080	\$12,193	\$11,962	\$14,942	\$12,265	\$12,467	\$12,291	\$15,389
Y/Y Growth	7%	7%	5%	6%	5%	6%	4%	3%	2%	2%	3%	3%
Q/Q Growth	-16%	0%	0%	25%	-17%	1%	-2%	25%	-18%	2%	-1%	25%
Units	1,445,405	1,510,511	1,563,919	1,784,476	1,641,126	1,675,085	1,802,759	2,057,521	1,852,480	1,896,217	2,037,557	2,326,653
Y/Y Growth	23%	23%	17%	16%	14%	11%	15%	15%	13%	13%	13%	13%
Q/Q Growth	-6%	5%	4%	14%	-8%	2%	8%	14%	-10%	2%	7%	14%
ASPs	\$7,972	\$7,628	\$7,395	\$7,590	\$7,181	\$6,871	\$6,639	\$6,856	\$6,484	\$6,231	\$6,014	\$6,257
Y/Y Growth	-12%	-13%	-10%	-15%	-10%	-10%	-10%	-10%	-10%	-9%	-9%	-9%
Q/Q Growth	-10%	-4%	-3%	3%	-5%	-4%	-3%	3%	-5%	-4%	-3%	4%
Unix Servers												
Revenues (\$MM)	\$4,134	\$4,242	\$3,978	\$5,281	\$4,249	\$4,349	\$3,776	\$5,019	\$4,051	\$4,182	\$3,623	\$4,809
Y/Y Growth	-3%	-2%	-2%	3%	3%	3%	-5%	-5%	-5%	-4%	-4%	-4%
Q/Q Growth	-19%	3%	-6%	33%	-20%	2%	-13%	33%	-19%	3%	-13%	33%
Units	163,268	185,681	173,487	203,140	171,505	169,522	181,734	214,124	180,309	178,350	191,564	226,362
Y/Y Growth	7%	23%	9%	2%	5%	-9%	5%	5%	5%	5%	5%	6%
Q/Q Growth	-18%	14%	-7%	17%	-16%	-1%	7%	18%	-16%	-1%	7%	18%
ASPs	\$25,319	\$22,845	\$22,929	\$25,996	\$24,776	\$25,652	\$20,778	\$23,440	\$22,467	\$23,449	\$18,912	\$21,244
Y/Y Growth	-9%	-21%	-10%	2%	-2%	12%	-9%	-10%	-9%	-9%	-9%	-9%
Q/Q Growth	-1%	-10%	0%	13%	-5%	4%	-19%	13%	-4%	4%	-19%	12%
Windows Servers												
Revenues (\$MM)	\$3,766	\$3,570	\$3,917	\$4,611	\$4,148	\$4,083	\$4,264	\$5,032	\$4,358	\$4,286	\$4,477	\$5,308
Y/Y Growth	16%	13%	13%	16%	10%	14%	9%	9%	5%	5%	5%	5%
Q/Q Growth	-6%	-5%	10%	18%	-10%	-2%	4%	18%	-13%	-2%	4%	19%
Units	946,973	969,292	1,013,765	1,146,439	1,065,876	1,074,572	1,182,563	1,337,705	1,205,786	1,216,790	1,338,409	1,514,919
Y/Y Growth	27%	25%	19%	18%	13%	11%	17%	17%	13%	13%	13%	13%
Q/Q Growth	-3%	2%	5%	13%	-7%	1%	10%	13%	-10%	1%	10%	13%
ASPs	\$3,977	\$3,683	\$3,864	\$4,022	\$3,892	\$3,800	\$3,606	\$3,762	\$3,614	\$3,522	\$3,345	\$3,504
Y/Y Growth	-8%	-10%	-5%	-2%	-2%	3%	-7%	-6%	-7%	-7%	-7%	-7%
Q/Q Growth	-3%	-7%	5%	4%	-3%	-2%	-5%	4%	-4%	-3%	-5%	5%
Linux Servers												
Revenues (\$MM)	\$923	\$963	\$1,067	\$1,303	\$1,241	\$1,398	\$1,217	\$1,457	\$1,417	\$1,578	\$1,431	\$1,734
Y/Y Growth	56%	47%	42%	38%	34%	45%	14%	12%	14%	13%	18%	19%
Q/Q Growth	-2%	4%	11%	22%	-5%	13%	-13%	20%	-3%	11%	-9%	21%
Units	244,452	264,312	283,901	328,082	319,233	349,034	344,128	397,451	380,625	417,855	411,633	475,637
Y/Y Growth	47%	38%	32%	30%	31%	32%	21%	21%	19%	20%	20%	20%
Q/Q Growth	-3%	8%	7%	16%	-3%	9%	-1%	15%	-4%	10%	-1%	16%
ASPs	\$3,776	\$3,645	\$3,759	\$3,972	\$3,888	\$4,005	\$3,537	\$3,667	\$3,724	\$3,777	\$3,477	\$3,646
Y/Y Growth	6%	7%	8%	6%	3%	10%	-6%	-8%	-4%	-6%	-2%	-1%
Q/Q Growth	1%	-3%	3%	6%	-2%	3%	-12%	4%	2%	1%	-8%	5%

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 13

Computing Hardware - Quarterly Key Metrics

Rebecca Runkle, Ellen Tseng, Frank Wang, Tomohiro Murata, Kathryn Huberty

	1Q04E	2Q04E	3Q04E	4Q04E	1Q05E	2Q05E	3Q05E	4Q05E	1Q06E	2Q06E	3Q06E	4Q06E
Storage and Networking												
Disk Storage Systems												
Revenues (\$MM)	\$5,485	\$5,412	\$5,384	\$6,336	\$5,483	\$5,596	\$5,739	--	--	--	--	--
Y/Y Growth	5.3%	7.0%	4.2%	4.0%	(0.0%)	3.4%	6.6%	--	--	--	--	--
Q/Q Growth	(10.0%)	(1.3%)	(0.5%)	17.7%	(13.5%)	2.1%	2.6%	--	--	--	--	--
Units	529,951	543,285	538,078	681,057	588,777	603,437	628,038	--	--	--	--	--
Y/Y Growth	3.0%	12.9%	8.0%	18.8%	11.1%	11.1%	16.7%	--	--	--	--	--
Q/Q Growth	(7.5%)	2.5%	(1.0%)	26.6%	(13.5%)	2.5%	4.1%	--	--	--	--	--
ASPs	\$10,350	\$9,961	\$10,006	\$9,303	\$9,312	\$9,274	\$9,138	--	--	--	--	--
Y/Y Growth	2.2%	(5.3%)	(3.5%)	(12.5%)	(10.0%)	(6.9%)	(8.7%)	--	--	--	--	--
Q/Q Growth	(2.6%)	(3.8%)	0.5%	(7.0%)	0.1%	(0.4%)	(1.5%)	--	--	--	--	--
SAN												
Revenues (\$MM)	\$1,888	\$2,006	\$1,955	\$2,334	\$1,835	\$1,960	\$1,940	--	--	--	--	--
Y/Y Growth	18%	19%	17%	13%	-3%	-2%	-1%	--	--	--	--	--
Q/Q Growth	(8.9%)	6.3%	(2.5%)	19.4%	(21.4%)	6.8%	(1.0%)	--	--	--	--	--
NAS												
Revenues (\$MM)	\$433	\$454	\$468	\$476	\$482	\$475	\$481	--	--	--	--	--
Y/Y Growth	20%	20%	19%	11%	11%	5%	3%	--	--	--	--	--
Q/Q Growth	1.1%	5.0%	3.1%	1.8%	1.1%	(1.4%)	1.2%	--	--	--	--	--
Hard Disk Drives												
Hard Disk Drives												
Revenues (\$MM)	\$4,944	\$4,788	\$5,125	\$5,628	\$5,832	\$5,780	\$5,638	\$6,168	\$6,229	\$6,088	\$6,106	\$6,503
Y/Y Growth	-4%	-1%	7%	-1%	18%	21%	10%	10%	7%	5%	8%	5%
Q/Q Growth	-13%	-3%	7%	10%	4%	-1%	-2%	9%	1%	-2%	0%	7%
Units	66,310	67,800	79,000	86,257	83,121	85,463	92,540	100,000	95,005	95,280	106,259	109,997
Y/Y Growth	15%	23%	17%	15%	25%	26%	17%	16%	14%	11%	15%	10%
Q/Q Growth	-12%	2%	17%	9%	-4%	3%	8%	8%	-5%	0%	12%	4%
ASPs	\$75	\$71	\$65	\$65	\$70	\$68	\$61	\$62	\$66	\$64	\$57	\$59
Y/Y Growth	-16%	-19%	-9%	-13%	-6%	-4%	-6%	-5%	-7%	-6%	-6%	-4%
Q/Q Growth	-1%	-5%	-8%	1%	8%	-4%	-10%	1%	6%	-3%	-10%	3%
Recording Heads												
Units	83	71	78	97	105	107	118	129	126	128	134	138
Y/Y Growth	7%	-5%	-4%	2%	28%	51%	51%	32%	20%	20%	14%	7%
Q/Q Growth	-13%	-14%	10%	25%	8%	2%	10%	9%	-2%	2%	4%	3%
Spindle Motors												
Units	64	55	64	76	72	76	82	85	90	89	96	105
Y/Y Growth	25%	12%	11%	13%	13%	40%	28%	12%	24%	17%	17%	23%
Q/Q Growth	-4%	-15%	18%	18%	-4%	6%	8%	3%	5%	0%	8%	9%

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 14

Communications Equipment - Annual Key Metrics

Scott Coleman, John Marchetti

	1999	2000	2001	2002	2003	2004	2005E	2006E
Global Carrier Capex (Constant Currency)								
Total								
Capex (\$MM)	\$169,519	\$229,657	\$239,279	\$173,228	\$156,834	\$169,256	\$187,086	\$195,757
Y/Y Growth	--	35%	4%	-28%	-9%	8%	11%	5%
North America (\$MM)	\$60,954	\$94,421	\$88,991	\$56,927	\$45,842	\$47,654	\$52,341	\$55,071
APAC (\$MM)	\$24,611	\$36,863	\$47,664	\$39,376	\$40,825	\$41,002	\$44,376	\$46,716
EMEA (\$MM)	\$44,703	\$58,085	\$63,961	\$49,748	\$43,373	\$49,445	\$54,745	\$57,665
Japan (\$MM)	\$33,613	\$31,376	\$25,893	\$21,097	\$20,644	\$22,371	\$24,556	\$24,917
Latin America (\$MM)	\$5,638	\$8,913	\$12,770	\$6,081	\$6,151	\$8,784	\$11,067	\$11,389
Wireline Carrier Capex								
Capex (\$MM)	\$120,701	\$164,330	\$154,396	\$99,668	\$87,426	\$87,782	\$94,910	\$98,323
Y/Y Growth	--	36%	-6%	-35%	-12%	0%	8%	4%
North America (\$MM)	\$53,874	\$82,260	\$66,038	\$34,605	\$27,424	\$26,179	\$27,593	\$29,496
APAC (\$MM)	\$13,424	\$20,727	\$26,211	\$22,382	\$23,444	\$22,220	\$23,672	\$23,803
EMEA (\$MM)	\$28,689	\$37,537	\$39,939	\$28,261	\$22,213	\$23,242	\$24,888	\$26,305
Japan (\$MM)	\$21,324	\$18,516	\$13,924	\$11,143	\$11,657	\$12,690	\$14,247	\$14,232
Latin America (\$MM)	\$3,389	\$5,290	\$8,285	\$3,277	\$2,688	\$3,450	\$4,510	\$4,486
Wireless Carrier Capex								
Capex (\$MM)	\$48,818	\$65,328	\$84,883	\$73,560	\$69,408	\$81,474	\$92,175	\$97,435
Y/Y Growth	--	34%	30%	-13%	-6%	17%	13%	6%
North America (\$MM)	\$7,079	\$12,161	\$22,953	\$22,321	\$18,417	\$21,475	\$24,748	\$25,576
APAC (\$MM)	\$11,187	\$16,136	\$21,453	\$16,994	\$17,380	\$18,782	\$20,704	\$22,913
EMEA (\$MM)	\$16,015	\$20,548	\$24,022	\$21,487	\$21,160	\$26,202	\$29,857	\$31,359
Japan (\$MM)	\$12,288	\$12,860	\$11,969	\$9,954	\$8,987	\$9,681	\$10,310	\$10,685
Latin America (\$MM)	\$2,249	\$3,623	\$4,485	\$2,804	\$3,463	\$5,334	\$6,557	\$6,902
Breakdown by Product								
Voice-over-IP (VoIP) *								
Manufacturing Revenues (\$MM)	--	--	--	\$1,521	\$2,423	\$4,100	\$5,791	\$7,588
Y/Y Growth	--	--	--	--	59%	69%	41%	31%
Carrier	--	--	--	\$601	\$697	\$1,031	\$1,693	\$2,294
Enterprise	--	--	--	\$920	\$1,726	\$3,069	\$4,098	\$5,294
Routers *								
Manufacturing Revenues (\$MM)	--	--	--	\$6,544	\$6,028	\$6,957	\$7,886	\$10,029
Y/Y Growth	--	--	--	--	-8%	15%	13%	27%
High-end	--	--	--	\$3,498	\$3,298	\$4,055	\$4,996	\$6,794
Carrier	--	--	--	\$2,794	\$2,865	\$3,744	\$4,580	\$6,254
Enterprise	--	--	--	\$703	\$433	\$311	\$416	\$540
Midrange	--	--	--	\$1,505	\$1,312	\$1,324	\$1,168	\$1,274
Low-end	--	--	--	\$1,542	\$1,418	\$1,578	\$1,722	\$1,961
Ethernet Switches *								
Manufacturing revenues (\$MM)	--	--	--	\$13,886	\$12,887	\$16,645	\$16,753	\$17,379
Y/Y Growth	--	--	--	--	-7%	29%	1%	4%
Layer 2 (fixed & modular)	--	--	--	\$5,318	\$4,050	\$4,039	\$3,541	\$3,224
Layer 3 (fixed & modular)	--	--	--	\$5,591	\$6,310	\$9,756	\$10,443	\$11,630
Layer 4-7	--	--	--	\$608	\$582	\$623	\$709	\$808
Multiservice WAN Switch	--	--	--	\$2,369	\$1,946	\$2,227	\$2,060	\$1,717
WLAN *								
Revenues (\$MM)	--	--	--	\$1,696	\$2,194	\$2,802	\$3,881	\$3,783
Y/Y Growth	--	--	--	--	29%	28%	39%	-3%
SO/HO/Home	--	--	--	\$898	\$1,310	\$1,591	\$1,887	\$2,211
Enterprise	--	--	--	\$798	\$884	\$1,211	\$1,994	\$1,572

E = Morgan Stanley Research Estimates; Source: Morgan Stanley Research; * Source: Synergy Research data

Exhibit 15

Wireless Infrastructure - Annual Key Metrics

Adnaan Ahmad, Peter Dionisio

	2000	2001	2002	2003	2004	2005e	2006e	2007e	2008e	2009e	2010e
Wireless Infrastructure Revenues											
Revenues (\$MM)	\$62,746	\$59,115	\$46,219	\$46,064	\$56,435	\$66,489	\$71,851	\$76,794	\$80,295	\$83,097	\$85,463
Y/Y Growth		-6%	-22%	0%	23%	18%	8%	7%	5%	3%	3%
Regional Breakdown											
Asia Pacific	\$17,532	\$19,141	\$13,456	\$14,576	\$16,916	\$19,345	\$21,388	\$23,283	\$25,050	\$26,517	\$27,816
(% of total market)		9%	-30%	8%	16%	14%	11%	9%	8%	6%	5%
Japan	\$5,230	\$5,772	\$3,703	\$4,267	\$4,305	\$4,379	\$4,773	\$4,821	\$4,821	\$4,724	\$4,771
China	\$5,492	\$7,871	\$4,725	\$4,418	\$5,403	\$6,213	\$6,959	\$8,072	\$9,122	\$9,760	\$10,151
Korea	\$2,092	\$1,574	\$1,305	\$1,391	\$1,331	\$1,400	\$1,456	\$1,442	\$1,413	\$1,399	\$1,413
Rest of Asia Pacific	\$4,718	\$3,924	\$3,723	\$4,500	\$5,877	\$7,353	\$8,199	\$8,948	\$9,694	\$10,634	\$11,481
Emerging: Asia Pacific					\$3,526	\$4,552	\$5,214	\$5,818	\$6,536	\$7,410	\$8,218
Developed: Asia Pacific					\$1,469	\$1,810	\$1,920	\$2,026	\$2,082	\$2,208	\$2,313
Mature: Asia Pacific					\$882	\$991	\$1,066	\$1,104	\$1,076	\$1,015	\$950
EMEA	\$25,005	\$20,433	\$17,835	\$17,767	\$22,949	\$27,073	\$29,171	\$30,690	\$31,079	\$31,502	\$31,703
(% of total market)		-18%	-13%	0%	29%	18%	8%	5%	1%	1%	1%
Western Europe	\$20,747	\$16,183	\$12,784	\$10,995	\$12,314	\$13,840	\$14,892	\$15,418	\$15,030	\$14,180	\$13,267
E. EU, M. East, & Africa	\$4,258	\$4,250	\$5,050	\$6,772	\$10,635	\$13,234	\$14,279	\$15,272	\$16,049	\$17,322	\$18,436
Eastern Europe & the Middle East	\$4,132	\$4,093	\$4,713	\$5,869	\$8,396	\$10,343	\$10,969	\$11,578	\$11,899	\$12,617	\$13,218
Africa	\$126	\$157	\$337	\$903	\$2,239	\$2,890	\$3,310	\$3,694	\$4,150	\$4,705	\$5,218
Latin America	\$7,261	\$6,773	\$3,485	\$2,732	\$4,331	\$5,336	\$5,658	\$5,972	\$6,138	\$6,509	\$6,819
(% of total market)		-7%	-49%	-22%	59%	23%	6%	6%	3%	6%	5%
North America	\$12,948	\$12,768	\$11,443	\$10,990	\$12,239	\$14,734	\$15,634	\$16,849	\$18,028	\$18,569	\$19,126
(% of total market)		-1%	-10%	-4%	11%	20%	6%	8%	7%	3%	3%
Product Breakdown											
GSM	\$31,151	\$29,816	\$26,995	\$28,018	\$33,209	\$40,436	\$41,686	\$38,967	\$38,111	\$36,764	\$36,028
Y/Y Growth		-4%	-9%	4%	19%	22%	3%	-7%	-2%	-4%	-2%
WCDMA	\$667	\$1,700	\$3,034	\$5,188	\$8,588	\$11,633	\$15,463	\$21,435	\$25,313	\$29,161	\$32,619
Y/Y Growth		155%	78%	71%	66%	35%	33%	39%	18%	15%	12%
Total GSM Evolution	\$31,818	\$31,516	\$30,028	\$33,207	\$41,797	\$52,070	\$57,150	\$60,402	\$63,424	\$65,925	\$68,647
CDMA Evolution	\$17,995	\$16,745	\$10,795	\$9,105	\$11,048	\$12,488	\$13,007	\$14,855	\$15,488	\$15,917	\$15,943
Y/Y Growth		-7%	-36%	-16%	21%	13%	4%	14%	4%	3%	0%
Other (PDC, TDMA, iDEN etc)	\$12,933	\$10,854	\$5,395	\$3,752	\$3,590	\$1,931	\$1,695	\$1,536	\$1,383	\$1,255	\$873
Y/Y Growth		-16%	-50%	-30%	-4%	-46%	-12%	-9%	-10%	-9%	-30%
Total Equipment revenues	\$62,746	\$59,115	\$46,219	\$46,064	\$56,436	\$66,489	\$71,851	\$76,794	\$80,295	\$83,097	\$85,463
Y/Y Growth		-6%	-22%	0%	23%	18%	8%	7%	5%	3%	3%

E = Morgan Stanley Research Estimates
Source: Morgan Stanley Research

Editors' Commentary: We note that in examining exhibits 14 and 15, one will find a difference between wireless capex figures and wireless infrastructure revenues, and our analysts emphasize that infrastructure forecasts pertain to wireless equipment revenues, and hence, should not necessarily correspond to telco capex trends. Our analysts have examined the relationship between telco capex and wireless equipment revenues and concluded that relying solely on operator spend numbers is not an effective way of forecasting revenues. Instead, our analysts believe telco capex data gives the market a sense of how loose or tight the purse strings are on the part of operators, but it should only be used as an accompanying tool in forecasting wireless equipment revenues.

Exhibit 16

Handsets - Annual Key Metrics

Adnaan Ahmad, Peter Dionisio, Bonnie Chang*, Jasmine Lu*

	1997	1998	1999	2000	2001	2002	2003	2004	2005E	2006E
Wireless Handsets										
Revenues (\$MM)	--	--	--	--	--	--	--	\$112,304	\$123,773	\$128,790
Y/Y Growth	--	--	--	--	--	--	--	--	10%	4%
ASPs (\$)	--	--	--	--	--	--	--	\$164	\$153	\$144
Y/Y Growth	--	--	--	--	--	--	--	--	-7%	-6%
Units (MM)	--	--	--	425	432	427	508	683	810	896
Y/Y Growth	--	--	--	--	2%	-1%	19%	34%	19%	11%
By Technology										
GSM/GPRS	--	--	--	246	255	256	315	451	583	624
WCDMA	--	--	--	0	0	0	3	20	42	79
CDMA Evolution	--	--	--	85	86	85	112	143	162	175
Others	--	--	--	93	91	85	79	68	22	18
Total Net Adds (Units)										
North America	12	16	18	25	21	13	20	23	23	20
Western Europe	20	38	66	82	44	20	23	29	21	14
Asia Pacific	24	36	46	70	88	91	109	119	118	130
Latin America	6	8	20	21	20	14	23	47	54	41
Eastern Europe	2	4	6	12	18	25	30	59	56	48
Middle East and Africa	3	5	10	19	17	15	19	33	46	53
Total Replacements (Units)										
North America	14	18	34	52	57	75	84	106	118	136
Western Europe	13	22	34	62	80	77	92	108	129	149
Asia Pacific	20	40	60	59	56	54	67	99	152	172
Latin America	1	2	4	9	11	15	17	25	32	45
Eastern Europe	1	2	3	6	10	12	11	18	35	54
Middle East and Africa	1	2	4	7	10	14	15	18	26	36
Wireless Subscribers										
Total Subscribers (MM)	206	315	486	724	947	1,141	1,384	1,725	2,067	2,396
Y/Y Growth		53%	54%	49%	31%	21%	21%	25%	20%	16%
North America	59	75	93	118	139	153	172	195	218	238
Western Europe	56	94	161	243	288	309	334	366	390	405
Asia Pacific	66	104	153	229	328	429	550	685	814	957
Latin America	13	22	43	65	86	101	125	174	231	274
Eastern Europe	4	8	14	27	47	75	109	175	237	289
Middle East and Africa	7	13	22	41	59	74	94	128	176	232
Handset Printed Circuit Boards (from Taiwan)										
Units (MM)	--	--	--	--	60.6	148.1	185.9	263.2	341.2	419.7
Y/Y Growth						144%	26%	42%	30%	23%

E = Morgan Stanley Research Estimate

Source: Morgan Stanley Research

Notes: Industry figures for 2005 are estimates, Handsets ASPs are sell-through ASPs, and ASPs are based on weighted average of actuals and not estimates

* Handset Printed Circuit Board forecasts

Exhibit 17

Handset PCBs - Quarterly Key Metrics

Bonnie Chang, Jasmine Lu

	1Q04E	2Q04E	3Q04E	4Q04E	1Q05E	2Q05E	3Q05E	4Q05E	1Q06E	2Q06E	3Q06E	4Q06E
Handset Printed Circuit Boards (from Taiwan)												
Units (MM)	59.0	62.1	63.3	78.8	66.6	70.2	94.7	109.7	104.8	95.5	109.7	109.7
Y/Y Growth	70%	72%	33%	17%	13%	13%	50%	39%	57%	36%	16%	0%
Q/Q Growth	-13%	5%	2%	24%	-15%	5%	35%	16%	-4%	-9%	15%	0%

E = Morgan Stanley Research Estimate

Source: Morgan Stanley Research

Note: Data and forecasts based on Handset Printed Circuit Board from Taiwan

Exhibit 18

Consumer Electronics - Annual Key Metrics

Masahiro Ono

	1997A	1998A	1999A	2000A	2001A	2002A	2003A	2004A	2005E	2006E
Televisions (Ono)										
Total										
Revenues (\$MM)	\$26,493	\$27,622	\$29,325	\$30,857	\$30,625	\$40,760	\$47,572	\$52,637	\$59,543	\$65,373
Y/Y Growth	-1%	4%	6%	5%	-1%	33%	17%	11%	13%	10%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	120,841	126,705	136,393	147,561	149,698	162,038	172,290	183,817	202,035	222,669
Y/Y Growth	--	5%	8%	8%	1%	8%	6%	7%	10%	10%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	\$219	\$218	\$215	\$209	\$205	\$1,720	\$1,371	\$1,004	\$751	\$597
Y/Y Growth	-5%	0%	-1%	-3%	-2%	737%	-20%	-27%	-25%	-21%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
LCD Television (Ono)										
Revenues (\$MM)	--	--	--	--	--	\$2,211	\$7,078	\$9,606	\$15,762	\$20,469
Y/Y Growth	--	--	--	--	--	--	220%	36%	64%	30%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units	--	--	--	200	600	1,400	4,760	8,797	19,246	31,250
Y/Y Growth	--	--	--	--	200%	133%	240%	85%	119%	62%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	--	--	--	--	--	\$1,579	\$1,487	\$1,092	\$819	\$655
Y/Y Growth	--	--	--	--	--	--	-6%	-27%	-25%	-20%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
PDP Television (Ono)										
Revenues (\$MM)	--	--	--	--	--	\$3,200	\$3,220	\$5,294	\$6,339	\$7,531
Y/Y Growth	--	--	--	--	--	--	1%	64%	20%	19%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units	--	--	--	--	--	800	1,150	2,816	4,817	7,630
Y/Y Growth	--	--	--	--	--	--	44%	145%	71%	58%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	--	--	--	--	--	\$4,000	\$2,800	\$1,880	\$1,316	\$987
Y/Y Growth	--	--	--	--	--	--	-30%	-33%	-30%	-25%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Projection Television (Ono)										
Revenues (\$MM)	--	--	--	--	--	\$4,114	\$5,600	\$5,610	\$5,032	\$4,520
Y/Y Growth	--	--	--	--	--	--	36%	0%	-10%	-10%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units	--	--	--	--	--	3,740	5,600	6,600	7,400	8,100
Y/Y Growth	--	--	--	--	--	--	50%	18%	12%	9%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	--	--	--	--	--	\$1,100	\$1,000	\$850	\$680	\$558
Y/Y Growth	--	--	--	--	--	--	-9%	-15%	-20%	-18%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
CRT Television (Ono)										
Revenues (\$MM)	\$26,493	\$27,622	\$29,325	\$30,857	\$30,625	\$31,235	\$31,674	\$32,127	\$32,409	\$32,854
Y/Y Growth	-1%	4%	6%	5%	-1%	2%	1%	1%	1%	1%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units	120,841	126,705	136,393	147,361	149,098	156,098	160,780	165,604	170,572	175,689
Y/Y Growth	4%	5%	8%	8%	1%	5%	3%	3%	3%	3%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	\$219	\$218	\$215	\$209	\$205	\$200	\$197	\$194	\$190	\$187
Y/Y Growth	-5%	0%	-1%	-3%	-2%	-3%	-2%	-2%	-2%	-2%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Integrated Digital TV (Ono) *										
Revenues (\$MM)	--	--	--	\$1,088	\$2,065	\$2,602	\$3,200	\$3,000	\$3,900	\$7,200
Y/Y Growth	--	--	--	--	90%	26%	23%	-6%	30%	85%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units	--	--	--	787	1,595	1,865	3,561	7,747	15,525	28,780
Y/Y Growth	--	--	--	--	103%	17%	91%	118%	100%	85%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	--	--	--	\$1,383	\$1,295	\$1,129	\$1,000	\$930	\$800	\$650
Y/Y Growth	--	--	--	--	-6%	-13%	-11%	-7%	-14%	-19%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--

E = Morgan Stanley Research Estimate

Source: Morgan Stanley Research

* Not included in total TVs; DTV can be any type of display.

Exhibit 19

Consumer Electronics - Annual Key Metrics

Masahiro Ono

	1997A	1998A	1999A	2000A	2001A	2002A	2003A	2004A	2005E	2006E
DVD Hardware (Ono)										
Total										
Revenues (\$MM)	\$320	\$1,001	\$2,455	\$4,169	\$6,221	\$5,065	\$8,080	\$11,630	\$10,740	\$11,110
Y/Y Growth	870%	213%	145%	70%	49%	-19%	60%	44%	-8%	3%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	705	2,951	9,704	20,846	35,335	21,951	39,000	85,600	102,000	123,000
Y/Y Growth	985%	319%	229%	115%	70%	-38%	78%	119%	19%	21%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	\$454	\$339	\$253	\$200	\$593	\$506	\$359	\$233	\$155	\$120
Y/Y Growth	-16%	-25%	-25%	-21%	197%	-15%	-29%	-35%	-33%	-23%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
DVD Player (Ono)										
Total										
Revenues (\$MM)	\$320	\$1,001	\$2,455	\$4,169	\$5,880	\$4,169	\$5,880	\$8,970	\$8,100	\$6,860
Y/Y Growth	870%	213%	145%	70%	41%	-29%	41%	53%	-10%	-15%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	705	2,951	9,704	20,846	35,000	20,846	35,000	78,000	90,000	98,000
Y/Y Growth	985%	319%	229%	115%	68%	-40%	68%	123%	15%	9%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	\$454	\$339	\$253	\$200	\$168	\$200	\$168	\$115	\$90	\$70
Y/Y Growth	-16%	-25%	-25%	-21%	-16%	19%	-16%	-32%	-22%	-22%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
DVD Recorder (Ono)										
Total										
Revenues (\$MM)	--	--	--	--	\$341	\$896	\$2,200	\$2,660	\$2,640	\$4,250
Y/Y Growth	--	--	--	--	--	163%	145%	21%	-1%	61%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	--	--	--	--	335	1,105	4,000	7,600	12,000	25,000
Y/Y Growth	--	--	--	--	230%	262%	90%	58%	108%	
Q/Q Growth	--	--	--	--	--	--	--	--	--	
ASPs	--	--	--	--	\$1,018	\$811	\$550	\$350	\$220	\$170
Y/Y Growth	--	--	--	--	--	-20%	-32%	-36%	-37%	-23%
Q/Q Growth	--	--	--	--	--	--	--	--	--	
VCR (Ono)										
Total										
Revenues (\$MM)	\$9,986	\$9,342	\$8,755	\$7,681	\$5,436	\$3,925	\$3,262	\$2,640	\$2,491	\$2,244
Y/Y Growth	-2%	-6%	-6%	-12%	-29%	-28%	-17%	-19%	-6%	-10%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	62,022	62,283	60,801	56,065	54,361	56,065	54,361	48,000	47,000	44,000
Y/Y Growth	4%	0%	-2%	-8%	-3%	3%	-3%	-12%	-2%	-6%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	\$161	\$150	\$144	\$137	\$100	\$70	\$60	\$55	\$53	\$51
Y/Y Growth	-6%	-7%	-4%	-5%	-27%	-30%	-14%	-8%	-4%	-4%
Q/Q Growth	--	--	--	--	--	--	--	--	--	
Digital Camcorder (Ono)										
Total										
Revenues (\$MM)	\$1,083	\$1,958	\$2,890	\$4,675	\$5,198	\$5,166	\$5,346	\$4,410	\$4,725	\$5,400
Y/Y Growth	-26%	81%	48%	62%	11%	-1%	3%	-18%	7%	14%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	800	1,750	3,440	6,875	9,450	12,300	14,850	15,750	21,000	27,000
Y/Y Growth	-17%	119%	97%	100%	37%	30%	21%	6%	33%	29%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	\$1,354	\$1,119	\$840	\$680	\$550	\$420	\$360	\$280	\$225	\$200
Y/Y Growth	-11%	-17%	-25%	-19%	-19%	-24%	-14%	-22%	-20%	-11%
Q/Q Growth	--	--	--	--	--	--	--	--	--	
Digital Still Cameras (Ono)										
Total										
Revenues (\$MM)	\$576	\$1,026	\$1,491	\$5,193	\$6,240	\$7,131	\$10,329	\$12,169	\$10,395	\$9,315
Y/Y Growth	88%	78%	45%	248%	20%	14%	45%	18%	-15%	-10%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	2,311	4,416	6,257	14,098	19,500	27,426	49,185	71,585	77,000	81,000
Y/Y Growth	110%	91%	42%	125%	38%	41%	79%	46%	8%	5%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	\$249	\$232	\$238	\$368	\$320	\$260	\$210	\$170	\$135	\$115
Y/Y Growth	-11%	-7%	3%	55%	-13%	-19%	-19%	-19%	-21%	-15%
Q/Q Growth	--	--	--	--	--	--	--	--	--	

E = Morgan Stanley Research Estimate
Source: Morgan Stanley Research; PDA estimates are from Gartner

Exhibit 20

Consumer Electronics - Annual Key Metrics

Masahiro Ono

	1997A	1998A	1999A	2000A	2001A	2002A	2003A	2004A	2005E	2006E
CD Players (Ono)										
Total										
Revenues (\$MM)	--	--	--	\$9,984	\$9,249	\$9,371	\$9,500	\$9,700	\$9,600	\$9,600
Y/Y Growth	--	--	--	--	-7%	1%	1%	2%	-1%	0%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	--	--	--	104,000	102,765	106,491	111,000	117,000	122,000	124,000
Y/Y Growth	--	--	--	--	-1%	4%	4%	5%	4%	2%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	--	--	--	\$96	\$90	\$88	\$85	\$83	\$80	\$78
Y/Y Growth	--	--	--	--	-6%	-2%	-3%	-2%	-4%	-3%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Mini Disc Players (Ono)										
Total										
Revenues (\$MM)	\$1,056	\$1,557	\$2,080	\$1,442	\$1,458	\$1,525	\$1,600	\$1,650	\$1,700	\$1,750
Y/Y Growth	96%	47%	34%	-31%	1%	5%	5%	3%	3%	3%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Units (000)	5,698	8,650	13,000	13,000	14,500	16,400	18,000	19,400	20,700	22,300
Y/Y Growth	130%	52%	50%	0%	12%	13%	10%	8%	7%	8%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
ASPs	\$185	\$180	\$160	\$111	\$101	\$93	\$90	\$85	\$80	\$77
Y/Y Growth	-15%	-3%	-11%	-31%	-9%	-8%	-3%	-6%	-6%	-4%
Q/Q Growth	--	--	--	--	--	--	--	--	--	--
Portable MP3 Devices (Runkle)										
Total Units (000)										
Y/Y Growth	--	--	--	--	--	--	15,130	38,870	75,900	105,570
Flash Units	--	--	--	--	--	--	12,460	26,360	55,410	82,460
Y/Y Growth	--	--	--	--	--	--	--	112%	110%	49%
HDD Units	--	--	--	--	--	--	2,670	12,510	20,490	23,110
Y/Y Growth	--	--	--	--	--	--	--	369%	64%	13%
AAPL Units (Flash & HDD)	--	--	--	--	--	--	1,451	8,263	31,961	47,476
Y/Y Growth	--	--	--	--	--	--	--	469%	287%	49%
% Market Share	--	--	--	--	--	--	10%	21%	42%	45%
Set-top Boxes (Swinburne)										
Global Total STB Units (000)										
Y/Y Growth	--	--	--	21,722	24,563	26,816	30,205	39,283	46,211	51,399
US Total STB Units	--	--	--	9,961	11,286	12,436	13,385	18,443	19,731	19,159
Y/Y Growth	--	--	--	--	13%	10%	8%	38%	7%	-3%
ROW Total STB Units	--	--	--	11,762	13,277	14,380	16,820	20,840	26,480	32,240
Y/Y Growth	--	--	--	--	13%	8%	17%	24%	27%	22%
Global Cable STB Units	--	--	--	4,751	5,590	7,418	7,604	10,250	12,398	13,760
Y/Y Growth	--	--	--	--	18%	33%	3%	35%	21%	11%
Global Satellite STB Units	--	--	--	16,971	18,973	19,249	22,101	28,082	31,213	33,838
Y/Y Growth	--	--	--	--	12%	1%	15%	27%	11%	8%
Game Consoles (Pitz)										
Total Revenue (US\$ in Millions)										
Y/Y Growth	--	--	\$22,730	\$22,563	\$26,535	\$29,567	\$29,897	\$26,199	\$27,415	\$30,357
Global Console & Handheld Hardware Revenue (\$ Millions)	--	--	\$5,031	\$4,782	\$8,452	\$9,003	\$7,517	\$5,178	\$5,270	\$7,799
Y/Y Growth	--	--	--	--	77%	7%	-17%	-31%	2%	48%
Global Console Units (000)	--	--	7,717	8,709	22,859	31,230	28,233	26,143	25,560	23,865
Y/Y Growth	--	--	--	--	162%	37%	-10%	-7%	-2%	-7%
Xbox 360 ⁴	--	--	--	--	--	--	--	--	1,500	8,800
Y/Y Growth	--	--	--	--	--	--	--	--	--	487%
PlayStation 3	--	--	--	--	--	--	--	--	--	4,700
Y/Y Growth	--	--	--	--	--	--	--	--	--	--
Nintendo Revolution	--	--	--	--	--	--	--	--	--	1,500
Y/Y Growth	--	--	--	--	--	--	--	--	--	--
Global Handheld Units (000)	--	--	--	--	13,952	14,132	15,436	19,670	29,548	21,300
Y/Y Growth	--	--	--	--	--	1%	9%	27%	50%	-28%
Global Console & Handheld Software Revenue (\$ Millions)	--	--	\$11,238	\$11,101	\$11,140	\$12,957	\$13,977	\$11,277	\$11,000	\$10,435
Y/Y Growth	--	--	--	--	0%	16%	8%	-19%	-2%	-5%
Global PC Software Revenue (\$ Millions)	--	--	\$5,138	\$5,256	\$5,198	\$4,761	\$4,379	\$4,314	\$4,347	\$3,911
Y/Y Growth	--	--	--	--	-1%	-8%	-8%	-1%	1%	-10%
Global Online Subscriptions, Ads & Fees (\$ Millions) ⁴	--	--	--	\$135	\$393	\$884	\$1,498	\$2,146	\$2,771	\$3,395
Y/Y Growth	--	--	--	--	191%	125%	69%	43%	29%	23%
Global Mobile Subscriptions & Fees (\$ Millions) ⁵	--	--	--	--	\$8	\$357	\$733	\$1,312	\$1,858	\$2,323
Y/Y Growth	--	--	--	--	--	4363%	105%	79%	42%	25%
PDA (Gartner)										
Units (000)										
Y/Y Growth	--	--	--	10,979	13,121	12,055	13,363	15,658	--	--
Y/Y Growth	--	--	--	--	20%	-8%	11%	17%	--	--

E = Morgan Stanley Research Estimate

Source: Morgan Stanley Research; PDA estimates are from Gartner

1 Based on PricewaterhouseCoopers estimates for C2000-2003E and Morgan Stanley Research estimates thereafter.

2 Based on PricewaterhouseCoopers estimates for C2001-2003E and Morgan Stanley Research estimates thereafter.

3 Based on PricewaterhouseCoopers and Morgan Stanley Research estimates.

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 21

Semiconductors - Annual Key Metrics

Mark Edelstone, Louis Gerhardy, Harlan Sur, Sunil Gupta, Keon Han, Timm Schulze-Melander

	1997	1998	1999	2000	2001	2002	2003	2004	2005E	2006E	Comments	
Semiconductors												
Total												
Revenues (\$000)	\$137,203,120	\$125,611,999	\$149,378,551	\$204,393,623	\$138,962,610	\$140,713,320	\$166,425,522	\$213,026,836	\$227,938,715	\$250,732,586	* = Range 8-12%	
Y/Y Growth	4.0%	-8.4%	18.9%	36.8%	-32.0%	1.3%	18.3%	28.0%	7.0%	10.0%		
Units (000)	255,293,458	257,557,240	299,815,913	373,356,791	293,833,480	335,632,108	366,730,834	433,466,163	455,509,052	--		
Y/Y Growth	18.6%	0.9%	16.4%	24.6%	-21.3%	14.2%	9.3%	18.2%	5.1%	--		
ASPs (\$)	\$0.54	\$0.49	\$0.50	\$0.55	\$0.47	\$0.42	\$0.45	\$0.49	\$0.50	\$0.50	--	
Integrated Circuits												
Revenues (\$000)	\$119,532,273	\$109,071,451	\$130,217,860	\$176,945,444	\$118,491,940	\$120,072,732	\$139,964,713	\$178,772,092	\$192,798,203	--		
Y/Y Growth	4.0%	-8.8%	19.4%	35.9%	-33.0%	1.3%	16.6%	27.7%	7.8%	--		
Units (000)	58,333,158	58,716,106	68,119,064	86,514,632	68,546,045	78,597,897	90,290,041	105,187,213	116,348,536	--		
Y/Y Growth	21.8%	0.7%	16.0%	27.0%	-20.8%	14.7%	14.9%	16.5%	10.6%	--		
ASPs (\$)	\$1.86	\$1.86	\$1.91	\$2.05	\$1.73	\$1.53	\$1.55	1.70	1.66	--		
MPUs												
Revenues (\$000)	\$19,985,070	\$21,796,632	\$23,098,680	\$26,098,784	\$21,039,498	\$20,404,572	\$23,875,229	\$27,002,147	\$31,283,933	\$34,118,395		
Y/Y Growth	9.1%	6.0%	13.0%	13.0%	-19.4%	-3.0%	17.0%	13.1%	15.9%	9.1%		
Units (000)	88,150	112,397	135,363	159,281	149,480	150,310	170,710	186,586	221,540	256,000		
Y/Y Growth	27.5%	20.4%	17.7%	17.7%	-6.2%	0.6%	13.6%	9.3%	18.7%	15.6%		
ASPs (\$)	\$226.72	\$193.93	\$170.64	\$163.85	\$140.75	\$135.75	\$139.86	\$144.72	\$141.21	\$133.27		
Intel												
Revenues (\$000)	\$19,303,000	\$20,538,875	\$21,709,400	\$23,760,200	\$18,620,250	\$18,658,050	\$21,921,230	\$24,463,730	\$27,490,810	\$28,561,520		
Units (000)	79,750	98,820	116,603	132,681	118,955	124,860	142,750	155,540	177,940	196,000		
Advanced Micro Devices												
Revenues (\$000)	\$682,070	\$1,257,757	\$1,389,280	\$2,338,584	\$2,419,248	\$1,746,522	\$1,953,999	\$2,538,417	\$3,793,123	\$5,556,875		
Units (000)	8,400	13,577	18,760	26,600	30,525	25,450	27,960	31,046	43,600	60,000		
Analog												
Revenues (\$000)	\$19,788,937	\$19,072,955	\$22,081,701	\$30,516,279	\$23,180,165	\$23,912,887	\$26,793,903	\$31,367,086	\$31,921,999	\$35,150,000		
Y/Y Growth	-3.6%	15.8%	38.2%	38.2%	-24.0%	3.2%	12.0%	17.1%	1.8%	10.1%		
Units (000)	25,865,873	26,777,975	31,940,911	41,262,842	33,165,587	40,512,164	46,735,510	52,305,425	57,922,173	--		
Y/Y Growth	3.5%	19.3%	29.2%	29.2%	-19.6%	22.2%	15.4%	11.9%	10.7%	--		
ASPs (\$)	\$0.77	\$0.71	\$0.69	\$0.74	\$0.70	\$0.59	\$0.57	\$0.60	\$0.55	--		
PLDs												
Revenues (from wksh, in \$MM)	\$1,649	\$1,716	\$2,216	\$3,783	\$2,462	\$2,232	\$2,529	\$3,038	\$3,207	\$3,743	combine ALTR, LSCC, XLNX, QUIK, ACTL	
Y/Y Growth	25.9%	4.1%	29.1%	70.7%	-34.9%	-9.3%	13.3%	20.1%	5.6%	16.7%		
DRAM												
Revenues (\$Mn)	--	--	\$20,722	\$29,000	\$10,769	\$16,012	\$17,873	\$26,069	\$26,054	\$26,972		
Y/Y Growth	--	--	--	40.0%	-62.9%	48.7%	11.6%	45.9%	-0.1%	3.5%		
Supply (Mn, 512Mb Equiv.)	--	--	290	500	852	1,153	1,730	2,467	3,954	5,986		
Demand (Mn, 512 Mb Equiv.)	--	--	292	480	776	1,142	1,724	2,583	3,886	5,695		
ASPs (\$)	--	--	\$71.00	\$60.47	\$13.88	\$14.03	\$10.33	\$10.57	\$6.59	\$4.51		
Total Memory												
Bits (billions)	--	--	148,621,511	256,000,188	436,352,319	590,428,598	885,659,956	1,263,138,065	2,024,396,961	3,065,073,987		
Gigabytes	--	--	18,577,689	32,000,024	54,544,040	73,803,575	110,707,495	157,892,258	253,049,620	383,134,248		
Terabytes	--	--	18,578	32,000	54,544	73,804	110,707	157,892	253,050	383,134		
Pricing												
Average Price / Bit (\$)	--	--	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000		
Average Price / MB (\$)	--	--	\$4.438	\$3.780	\$0.867	\$0.877	\$0.161	\$0.165	\$0.103	\$0.070		

E = Morgan Stanley Research Estimate
Source: Morgan Stanley Research

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 22

Semiconductors - Annual Key Metrics

Mark Edelstone, Louis Gerhardy, Harlan Sur, Sunil Gupta, Keon Han, Timm Schulze-Melander

	1997	1998	1999	2000	2001	2002	2003	2004	2005E	2006E
Semiconductors										
NAND Flash										
Revenues (\$000)	--	--	--	--	--	\$2,172	\$3,752	\$5,251	\$5,895	--
Y/Y Growth	--	--	--	--	--	--	72.7%	40.0%	12.3%	--
Supply (MM)	--	--	--	--	--	--	738	1,788	4,058	--
Demand (MM)	--	--	--	--	--	256	748	1,795	3,617	--
ASPs (\$)	--	--	--	--	--	--	\$5.01	\$2.93	\$1.63	--
Demand Sources (MM):										
DSC	--	--	--	--	--	198	399	684	1,027	--
Handsets	--	--	--	--	--	5	64	335	726	--
MP3 Players	--	--	--	--	--	5	9	193	610	--
USB Drives	--	--	--	--	--	30	102	322	850	--
PDA's	--	--	--	--	--	12	5	18	--	--
Game Consoles	--	--	--	--	--	6	10	16	25	--
Digital Camcorders	--	--	--	--	--	14	18	39	82	--
Other	--	--	--	--	--	60	139	187	256	--
Inventory										
Channel/OEM Inventory (Days)	46	38	43	51	41	33	30	32	--	--
Semi Company Inventory (Days)	60	56	54	68	67	66	67	71	--	--
Semiconductor Capex										
WW Cap Spending (\$million)	40,505	30,199	34,603	64,289	38,195	27,699	31,500	46,962	46,004	50,668
Y/Y Growth	-9.9%	-25.4%	14.6%	85.8%	-40.6%	-27.5%	13.7%	49.1%	-2.0%	10.1%
Semiconductor Capital Equipment Booking										
Total Equip't Bookings (\$million) *	16,361	10,921	17,580	32,274	10,797	10,899	9,673	17,058	--	--
Y/Y Growth	17.1%	-33.2%	61.0%	83.6%	-66.5%	0.9%	-11.2%	76.3%	--	--
Foundry Utilization Model **										
Capacity (k wafers)	--	2,856	3,461	6,779	8,363	7,930	8,504	10,200	13,573	15,829
Capacity Utilization	--	80%	97%	100%	49%	64%	81%	94%	82%	91%
Wafer shipment (k wafers)	--	2,295	3,363	6,779	4,094	5,099	6,928	9,580	11,100	14,386

E = Morgan Stanley Research Estimate

Source: Morgan Stanley Research

* NA-based SCE companies

** TOP-4 Foundries

March 3, 2006
Electronic Mfg Services/Distribution/Components

Exhibit 23

Semiconductors - Quarterly Key Metrics

Mark Edelstone, Louis Gerhardy, Harlan Sur, Sunil Gupta, Keon Han, Timm Schulze-Melander

	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05	1Q06E	2Q06E	3Q06E	4Q06E
Semiconductors												
Total												
Revenues (\$000)	\$48,860,808	\$53,509,081	\$55,553,880	\$55,103,067	\$55,078,179	\$53,874,971	\$58,671,783	\$59,859,204	\$56,730,524	\$59,262,468	\$62,778,808	\$66,443,716
Y/Y Growth	32.4%	40.5%	28.2%	14.6%	12.7%	0.7%	2.0%	7.0%	3%	10%	7%	11%
Units (000)	101,956,641	113,922,776	113,195,965	104,390,781	103,270,289	109,357,388	119,638,625	123,242,750	--	--	--	--
Y/Y Growth	21.0%	27.5%	21.4%	4.5%	1.3%	-4.0%	5.7%	18.1%	--	--	--	--
ASPs (\$)	\$0.48	\$0.47	\$0.49	\$0.53	\$0.53	\$0.49	\$0.49	\$0.49	--	--	--	--
Integrated Circuits												
Revenues (\$000)	\$40,935,503	\$44,858,926	\$46,515,442	\$46,462,221	\$46,737,306	\$45,430,233	\$49,724,777	\$50,905,887	--	--	--	--
Y/Y Growth	32.4%	41.2%	26.9%	14.4%	14.2%	1.3%	6.9%	9.6%	--	--	--	--
Units (000)	25,682,324	27,295,446	26,854,658	25,354,785	25,772,848	27,452,807	31,042,593	32,080,288	--	--	--	--
Y/Y Growth	26.2%	25.4%	17.0%	0.5%	0.4%	0.6%	15.6%	26.5%	--	--	--	--
ASPs (\$)	\$1.59	\$1.64	\$1.73	\$1.83	\$1.81	\$1.65	\$1.65	\$1.65	--	--	--	--
MPUs												
Revenues (\$000)	\$6,561,025	\$6,305,057	\$6,601,545	\$7,534,520	\$7,453,190	\$7,273,500	\$8,079,062	\$8,478,181	\$7,988,095	\$7,983,500	\$8,586,300	\$9,560,500
Y/Y Growth	23.1%	20.5%	6.1%	6.2%	13.6%	15.4%	22.4%	12.5%	7.2%	9.8%	6.3%	12.8%
Units (000)	44,845	43,729	45,777	52,235	51,760	50,600	57,240	61,940	60,500	60,250	64,500	70,750
Y/Y Growth	12.8%	13.3%	4.4%	7.7%	15.4%	15.7%	25.0%	18.6%	16.9%	19.1%	12.7%	14.2%
ASPs (\$)	\$146.30	\$144.18	\$144.21	\$144.24	\$144.00	\$143.75	\$141.14	\$136.88	\$132.03	\$132.51	\$133.12	\$135.13
Intel												
Revenues (\$000)	\$5,980,160	\$5,751,200	\$5,928,070	\$6,804,300	\$6,703,500	\$6,506,100	\$7,109,600	\$7,171,610	\$6,705,020	\$6,670,000	\$7,188,000	\$7,998,500
Units (000)	37,905	36,679	37,875	43,081	42,560	41,750	45,990	47,640	46,500	46,000	49,500	54,000
Advanced Micro Devices												
Revenues (\$000)	\$580,865	\$553,857	\$673,475	\$730,220	\$749,690	\$767,400	\$969,462	\$1,306,571	\$1,283,075	\$1,313,500	\$1,398,300	\$1,562,000
Units (000)	6,940	7,050	7,902	9,154	9,200	8,850	11,250	14,300	14,000	14,250	15,000	16,750
Analog												
Revenues (\$000)	\$7,741,135	\$7,817,867	\$8,132,798	\$7,675,286	\$7,179,812	\$7,657,791	\$8,391,522	\$8,692,874	\$8,375,000	\$8,525,000	\$8,850,000	\$9,400,000
Y/Y Growth	29.0%	21.0%	19.4%	2.0%	-7.3%	-2.0%	3.2%	13.3%	16.6%	11.3%	5.5%	8.1%
Units (000)	13,320,337	13,656,500	13,202,452	12,126,136	12,199,411	13,669,395	15,632,324	16,421,043	--	--	--	--
Y/Y Growth	26.9%	19.4%	12.0%	-6.8%	-8.4%	0.1%	18.4%	35.4%	--	--	--	--
ASPs (\$)	\$0.58	\$0.57	\$0.62	\$0.63	\$0.59	\$0.56	\$1.56	\$2.56	--	--	--	--
PLDs												
Revenues (from wksh, in \$MM)	\$758	\$808	\$776	\$695	\$764	\$801	\$803	\$840	\$880	\$920	\$955	\$988
Y/Y Growth	26.0%	29.9%	25.7%	1.2%	0.7%	-0.9%	3.4%	20.8%	15.2%	14.9%	19.0%	17.7%
DRAM												
Revenues (\$Mn)	\$5,252	\$6,174	\$6,583	\$7,472	\$6,985	\$5,917	\$6,665	\$6,487	\$6,434	\$6,468	\$6,487	\$7,583
Y/Y Growth	40.7%	63.4%	36.8%	42.7%	33.0%	-4.2%	1.2%	-13.2%	-7.9%	9.3%	-2.7%	16.9%
Supply (Mn, 512Mb Equiv.)	518	561	627	705	837	932	1,033	1,152	1,257	1,404	1,584	1,743
Demand (Mn, 512 Mb Equiv.)	551	585	665	787	802	864	983	1,238	1,166	1,258	1,441	1,829
ASPs (\$)	\$10.14	\$11.01	\$10.50	\$10.60	\$8.35	\$6.35	\$6.45	\$5.63	\$5.12	\$4.61	\$4.10	\$4.35
Total Memory												
Bits (billions)	265,277,602	287,158,976	321,140,464	360,985,600	409,841,555	444,953,907	484,215,520	528,808,966	643,391,526	718,650,965	810,855,331	892,176,164
Gigabytes	33,159,700	35,894,872	40,142,558	45,123,200	51,230,194	55,619,238	60,526,940	66,101,121	80,423,941	89,831,371	101,356,916	111,522,021
Terabytes	33,160	35,895	40,143	45,123	51,230	55,619	60,527	66,101	80,424	89,831	101,357	111,522
Pricing												
Average Price / Bit (\$)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Average Price / MB (\$)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

E = Morgan Stanley Research Estimate
Source: Morgan Stanley Research

Exhibit 24

Semiconductors - Quarterly Key Metrics

Mark Edelstone, Louis Gerhardy, Harlan Sur, Sunil Gupta, Keon Han, Timm Schulze-Melander

	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05	1Q06E	2Q06E	3Q06E	4Q06E
Semiconductors												
NAND Flash												
Revenues (\$000)	\$1,298	\$1,316	\$1,268	\$1,368	\$1,124	\$1,413	\$1,593	\$1,764	--	--	--	--
Y/Y Growth	108.7%	79.2%	30.4%	-3.8%	-13.4%	7.4%	25.6%	29.0%	--	--	--	--
Supply (MM)	283	386	491	628	709	925	1,118	1,305	--	--	--	--
Demand (MM)	286	338	501	670	588	781	995	1,253	--	--	--	--
ASPs (\$)	\$4.54	\$3.90	\$2.53	\$2.04	\$1.91	\$1.81	\$1.60	\$1.41	--	--	--	--
Demand Sources (MM):												
DSC	130	143	185	227	162	219	292	354	--	--	--	--
Handsets	60	77	87	111	120	153	190	263	--	--	--	--
MP3 Players	13	25	58	97	101	133	168	208	--	--	--	--
USB Drives	36	36	103	147	134	194	238	284	--	--	--	--
PDA's	2	3	5	8	5	6	12	18	--	--	--	--
Game Consoles	2	3	4	7	3	4	6	11	--	--	--	--
Digital Camcorders	5	7	10	17	11	14	21	37	--	--	--	--
Other	37	43	50	57	51	59	68	78	--	--	--	--
Inventory												
Channel/OEM Inventory (Days)	34	34	35	32	34	33	34	--	--	--	--	--
Semi Company Inventory (Days)	72	76	77	71	76	73	72	--	--	--	--	--
Semiconductor Capex												
WW Cap Spending (\$million)	--	--	--	--	--	--	--	--	--	--	--	--
Y/Y Growth	--	--	--	--	--	--	--	--	--	--	--	--
Semiconductor Capital Equipment Booking												
Total Equip't Bookings (\$million) *	3,921	4,750	4,448	3,938	--	--	--	--	--	--	--	--
Y/Y Growth	72.2%	115.6%	100.6%	32.3%	--	--	--	--	--	--	--	--
Foundry Utilization Model **												
Capacity (k wafers)	2,336	2,498	2,832	3,031	3,121	3,311	3,498	3,642	3,641	3,875	4,055	4,259
Capacity Utilization	98%	101%	99%	81%	71%	77%	86%	91%	89%	87%	93%	94%
Wafer shipment (k wafers)	2,295	2,533	2,792	2,462	2,206	2,541	3,025	3,328	3,249	3,384	3,758	3,995

E = Morgan Stanley Research Estimate

Source: Morgan Stanley Research

* NA-based SCE companies

** TOP-4 Foundries

Exhibit 25

Software - Annual Key Metrics

	2000	2001	2002	2003	2004	Comments
Enterprise Software Leaders* Aggregate Revenue Analysis						
Total Revenue (\$MM)	\$21,003	\$22,018	\$20,780	\$22,357	\$25,945	
Y/Y Organic Growth	29%	6%	-6%	1%	10%	
Y/Y Organic Constant Currency Growth	31%	8%	-5%	0%	9%	
License Revenue (\$MM)	\$9,022	\$9,428	\$7,792	\$8,091	\$9,621	License revenue looks to have stabilized at around 35% of revenue
Y/Y Organic Growth	39%	-4%	-17%	-1%	13%	
Y/Y Organic Constant Currency Growth	41%	-3%	-16%	-3%	10%	
% of Total Revenue	43%	43%	37%	36%	37%	
Maintenance Revenue (\$MM)	\$5,496	\$6,458	\$7,188	\$8,600	\$10,163	Maintenance is still increasing in the mix, but at a decelerated rate.
% of Total Revenue	26%	29%	35%	38%	39%	
Services Revenue (\$MM)	\$6,486	\$6,131	\$5,800	\$5,666	\$6,162	
% of Total Revenue	31%	28%	28%	25%	24%	
Enterprise Software Leaders* Aggregate Headcount Analysis						
Total Employees	86,248	91,503	88,298	91,240	97,638	
Y/Y Growth	--	6.1%	-3.5%	3.3%	7.0%	
Y/Y Organic Growth	--	--	--	3.3%	6.1%	
Revenue/Employee, Trailing 12 Months (\$000's)	\$244	\$241	\$235	\$245	\$266	
License Revenue/Employee, Trailing 12 Months (\$000's)	\$105	\$103	\$88	\$89	\$99	

Note: Enterprise Software Leaders figures comprise BOBJ, COGN, HYSL, ORCL, SAP, SEBL.

E = Morgan Stanley Research Estimate

Source: Morgan Stanley Research, Company data

Exhibit 26

Security Software - Annual Key Metrics

Peter Kuper

	2002	2003	2004	2005E	2006E	2007E	2008E	Comments
Macro Data ⁽¹⁾								2004-2008 CAGR
Worldwide Security Software Revenue	--	\$7.9	\$8.8	\$10.0	\$11.3	\$12.7	\$14.2	12.7%
<i>Y/Y Growth</i>	--	--	11%	14%	13%	13%	11%	
Antivirus	--	\$2.7	\$3.2	\$3.6	\$4.1	\$4.5	\$4.9	11.0%
<i>% of Total Revenue</i>	--	34%	36%	36%	36%	35%	34%	
Identity & Access Management	--	\$2.2	\$2.3	\$2.6	\$2.9	\$3.2	\$3.6	11.3%
<i>% of Total Revenue</i>	--	28%	27%	26%	25%	25%	25%	
Messaging Security	--	\$0.4	\$0.6	\$0.8	\$1.1	\$1.4	\$1.7	29.9%
<i>% of Total Revenue</i>	--	5%	7%	8%	10%	11%	12%	
IDS/IPS	--	--	\$0.4	\$0.4	\$0.4	\$0.4	\$0.4	2.7%
<i>% of Total Revenue</i>	--	--	4%	4%	3%	3%	3%	
Firewall / VPN	--	--	\$1.0	\$1.0	\$1.1	\$1.2	\$1.2	5.2%
<i>% of Total Revenue</i>	--	--	11%	10%	10%	9%	8%	
Web Filtering	--	\$0.3	\$0.4	\$0.5	\$0.6	\$0.8	\$0.9	22.1%
<i>% of Total Revenue</i>	--	4%	5%	5%	6%	6%	7%	
Vulnerability Assessment	--	\$0.4	\$0.5	\$0.6	\$0.7	\$0.8	\$0.9	14.0%
<i>% of Total Revenue</i>	--	6%	6%	6%	6%	6%	6%	
Authentication	--	\$0.3	\$0.4	\$0.4	\$0.5	\$0.5	\$0.6	13.8%
<i>% of Total Revenue</i>	--	4%	4%	4%	4%	4%	4%	
Year over Year Growth								
Antivirus	--	--	19%	14%	12%	10%	8%	Growth for maturing perimeter technology such as FW/VPN and antivirus is slowing while growth continues to be stronger for endpoint and data protection such as desktop FW, messaging security, and authentication.
Identity & Access Management	--	--	6%	11%	11%	12%	11%	
Messaging Security	--	--	49%	40%	31%	27%	22%	
IDS/IPS	--	--	--	2%	3%	3%	3%	
Firewall / VPN	--	--	--	6%	5%	5%	4%	
Web Filtering	--	--	25%	24%	24%	22%	19%	
Vulnerability Assessment	--	--	19%	17%	15%	13%	11%	
Authentication	--	--	14%	13%	12%	14%	16%	
Worldwide Security Hardware Revenue	--	\$1.6	\$2.7	\$3.3	\$3.8	\$4.3	\$4.9	16.1%
<i>Y/Y Growth</i>	--	--	72%	21%	17%	13%	14%	
SSL VPN Appliances	--	--	\$0.1	\$0.2	\$0.3	\$0.3	\$0.4	31.3%
<i>% of Total Revenue</i>	--	--	--	48%	33%	28%	18%	
IDS/IPS Appliances	--	--	\$0.5	\$0.6	\$0.7	\$0.8	\$0.9	16.7%
<i>% of Total Revenue</i>	--	--	--	25%	18%	12%	12%	
Multifunctional Appliances	--	--	\$2.1	\$2.5	\$2.8	\$3.2	\$3.6	14.8%
<i>% of Total Revenue</i>	--	--	--	18%	15%	12%	14%	
Year over Year Growth								
SSL VPN Appliances	--	--	--	48%	33%	28%	18%	In general, appliances are growing faster than related software as security becomes more embedded in products.
IDS/IPS Appliances	--	--	--	25%	18%	12%	12%	
Multifunctional Appliances	--	--	--	18%	15%	12%	14%	

Notes:

1) Source: IDC and Morgan Stanley Research

2) 2005E and 2006E numbers skewed by Symantec's acquisition of Veritas in July 2005.

E = Morgan Stanley Research Estimates

Exhibit 27

Internet - Annual Key Metrics

Mary Meeker, Brian Pitz, Brian Fitzgerald

Internet	1999	2000	2001	2002	2003	2004	2005	2006E	Comments
Overall Internet Market Data									
Global Internet Users (MM)	227	379	482	609	761	901	1,039	1,191	While user growth rates are slowing, absolute rates remain healthy. Page view growth (usage) is key to monitor.
Y/Y Growth	55%	67%	27%	26%	25%	18%	15%	15%	
Q/Q Growth	--	--	--	--	--	--	--	--	
North America	93	137	157	178	203	224	241	255	Market at 75% user penetration in 2005...
Y/Y Growth	37%	48%	15%	14%	14%	10%	8%	6%	
Q/Q Growth	--	--	--	--	--	--	--	--	
Europe	68	105	132	157	196	236	271	290	Market at 42% user penetration in 2005...
Y/Y Growth	66%	54%	26%	18%	25%	20%	15%	7%	
Q/Q Growth	--	--	--	--	--	--	--	--	
Asia-Pacific (including China, Japan)	47	101	143	198	255	308	382	486	Market at 12% user penetration in 2005... Asia-Pacific will likely remain fastest growing large market.
Y/Y Growth	96%	115%	42%	38%	29%	21%	24%	27%	
Q/Q Growth	--	--	--	--	--	--	--	--	
Latin America	8	18	23	32	39	47	50	53	Market at 11% user penetration in 2005...
Y/Y Growth	76%	113%	28%	38%	23%	19%	6%	7%	
Q/Q Growth	--	--	--	--	--	--	--	--	
Rest of World	10	18	26	44	67	87	97	108	Market at 5% user penetration in 2005...
Y/Y Growth	7%	74%	48%	69%	52%	29%	12%	11%	
Q/Q Growth	--	--	--	--	--	--	--	--	
Global Broadband Subscribers (Primarily Residential) (000's) (a)	2,485	13,524	31,289	56,550	96,309	147,699	208,979	--	209MM global broadband subscribers (up 41%+ Y/Y) in CQ4:05. Sub/user multiplier could be 2.0x+. Broadband users more active than narrowband users.
Y/Y Growth	--	444%	131%	81%	70%	53%	41%	--	
Q/Q Growth	--	--	--	--	--	--	--	--	
North America	2,485	7,525	14,550	20,484	28,880	38,740	49,848	59,610	
Y/Y Growth	--	203%	93%	41%	41%	34%	29%	20%	
Q/Q Growth	--	--	--	--	--	--	--	--	
Europe	0	983	2,872	9,966	24,693	42,225	60,301	--	
Y/Y Growth	--	#DIV/0!	192%	247%	148%	71%	43%	--	
Q/Q Growth	--	--	--	--	--	--	--	--	
Japan	0	625	2,836	7,806	13,641	18,295	22,346	--	
Y/Y Growth	--	--	354%	175%	75%	34%	22%	--	
Q/Q Growth	--	--	--	--	--	--	--	--	
Asia-Pacific	0	4,351	10,707	16,991	26,836	44,115	69,896	--	S. Korea is most penetrated global broadband market and serves as model market for what may occur with ramp.
Y/Y Growth	--	--	146%	59%	58%	64%	58%	--	
Q/Q Growth	--	--	--	--	--	--	--	--	
Latin America	0	41	324	1,304	2,259	4,324	6,588	--	
Y/Y Growth	--	--	689%	303%	73%	91%	52%	--	
Q/Q Growth	--	--	--	--	--	--	--	--	
Internet User Data Points									
Yahoo! (Meeker/Pitz) - Global									
Global Monthly Unique Visitors (000's)	120,000	180,000	188,000	213,000	263,000	410,510	456,308	510,000	Yahoo! may be best quarterly proxy for global Internet user growth. Y/Y growth rate remains solid.
Y/Y Growth	140%	50%	4%	13%	23%	56%	11%	12%	
Q/Q Growth	--	--	--	--	--	--	--	--	
Internet Usage Data Points									
Yahoo! (Meeker/Pitz) - Global									
Average Daily Page Views (MM)	465	900	1,122	1,598	2,114	2,727	3,283	4,391	Yahoo! may be best quarterly proxy for global Internet usage growth. Strong Y/Y growth.
Y/Y Growth	--	94%	25%	42%	32%	29%	20%	34%	
Q/Q Growth	--	--	--	--	--	--	--	--	

Source: Company reports, Morgan Stanley Research.

(a) Morgan Stanley estimates updated 2/28/06; R. Bilotti, S. Flannery, S. Simon, P. Marsch, Y. Motoyama, M. Kim, N. Sebrell, B. Swinburne, L. Choi.

(b) Goods/services where order is placed or price/terms of sale are negotiated over Internet, extranet, EDI network, e-mail, or other online system. Payment may or may not be made online. Does not include travel, financial services, or event tickets. Numbers are adjusted for eBay: Adding U.S. Gross Merchandise Volume (GMV) less eBay U.S. Transaction revenue.

(c) Represents Top 3 U.S. suppliers.

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 28

Internet - Annual Key Metrics

Mary Meeker, Brian Pitz, Brian Fitzgerald

Internet	1999	2000	2001	2002	2003	2004	2005	2006E	Comments
Online Advertising Data Points									
Internet Advertising Bureau (Meeker/Pitz) - US									
Internet Advertising Revenue (\$MM)	4,621	8,087	7,134	6,009	7,267	9,626	12,487	16,233	Online advertising growth rate remains strong. Trend should continue with increasing seasonal impact.
Y/Y Growth	141%	75%	-12%	-16%	21%	32%	30%	30%	
Q/Q Growth	--	--	--	--	--	--	--	--	
eCommerce Data Points									
eBay (Meeker/Pitz) - Global									
Gross Merchandise Volume (\$MM)	2,805	5,414	9,318	14,868	23,779	34,168	44,796	57,248	22%+ Y/Y growth impressive considering scale, in our view.
Y/Y Growth	276%	93%	72%	60%	60%	44%	31%	28%	
Q/Q Growth	--	--	--	--	--	--	--	--	
PayPal (Meeker/Pitz) - Global									
Total Payments (MM)	--	28	69	126	230	340	472	628	PayPal's ramp on and off the eBay platform remains robust as demand for online payments rises.
Y/Y Growth	--	--	144%	83%	83%	48%	39%	33%	
Q/Q Growth	--	--	--	--	--	--	--	--	
U.S. Department of Commerce - U.S.									
Total Adjusted U.S. Retail eCommerce Transactions (\$MM) (b)	--	29,994	40,992	54,297	69,120	86,290	106,699	--	Online share gains from offline continue in commerce. Penetration still quite low.
Y/Y Growth	--	--	37%	32%	27%	25%	24%	--	
Q/Q Growth	--	--	--	--	--	--	--	--	
eCommerce as a % of adjusted Retail Sales	--	0.99%	1.33%	1.72%	2.10%	2.44%	2.85%	--	
SBC+Verizon+BellSouth (Flannery) - U.S.									
Digital Signal Lines, Level 0 (DS-0) (000's) (c)	77,721	123,079	162,636	182,044	201,582	228,967	268,462	305,429	Measures rising use of high capacity circuits by ILEC customers for their broadband needs. Growth rate accelerating.
Y/Y Growth	--	58%	32%	12%	11%	14%	17%	11%	
Q/Q Growth	--	--	--	--	--	--	--	--	
WiFi/WLAN & Wireless Data Points									
Access Points/Bridges, NICs & Client Devices - U.S.									
802.11b, 802.11g, 802.11a, Multimode - (000's)	--	2,122	6,821	14,698	28,755	42,497	52,667	--	WiFi growth remains compelling and early stage.
Y/Y Growth	--	--	221%	115%	96%	48%	24%	--	
Q/Q Growth	--	--	--	--	--	--	--	--	
NTT DoCoMo (iMode) (Tanaka) - Japan									
Wireless Data Subscribers (000's)	3,130	17,161	30,182	36,209	40,335	43,027	45,616	--	Asia-Pacific is leader in wireless trends.
Y/Y Growth	6421%	448%	76%	20%	11%	7%	6%	--	
Q/Q Growth	--	--	--	--	--	--	--	--	

Source: Company reports, Morgan Stanley Research.

(a) Morgan Stanley estimates updated 2/28/06; R. Bilotti, S. Flannery, S. Simon, P. Marsch, Y. Motoyama, M. Kim, N. Sebrell, B. Swinburne, L. Choi.

(b) Goods/services where order is placed or price/terms of sale are negotiated over Internet, extranet, EDI network, e-mail, or other online system. Payment may or may not be made online. Does not include travel, financial services, or event tickets. Numbers are adjusted for eBay: Adding U.S. Gross Merchandise Volume (GMV) less eBay U.S. Transaction revenue.

(c) Represents Top 3 U.S. suppliers.

Exhibit 29

Internet - Quarterly Key Metrics

Mary Meeker, Brian Pitz, Brian Fitzgerald

Internet	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05
Overall Internet Market Data												
Global Internet Users (MM)	--	--	--	761	796	833	871	901	940	975	1,012	1,039
Y/Y Growth	--	--	--	25	--	--	--	18	18	17	16	15
Q/Q Growth	--	--	--	--	5	5	5	3	4	4	4	3
North America	--	--	--	203	208	214	219	224	228	232	237	241
Y/Y Growth	--	--	--	14	--	--	--	10	9	9	8	8
Q/Q Growth	--	--	--	--	3	3	3	2	2	2	2	2
Europe	--	--	--	196	206	217	228	236	245	254	263	271
Y/Y Growth	--	--	--	25	--	--	--	20	19	17	16	15
Q/Q Growth	--	--	--	--	5	5	5	4	4	4	4	3
Asia-Pacific (including China, Japan)	--	--	--	255	268	282	297	308	326	346	367	382
Y/Y Growth	--	--	--	29	--	--	--	21	22	23	24	24
Q/Q Growth	--	--	--	--	5	5	5	4	6	6	6	4
Latin America	--	--	--	39	41	43	45	47	47	48	49	50
Y/Y Growth	--	--	--	23	--	--	--	19	15	12	8	6
Q/Q Growth	--	--	--	--	5	5	5	4	2	2	2	1
Rest of World	--	--	--	67	72	77	83	87	94	95	96	97
Y/Y Growth	--	--	--	52	--	--	--	29	30	23	16	12
Q/Q Growth	--	--	--	--	7	7	7	5	9	1	1	1
Global Broadband Subscribers (Primarily Residential) (000's) (a)	69,585	78,609	88,046	96,309	112,051	123,286	133,992	147,699	165,803	178,471	192,796	208,979
Y/Y Growth	92%	90%	79%	70%	61%	57%	52%	53%	48%	45%	44%	41%
Q/Q Growth	23	13	12	9	16	10	9	10	12	8	8	8
North America	22,607	24,336	26,649	28,880	31,540	33,505	36,153	38,740	41,699	43,788	46,797	49,848
Y/Y Growth	47%	43%	45%	41%	40%	38%	36%	34%	32%	31%	29%	29%
Q/Q Growth	10	8	10	8	9	6	8	7	8	5	7	7
Europe	16,363	18,543	20,951	24,693	28,572	32,376	36,237	42,225	47,738	51,624	55,436	60,301
Y/Y Growth	331%	318%	158%	148%	75%	75%	73%	71%	67%	59%	53%	43%
Q/Q Growth	64	13	13	18	16	13	12	17	13	8	7	9
Japan	9,397	10,939	12,256	13,641	14,917	16,238	17,304	18,295	19,488	20,428	21,398	22,346
Y/Y Growth	143%	119%	100%	75%	59%	48%	41%	34%	31%	26%	24%	22%
Q/Q Growth	20	16	12	11	9	9	7	6	7	5	5	4
Asia-Pacific	19,762	23,132	26,243	26,836	34,426	38,090	40,645	44,115	52,032	57,228	63,157	69,896
Y/Y Growth	58%	66%	70%	58%	74%	65%	55%	64%	51%	50%	55%	58%
Q/Q Growth	16	17	13	2	28	11	7	9	18	10	10	11
Latin America	1,457	1,659	1,947	2,259	2,596	3,077	3,653	4,324	4,847	5,403	6,008	6,588
Y/Y Growth	83%	69%	73%	73%	78%	85%	88%	91%	87%	76%	64%	52%
Q/Q Growth	12	14	17	16	15	19	19	18	12	11	11	10
Internet User Data Points												
Yahoo! (Meeker/Pitz) - Global												
Global Monthly Unique Visitors (000's)	232,000	236,000	245,000	263,000	343,760	355,042	378,306	410,510	428,927	431,513	442,203	456,308
Y/Y Growth	15%	20%	22%	23%	48%	50%	54%	56%	25%	22%	17%	11%
Q/Q Growth	9	2	4	7	31	3	7	9	4	1	2	3
Internet Usage Data Points												
Yahoo! (Meeker/Pitz) - Global												
Average Daily Page Views (MM)	1,865	1,914	2,041	2,114	2,413	2,504	2,760	2,727	3,070	2,961	3,219	3,283
Y/Y Growth	36%	31%	36%	32%	29%	31%	35%	29%	27%	18%	17%	20%
Q/Q Growth	17	3	7	4	14	4	10	(1)	13	(4)	9	2

Source: Company reports, Morgan Stanley Research.

(a) Morgan Stanley estimates updated 2/28/06; R. Bilotti, S. Flannery, S. Simon, P. Marsch, Y. Motoyama, M. Kim, N. Sebrell, B. Swinburne, L. Choi.

(b) Goods/services where order is placed or price/terms of sale are negotiated over Internet, extranet, EDI network, e-mail, or other online system. Payment may or may not be made online. Does not include travel, financial services, or event tickets. Numbers are adjusted for eBay: Adding U.S. Gross Merchandise Volume (GMV) less eBay U.S. Transaction revenue.

(c) Represents Top 3 U.S. suppliers.

Exhibit 30

Internet - Quarterly Key Metrics

Mary Meeker, Brian Pitz, Brian Fitzgerald

Internet	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05
Online Advertising Data Points												
Internet Advertising Bureau (Meeker/Pitz) - US												
Internet Advertising Revenue (\$MM)	1,632	1,660	1,793	2,182	2,230	2,369	2,333	2,694	2,802	2,985	3,125	3,575
Y/Y Growth	7%	14%	24%	38%	37%	43%	30%	23%	26%	26%	34%	33%
Q/Q Growth	3	2	8	22	2	6	(2)	15	4	7	5	14
eCommerce Data Points												
eBay (Meeker/Pitz) - Global												
Gross Merchandise Volume (\$MM)	\$5,317	\$5,635	\$5,775	\$7,052	\$8,039	\$8,012	\$8,307	\$9,810	\$10,602	\$10,884	\$10,800	\$12,013
Y/Y Growth	71%	66%	53%	53%	51%	42%	44%	39%	32%	36%	30%	22%
Q/Q Growth	16	6	2	22	14	(0)	4	18	8	3	(1)	11
PayPal (Meeker/Pitz) - Global												
Total Payments (MM)	51	54	57	68	79	78	83	100	110	113	117	140
Y/Y Growth	90%	86%	83%	74%	57%	45%	45%	46%	39%	46%	41%	41%
Q/Q Growth	29	6	7	19	16	(2)	7	19	11	3	4	19
U.S. Department of Commerce - U.S.												
Total Adjusted U.S. Retail eCommerce Transactions (\$MM) (b)	15,261	15,913	16,773	21,174	19,635	19,839	20,599	26,216	24,037	24,769	25,809	32,083
Y/Y Growth	29%	28%	27%	25%	29%	25%	23%	24%	22%	25%	25%	22%
Q/Q Growth	(10)	4	5	26	(7)	1	4	27	(8)	3	4	24
eCommerce as a % of adjusted Retail Sales	2.05	1.93	2.01	2.40	2.44	2.24	2.31	2.74	2.80	2.59	2.69	3.29
SBCVerizon+BellSouth (Flannery) - U.S.												
Digital Signal Lines, Level 0 (DS-0) (000's) (c)	186,714	190,978	196,307	201,582	208,833	214,555	221,207	228,967	239,145	246,973	258,184	268,462
Y/Y Growth	12%	11%	11%	11%	12%	12%	13%	14%	15%	15%	17%	17%
Q/Q Growth	3	2	3	3	4	3	3	4	4	3	5	4
WiFi/WLAN & Wireless Data Points												
Access Points/Bridges, NICs & Client Devices - U.S.												
802.11b, 802.11g, 802.11a, Multimode - (000's)	5,120	6,345	7,710	9,580	10,162	9,333	11,099	11,903	12,323	12,845	13,880	13,619
Y/Y Growth	101%	121%	81%	91%	98%	47%	44%	24%	21%	38%	25%	14%
Q/Q Growth	2	24	22	24	6	(8)	19	7	4	4	8	(2)
NTT DoCoMo (Mode) (Tanaka) - Japan												
Wireless Data Subscribers (000's)	37,758	38,648	39,739	40,335	41,077	41,723	42,362	43,027	44,021	44,658	45,139	45,616
Y/Y Growth	17%	15%	14%	11%	9%	8%	7%	7%	7%	7%	7%	6%
Q/Q Growth	4	2	3	1	2	2	2	2	2	1	1	1

Source: Company reports, Morgan Stanley Research.

(a) Morgan Stanley estimates updated 2/28/06; R. Bilotti, S. Flannery, S. Simon, P. Marsch, Y. Motoyama, M. Kim, N. Sebrell, B. Swinburne, L. Choi.

(b) Goods/services where order is placed or price/terms of sale are negotiated over Internet, extranet, EDI network, e-mail, or other online system. Payment may or may not be made online. Does not include travel, financial services, or event tickets. Numbers are adjusted for eBay: Adding U.S. Gross Merchandise Volume (GMV) less eBay U.S. Transaction revenue.

(c) Represents Top 3 U.S. suppliers.

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 31

IT Services - Annual Key Metrics

David Togut, James Dawson, Anantha Narayan, Gary Rollo, Julie Santoriello

	1999	2000	2001	2002	2003	2004	2005A	2006E	Comments
Top 3 IT Outsourcing Companies (1)									
Contract Signings (\$MM)	\$74,200	\$98,865	\$93,897	\$82,914	\$86,821	\$72,699	\$79,615	NA	Includes bookings for IBM, EDS & CSC
Y/Y Growth	53%	33%	-5%	-12%	5%	-16%	10%		
Revenue									
IT Services Total Revenue	87,013	91,426	99,903	103,612	116,651	132,101	137,934	148,348	
Y/Y Growth		5%	9%	4%	13%	13%	4%	8%	
Global Consulting Revenue	19,689	19,801	21,272	21,106	23,375	25,185	26,581	27,627	
Y/Y Growth		1%	7%	-1%	11%	8%	6%	4%	
India Software Revenue	1,119	2,092	2,903	3,589	5,044	7,284	9,817	12,734	
Y/Y Growth		87%	39%	24%	41%	44%	35%	30%	
Headcount (year-end)									
IT Services (Total) Headcount	440,821	498,269	541,659	562,015	629,420	707,166	805,554	910,522	Only annual data available
Y/Y Growth		13%	9%	4%	12%	12%	14%	13%	
Consulting (Total) Headcount	80,208	83,124	85,021	79,822	80,605	92,053	107,800	123,743	
Y/Y Growth		4%	2%	-6%	1%	14%	17%	15%	
Consulting (Billable) Headcount	65,579	68,164	71,855	69,911	71,355	83,502	98,670	113,604	
Y/Y Growth		4%	5%	-3%	2%	17%	18%	15%	
India Software (Total) Headcount	33,229	53,439	59,202	82,412	117,686	167,945	226,895	287,690	Only annual data available
Y/Y Growth		61%	11%	39%	43%	43%	35%	27%	
India Software (Offshore) Headcount	20,631	32,915	37,461	49,115	68,580	100,307	136,703	178,093	
Y/Y Growth		60%	14%	31%	40%	46%	36%	30%	
Consulting Billing Rates									
Blended Global Consulting Billing Rate (\$/hour)	\$138	\$134	\$133	\$122	\$111	\$106	\$99	\$92	Blended Global includes ACN, BE and KEA
Y/Y Growth		-3%	0%	-8%	-9%	-4%	-6%	-7%	
Offshore Consulting Billing Rate (\$/hour)	\$23	\$24	\$25	\$24	\$23	\$23	\$24	\$23	
Y/Y Growth		6%	2%	-5%	-1%	0%	1%	-1%	
Utilization (annual avg.)									
Blended Consulting Utilization	66%	72%	71%	73%	75%	76%	77%	77%	Blended Consulting includes ACN, BE and KEA
Y/Y Increase (Decrease)		5.92%	-0.79%	1.55%	1.85%	1.48%	0.87%	-0.08%	
Offshore Utilization	74%	75%	71%	73%	75%	72%	71%	71%	
Y/Y Increase (Decrease)		0.85%	-4.21%	1.71%	2.11%	-2.31%	-1.04%	-0.61%	

(1) Includes bookings for IBM, EDS & CSC
 E = Morgan Stanley Research Estimates
 Source: Morgan Stanley Research

March 3, 2006

Electronic Mfg Services/Distribution/Components

Exhibit 32

IT Services - Quarterly Key Metrics

David Togut, James Dawson, Anantha Narayan, Gary Rollo, Julie Santoriello

	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Top 3 IT Outsourcing Companies (1)												
Contract Signings (\$MM)	\$18,922	\$18,293	\$22,226	\$27,380	\$15,762	\$18,915	\$16,252	\$21,770	\$19,825	\$21,064	NA	NA
Y/Y Growth	-20%	0%	71%	-2%	-17%	3%	-27%	-20%	26%	11%	--	--
Revenue												
IT Services Total Revenue	26,988	28,731	28,660	30,731	31,536	32,247	32,111	34,408	33,723	34,617	33,743	36,284
Y/Y Growth	10%	15%	15%	12%	17%	12%	12%	12%	7%	7%	5%	5%
Global Consulting Revenue	5,757	5,914	5,592	6,112	5,937	6,340	6,083	6,825	6,417	6,846	6,523	6,794
Y/Y Growth	15%	18%	17%	-3%	3%	7%	9%	12%	8%	8%	7%	0%
India Software Revenue	806	1,179	1,320	1,463	1,592	1,713	1,897	2,083	2,199	2,351	2,542	2,725
Y/Y Growth	42%	89%	90%	90%	97%	45%	44%	42%	38%	37%	34%	31%
Headcount (year-end)												
IT Services (Total) Headcount	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Y/Y Growth												
Consulting (Total) Headcount	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Y/Y Growth												
Consulting (Billable) Headcount	69,200	69,352	69,499	71,355	74,306	77,420	80,582	83,502	70,943	74,940	80,930	98,670
Y/Y Growth	6%	9%	4%	2%	7%	12%	16%	17%	-5%	-3%	0%	18%
India Software (Total) Headcount	NA	98,266	106,496	117,686	127,435	139,383	157,457	167,945	177,619	189,903	212,709	226,895
Y/Y Growth												
India Software (Offshore) Headcount	NA	56,466	61,429	68,580	74,868	82,180	92,912	100,307	107,821	113,371	121,678	130,863
Y/Y Growth												
Consulting Billing Rates												
Blended Global Consulting Billing Rate (\$/hour)	114	111	109	108	108	109	104	101	101	100	98	97
Y/Y Growth	-8%	-11%	-7%	-12%	-6%	-1%	-4%	-6%	-7%	-8%	-6%	-4%
Offshore Consulting Billing Rate (\$/hour)	23	23	23	24	23	23	23	23	23	24	24	23
Y/Y Growth	-2%	-2%	0%	0%	0%	2%	0%	-1%	1%	1%	2%	0%
Utilization (annual avg.)												
Blended Consulting Utilization	73%	76%	75%	76%	76%	77%	75%	77%	77%	79%	77%	77%
Y/Y Increase (Decrease)	-1.50%	0.63%	3.17%	5.10%	2.83%	1.40%	0.30%	1.40%	0.67%	1.30%	1.67%	-0.17%
Offshore Utilization	72%	75%	76%	75%	72%	73%	73%	72%	71%	72%	72%	71%
Y/Y Increase (Decrease)	0.58%	1.14%	1.73%	1.30%	0.25%	-2.47%	-3.08%	-2.98%	-1.65%	-1.16%	-1.23%	-0.77%

(1) Includes bookings for IBM, EDS & CSC
 E = Morgan Stanley Research Estimates
 Source: Morgan Stanley Research

Exhibit 33

Non-Traditional End Markets: Auto Annual Metrics

Jonathan Steinmetz

	1997	1998	1999	2000	2001	2002	2003	2004	2005E	2006E
Global Vehicles in Operation	--	--	--	749,601,211	768,681,146	786,623,306	813,000,354	836,970,313	NA	NA
Y/Y Growth	--	--	--	--	2.5%	2.3%	3.4%	2.9%	--	--
Cars	--	--	--	548,558,446	561,650,434	575,847,180	589,271,786	603,433,437	NA	NA
Commercial Vehicles	--	--	--	201,042,765	207,030,712	210,776,126	223,728,568	233,536,876	NA	NA
North America	--	--	--	247,752,113	252,250,726	258,178,231	264,403,931	271,506,800	NA	NA
Y/Y Growth	--	--	--	--	1.8%	2.3%	2.4%	2.7%	--	--
Cars	--	--	--	156,090,409	157,954,137	160,415,165	162,155,175	164,914,368	NA	NA
Commercial Vehicles	--	--	--	91,661,704	94,296,589	97,763,066	102,248,756	106,592,432	NA	NA
Western Europe	--	--	--	213,414,559	218,806,320	222,500,588	226,345,187	229,123,401	NA	NA
Eastern Europe	--	--	--	62,597,059	64,486,961	67,668,048	69,884,933	72,567,864	NA	NA
Asia	--	--	--	148,871,955	153,848,287	157,958,341	170,307,185	177,736,600	NA	NA
Caribbean, Central & South America	--	--	--	38,733,960	39,998,195	41,125,920	41,560,877	43,179,710	NA	NA
Africa	--	--	--	17,648,731	18,148,190	17,693,423	18,237,982	18,867,150	NA	NA
Middle East	--	--	--	20,582,834	21,142,467	21,498,755	22,260,259	23,988,788	NA	NA
Global Sales (units)	52,808,331	51,571,895	54,523,162	57,822,108	57,650,968	58,291,925	59,371,626	63,313,688	65,179,579	NA
Y/Y Growth	3.7%	-2.3%	5.7%	6.1%	-0.3%	1.1%	2.5%	6.0%	2.9%	--
North America	17,098,366	17,693,120	19,188,786	20,403,987	20,133,830	20,000,093	19,716,576	20,133,607	20,365,024	NA
Y/Y Growth	2.6%	3.5%	8.5%	6.3%	-1.3%	-0.7%	-1.4%	2.1%	1.1%	--
Western Europe	14,881,855	15,989,447	16,855,343	16,947,082	16,985,383	16,491,460	16,254,402	16,763,765	16,756,851	NA
Eastern Europe	2,866,249	2,763,666	3,044,653	3,115,860	2,659,474	2,647,565	3,155,208	3,837,171	3,912,470	NA
Asia	12,721,993	10,466,461	11,408,909	12,898,628	13,154,615	14,550,000	15,878,051	17,044,314	18,199,384	NA
South America	2,904,141	2,458,542	1,882,328	2,166,126	2,267,958	1,997,924	1,910,176	2,395,354	2,668,365	NA
Africa	462,476	447,075	426,973	458,109	477,511	447,743	468,278	555,233	671,321	NA
Middle East	538,691	638,955	657,479	785,149	954,549	1,135,597	1,360,101	1,596,072	1,562,117	NA
Other	1,334,560	1,114,629	1,058,691	1,047,167	1,017,648	1,021,543	988,834	988,172	1,044,047	NA
Global Production (units)	53,800,938	52,177,298	55,084,909	58,905,572	56,753,791	59,371,084	61,051,694	64,505,264	66,840,171	NA
Y/Y Growth	5.4%	-3.0%	5.6%	6.9%	-3.7%	4.6%	2.8%	5.7%	3.6%	--
North America	15,617,398	15,570,872	17,037,065	17,667,577	15,805,945	16,725,937	16,224,804	16,238,665	16,309,072	NA
Y/Y Growth	3.4%	-0.3%	9.4%	3.7%	-10.5%	5.8%	-3.0%	0.1%	0.4%	--
Western Europe	15,033,557	16,212,970	16,466,359	17,053,935	17,185,997	16,866,449	16,791,135	16,863,155	16,763,045	NA
Eastern Europe	2,790,762	2,919,513	3,048,694	3,273,360	2,972,162	2,984,071	3,366,646	4,056,935	4,338,961	NA
Asia	17,330,797	14,919,057	16,303,128	18,182,285	17,895,875	19,893,781	21,552,608	23,400,731	25,121,209	NA
South America	2,501,311	2,039,589	1,666,378	2,079,503	2,133,727	1,985,704	2,005,594	2,635,928	2,968,381	NA
Africa	359,004	317,360	333,659	362,405	390,756	395,719	391,214	429,790	519,341	NA
Middle East	168,109	197,937	229,626	286,507	369,329	519,423	719,693	880,060	820,162	NA
Hybrid Car Sales¹ (units)	369	397	246	9,813	20,320	22,407	25,934	48,279	NA	NA
Y/Y Growth	--	7.6%	-38.0%	3889.0%	107.1%	10.3%	15.7%	86.2%	--	--

Notes:

1) Toyota Prius and Honda Insight only enter the market hybrid market in 2000

E = Morgan Stanley Research Estimates

Source: Morgan Stanley Research, The Polk Company (Vehicles in Operation), Global Insight (Sales and Production), Autodata

Industry Views

US

Semiconductor Industry View: In-Line

Although valuations are reasonable, we believe that near- to intermediate-term fundamentals will remain challenging, and the potential for additional reductions in forward revenue, margin, and earnings estimates remains high.

Semiconductor Capital Equipment Industry View: Attractive

We expect the average SCE stock to outperform the broader market fuelled by a durable up-cycle in front end semi cap equipment orders. This cycle is robust and is founded on technology spending ahead of important new product cycles emerging in 2H06, in our view.

Internet & PC Applications Software Industry View: Attractive

We maintain that investors still underestimate the impact the Internet will have in changing business process and consumer behavior on a global basis. We continue to believe that, at the margin, online is gaining share from offline, that this will occur for some time to come, and should benefit the Internet leaders.

Electronics Supply Chain Industry View: In-Line

We recommend investor build positions in selective stocks in our group to benefit from reaccelerating end demand as both valuation and sentiment remain relatively undemanding.

Computer Services & IT Consulting Industry View: In-Line

Given superior free cash flow, we prefer the information processors to the IT services stocks. Historically, the information processors outperform the S&P 500 late in the economic cycle given their strong free cash flow generation, high recurring revenue, and visible EPS growth. By contrast, the IT services companies usually are pressured by slowing demand, declining prices, and contracting operating margin. In this cycle, the rapid growth of low-unit cost IT services supply in India represents an additional source of pricing and margin pressure.

Communications Equipment Industry View: In-Line

Slowing carrier capex growth, particularly in the US market and diminishing possibilities for further margin improvements are offset by solid fundamentals and valuation support, leading to our In-Line industry view.

Security Software Industry View: In-Line

Because the problem of ongoing, evolving threats likely will never be fully countered, we expect continued demand independent of economic factors — but with a focus on specific sub-segments as security efforts shift to protection of the network and data.

Systems & PC Hardware Industry View: In-Line

In-Line overall, but add a positive bias to our weighting for the first time in several years. Emerging technologies should drive improvements in average system configurations during 2006, resulting in better ASP fundamentals.

Specialized IT Services Industry View In-Line

Our In-Line rating reflects an eclectic group that varies by vertical exposure, growth and valuation. Likely outperformers should be those well-positioned in homeland security and offshore outsourcing.

Autos Industry View Cautious

Our industry view is based on expectations of lukewarm retail demand, weak mix, high raw materials prices, softness in international markets, and limited signs of progress in attacking structural issues including overcapacity and legacy costs.

Europe

Semiconductor Industry View: In-line

The upside potential implied by the fair values of our stocks is now in line with our strategists' forecast of 11% upside for MSCI Europe over the next 12 months.

Software & Services Industry View: In-Line

Industry fundamentals appear to have bottomed out for this cycle. The enterprise's focus on lowering costs of technology means that spending growth is likely to be subdued. Competitive positioning, execution and cash generation are key.

Media & Internet Industry View: In-Line

We expect relative performance to be focused on companies with accelerating rates of organic revenue growth and/or those with balance sheet restructuring opportunities.

Japan

Semiconductor Production Equipment Industry View: In-Line

Although there have been signs of recovery in semiconductors, the recovery in capex related demand for heavy electrical machinery and IT is behind schedule. Also, price competition is fierce in digital consumer electronics.

Industrial Electronics Industry View: In-Line

With nearly all segments failing to show clear recovery signs, the profit environment surrounding industrial electronics firms remains harsh. However, we think the worst was seen in the 1H, and that seasonal factors are likely to lead a gradual recovery ahead.

Electronic Components Industry View: In-Line

Japan's components manufacturers should remain globally competitive, but 1) stagnant growth in final demand, 2) decline in unit prices, including the appreciation of the yen, and 3) competition with Asian manufacturers are concerns.

Consumer Electronics Industry View: In-Line

In the mainstay digital AV device field, we look for volume growth until F2006, but the essential picture remains that shorter product cycles translate into lower prices. F2004-05 was when firms were supposed to recoup their investments on flat panel TVs and DVD recorders, but the competition for the flat panel technology crown and the lack of interest in DVD recorders overseas caused earnings to disappoint on the whole. Although we expect restructuring benefits to continue to drive earnings growth in the industry, we have not seen any improvement in the earnings structure. Still, valuations are at historical lows, so we see limited downside risk at the moment.

Computer Software & Services Industry View: Attractive

We expect business conditions to pick up in F2006 and F2007, and valuations overall look low.

Asia/Pacific

China Technology View: In-Line

The Chinese Technology industry benefits from a large potential market but suffers from low technology content, lower entry barriers and potential overcapacity.

India- Software Industry View: In-Line

We expect strong revenue growth but margin pressure. We view valuations for the larger stocks as high.

Korea- Semiconductor Industry View: In-Line

Currency appreciation, low visibility, and pricing are issues facing the industry, but most are largely reflected in stock prices, in our view.

South Korea– Hardware Components Industry View: In-Line

The industry is facing currency, low visibility and competitive pricing issues, but we believe that most are largely reflected in stock prices.

South Korea– Non-PC Chip Design Industry View: Attractive

IC design is a young industry, with significant upside potential, in our view. We expect component design relating to digital TVs and wireless handsets to grow, with the potential to expand its footprint beyond basic ICs.

Singapore – Technology Industry View: In-Line

Valuations look reasonable, but Chinese competition remains credible.

Taiwan – Foundry Industry View: In-Line

Stock prices have largely factored in peak cycle expectations, in our opinion.

Taiwan– Hardware Component Industry View: In-Line

Accelerating magnesium casing adoption due to more affordable pricing is likely to stimulate future demand despite profit margin pressure.

Taiwan– PC-Related Chip Design Industry View: In-Line

Taiwan fabless design houses face risks in relation to volatility in end-demand, intensified price competition, and foundry supply.

Taiwan– DRAM/IDM Industry View: In-Line

We expect a mid-cycle DRAM rebound on seasonality, within the ongoing 12-month DRAM downtrend.

Taiwan– System & PC Hardware Industry View: In-Line

Morgan Stanley expects PC shipment growth of 9% for 2006; pricing erosion remains a key concern.

The information and opinions in this report were prepared by Morgan Stanley & Co. Incorporated and its affiliates (collectively, "Morgan Stanley").

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The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Bernie Mahon, Louis Gerhardy.

Unless otherwise stated, the individuals listed on the cover page of this report are research analysts.

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Different securities firms use a variety of rating terms as well as different rating systems to describe their recommendations. For example, Morgan Stanley uses a relative rating system including terms such as Overweight, Equal-weight or Underweight (see definitions below). A rating system using terms such as buy, hold and sell is not equivalent to our rating system. Investors should carefully read the definitions of all ratings used in each research report. In addition, since the research report contains more complete information concerning the analyst's views, investors should carefully read the entire research report and not infer its contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of February 28, 2006)

For disclosure purposes only (in accordance with NASD and NYSE requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Underweight to hold and sell recommendations, respectively.

Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)		
	Count	% of Total	Count	% of Total IBC	% of Rating Category
Overweight/Buy	744	36%	276	40%	37%
Equal-weight/Hold	937	45%	323	47%	34%
Underweight/Sell	400	19%	95	14%	24%
Total	2,081		694		

Data include common stock and ADRs currently assigned ratings. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations. Investment Banking Clients are companies from whom Morgan Stanley or an affiliate received investment banking compensation in the last 12 months.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

More volatile (V). We estimate that this stock has more than a 25% chance of a price move (up or down) of more than 25% in a month, based on a quantitative assessment of historical data, or in the analyst's view, it is likely to become materially more volatile over the next 1-12 months compared with the past three years. Stocks with less than one year of trading history are automatically rated as more volatile (unless otherwise noted). We note that securities that we do not currently consider "more volatile" can still perform in that manner.

Unless otherwise specified, the time frame for price targets included in this report is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

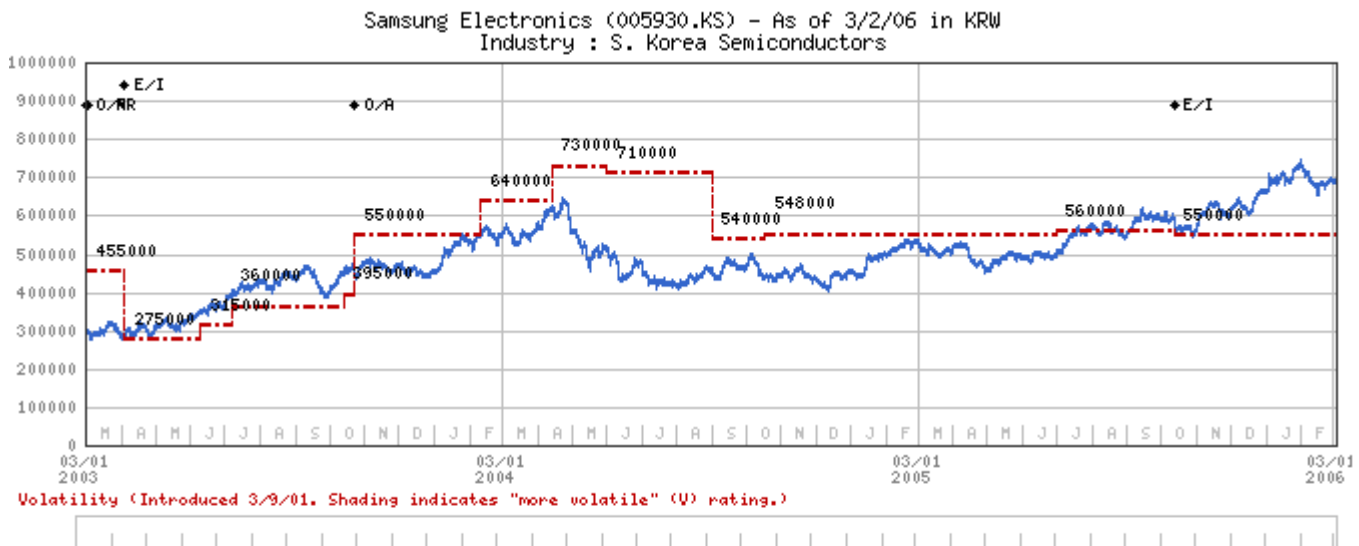
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index.

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Stock Price, Price Target and Rating History (See Rating Definitions)



Stock Rating History: 7/30/02 : 0/NR; 3/2/03 : 0/A; 4/4/03 : E/I; 10/23/03 : 0/A; 10/12/05 : E/I

Price Target History: 10/21/02 : 455000; 4/4/03 : 275000; 6/9/03 : 315000; 7/7/03 : 360000; 10/13/03 : 395000;
10/23/03 : 550000; 2/11/04 : 640000; 4/13/04 : 730000; 6/1/04 : 710000; 9/1/04 : 540000; 10/18/04 : 548000;
6/30/05 : 560000; 10/12/05 : 550000

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target --- No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) --- Stock Price (Covered by Current Analyst) ■
Stock Ratings abbreviated as below (Effective 3/18/02, ratings appear as Stock Ratings/Industry View) ♦
Stock Ratings as of 3/18/02: Overweight (O) Equal-weight (E) Underweight (U) More Volatile (V) No Rating Available (NAU)
Stock Ratings prior to 3/18/02: Strong Buy (SB) Outperform (OP) Neutral (N) Underperform (UP) No Rating Available (NAU)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Other Important Disclosures

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