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Industry View  
Attractive

## Internet & Consumer Software

### US Internet Advertising Outlook, 2006-2010E

**We remain upbeat about the five-year outlook**, and project a 20% five-year base-case CAGR for U.S. Internet advertising revenue growth, with above-average growth rates of about 25% for search and rich media. Internet advertising spending per household could move from \$177 in 2005E to \$362 in 2010E (comparable to 2005E radio advertising spending per household, but still far from \$980 for newspapers). Internet's share of US ad revenue could rise from 7% in 2005E to 13% by 2010E.

**Longer term, monetization should grow faster than usage, which should grow faster than users.** Recent, very rapid usage growth of online video + voice + user-generated content (UGC), combined with a high probability of continued innovation, bodes well for continued strong usage growth. Ongoing improvements in monetization are being driven by improved targeting / personalization / usability.

**Short-term, possible supply / demand imbalance in display / rich media advertising.** Pricing and revenue growth may be pressured in next 12-24 months due to especially rapid inventory growth (related to ramps in attempts to grow ad revenue by the likes of MySpace, Microsoft, YouTube and eBay). We believe the lower-hanging fruit for monetizing Internet video today may be in search and sponsorship formats that we believe may gain noticeable traction in online video as early as CQ1:07.

**Key beneficiaries should continue to be Google**, which continues to innovate and capture share; Yahoo!, though the next several quarters could present challenges given reliance on branded / display advertising (~35% of CQ2 revenue – see page 9 for details); and eBay, which is beginning to monetize its vast global footprint with search.

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## Summary

### Internet Advertising Continues to Evolve at Rapid Clip

For years, we have observed that internet advertising would become especially interesting when the contribution of internet advertising spending to total advertising spending met or surpassed the growth rate of traditional media advertising spending. Our point was that when the contribution of the new medium (online) met the growth rate of old media (offline) it would become apparent that very real share loss had begun. The milestone occurred in 2005E when full-year U.S. Internet advertising accounted for 7% of spending while the total advertising market grew by 3%. Our base-case estimates assume Internet could account for 13% of total advertising spending in 2010E and the share shifts for other media could continue. In our view, the biggest challenge in determining future growth for Internet advertising doesn't relate to overall growth rates or impact, but relates to determining how Internet advertising will evolve. We know by now that dynamic change in the evolution of the market for Internet advertising creates ongoing challenges. Note the massive change we have seen over the past half decade – search rose from 4% of Internet ad spending in 2001E to 41% in 2005E, while display and sponsorship fell from 62% to 25% of spending.

We believe these types of rapid changes are likely to continue, which makes precise forecasting especially difficult. While economic uncertainty is always a risk for advertising, the biggest near-term risks for Internet advertising may relate to a flood of advertising supply coming onto the market in 2007E and 2008E, which could pressure pricing and growth in certain segments of Internet advertising in the near term (e.g., display and rich media).

Five of the ten most-trafficked sites on the Internet today (Microsoft with AdCenter, Yahoo! with Panama, Google with

YouTube + video, eBay with Yahoo! + Google, and MySpace with News Corp push) have plans to dramatically increase available advertising inventory over the next 12 to 24 months. In a cozy little world, where Google + Yahoo! accounted for an estimated 60% of US gross Internet advertising revenue in CQ2 (with Google at 35% and Yahoo! at 25%; see Exhibit 4), this ramp in supply may upset the ecosystem of the market as advertiser spending (albeit rapid) may not grow as rapidly as Internet advertising inventory. While under this scenario the spending areas with the most risk may be display and rich media (which is still hampered by suboptimal long and invasive programming), search may be resistant owing to the transparency in measuring ROI, very low coverage among digital video / audio and still underpenetrated local terms today. An area that could surprise on the upside could be search tied with sponsorship – for example, if you search for motorcycles on YouTube you might actually enjoy (or might not mind) seeing a Harley-Davidson logo or frame around the videos you view, same for golf and TaylorMade, same for vacation resorts and Expedia, and so on.

Measuring 'inventory' on the internet is challenging. To get a sense of market dynamics it's worth looking at Exhibit 1 – if we use reported revenue and compare it with comScore unique user data, one sees that Google (at an estimated \$12.28 in annualized U.S. revenue per U.S. user) and Yahoo! (at an estimated \$8.65 in annualized U.S. revenue per U.S. user) are much more effective at monetizing their user bases than most other market participants. We expect rising competition to gain dollar share here as the less effective monetizers endeavor to increase their share of the monetization pie.

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**Estimated Key Data for Selected US Internet Sites – Focus on Estimated US Ad Revenue per User**

	Unique Users (000)	Total Pages Viewed (MM)	Total Minutes (MM)	CQ2E Annualized US Ad Rev. per Unique User
<b>Total Internet</b>	<b>173,428</b>	<b>462,186</b>	<b>310,466</b>	<b>\$31.44</b>
Y/Y Growth	2%	2%	15%	--
M/M Growth	0%	-8%	-4%	--
<b>Google Sites</b>	<b>107,365</b>	<b>10,264</b>	<b>5,232</b>	<b>\$12.28*</b>
Y/Y Growth	23%	62%	80%	--
M/M Growth	-1%	2%	9%	--
<b>Yahoo! Sites</b>	<b>129,724</b>	<b>39,878</b>	<b>42,715</b>	<b>\$8.65*</b>
Y/Y Growth	5%	-9%	25%	--
M/M Growth	-1%	0%	-1%	--
<b>Microsoft Sites</b>	<b>119,376</b>	<b>18,721</b>	<b>22,125</b>	<b>\$3.25</b>
Y/Y Growth	4%	-14%	0%	--
M/M Growth	0%	-8%	-4%	--
<b>Time Warner Network</b>	<b>120,276</b>	<b>18,000</b>	<b>36,106</b>	<b>\$1.62</b>
Y/Y Growth	1%	-43%	-6%	--
M/M Growth	-1%	-4%	-2%	--
<b>MySpace</b>	<b>55,849</b>	<b>34,988</b>	<b>11,503</b>	<b>\$1.32</b>
Y/Y Growth	158%	263%	634%	--
M/M Growth	0%	6%	9%	--
<b>eBay</b>	<b>78,991</b>	<b>10,972</b>	<b>6,480</b>	<b>\$0.33</b>
Y/Y Growth	13%	1%	-7%	--
M/M Growth	-1%	2%	5%	--
<b>YouTube</b>	<b>20,759</b>	<b>1,326</b>	<b>1,047</b>	<b>--</b>
Y/Y Growth	--	--	--	--
M/M Growth	9%	26%	29%	--

e = Morgan Stanley Research estimates

Source: comScore (9/06), Yahoo!, Time Warner, Microsoft, Google, eBay, Internet Advertising Bureau, Morgan Stanley Estimates

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Exhibit 1

## Morgan Stanley US Internet Advertising Forecast

(US\$ in MM, except where noted)

	C2001E	C2002E	C2003E	C2004E	C2005E	C2006E	C2007E	C2008E	C2009E	C2010E	CAGR '05-10
Search Advertising	\$285	\$901	\$2,543	\$3,850	\$5,142	\$6,681	\$8,622	\$10,898	\$13,396	\$15,786	25%
% Change	--	216%	182%	51%	34%	30%	29%	26%	23%	18%	
% of Total Internet Advertising	4%	15%	35%	40%	41%	42%	44%	46%	48%	50%	
Display and Sponsorship	\$4,423	\$2,824	\$2,253	\$2,599	\$3,136	\$4,108	\$4,765	\$5,337	\$5,818	\$6,225	15%
% Change	--	(36%)	(20%)	15%	21%	31%	16%	12%	9%	7%	
% of Total Internet Advertising	62%	47%	31%	27%	25%	26%	24%	22%	21%	20%	
Rich Media	\$357	\$601	\$727	\$963	\$1,003	\$1,123	\$1,472	\$2,001	\$2,582	\$3,150	26%
% Change	--	68%	21%	32%	4%	12%	31%	36%	29%	22%	
% of Total Internet Advertising	5%	10%	10%	10%	8%	7%	7%	8%	9%	10%	
Classified Advertising	\$1,141	\$901	\$1,235	\$1,733	\$2,132	\$2,587	\$2,973	\$3,306	\$3,621	\$3,892	13%
% Change	--	(21%)	37%	40%	23%	21%	15%	11%	10%	7%	
% of Total Internet Advertising	16%	15%	17%	18%	17%	16%	15%	14%	13%	12%	
E-mail and Other	\$927	\$781	\$509	\$481	\$1,129	\$1,498	\$1,867	\$2,211	\$2,512	\$2,743	19%
% Change	--	(16%)	(35%)	(5%)	135%	33%	25%	18%	14%	9%	
% of Total Internet Advertising	13%	13%	7%	5%	9%	9%	9%	9%	9%	9%	
<b>Total Internet Spending</b>	<b>\$7,134</b>	<b>\$6,009</b>	<b>\$7,267</b>	<b>\$9,626</b>	<b>\$12,542</b>	<b>\$15,998</b>	<b>\$19,699</b>	<b>\$23,754</b>	<b>\$27,928</b>	<b>\$31,796</b>	<b>20%</b>
% Change	--	(16%)	21%	32%	30%	28%	23%	21%	18%	14%	
Internet Users	141	157	171	183	195	205	212	219	225	229	3%
% Change	--	11%	9%	7%	7%	5%	4%	3%	3%	2%	
Total Internet Spending per User	\$50	\$38	\$43	\$53	\$64	\$78	\$93	\$109	\$124	\$139	17%
% Change	--	(24%)	11%	23%	22%	22%	19%	17%	15%	12%	
Internet Households	51	55	62	68	71	73	77	81	84	88	4%
% Change	--	9%	12%	10%	4%	3%	5%	5%	4%	4%	
Total Internet Spending per Internet Household	\$140	\$108	\$117	\$141	\$177	\$218	\$255	\$293	\$331	\$362	15%
% Change	--	(23%)	8%	20%	26%	23%	17%	15%	13%	9%	

### Terminology

**Search** – Fees advertisers pay Internet companies to list and/or link their company site / domain name to a specific search word or phrase (includes paid search revenues).

**Display and Sponsorship** – For display, advertiser pays an Internet company for space to display a static or hyper-linked banner or logo on one or more of the Internet company's pages.

For sponsorship, advertiser sponsors targeted Web site or email areas (e.g., entire web site, site area, an event, parts or all of an email message).

**Rich Media** – Advertisements that integrate some component of streaming video and/or audio and interactivity, in addition to flash or java script ads, and can allow users to view and interact with products or services.

**Classifieds** – Fees advertisers pay Internet companies to list specific products or services (e.g., Internet job boards and employment listings, real estate listings, automotive listings, yellow pages).

**E-mail and Other** – Banner ads, links or advertiser sponsorships that appear in e-mail newsletters, e-mail marketing campaigns and other commercial e-mail communications. Includes all types of electronic mail.

### Comments

**Search** could represent 50% of total Internet ad revenue in 2010E from 41% in 2005E and grow at a 25% CAGR. Key drivers include: online video/audio, local, mobile driving strong growth in queries, coverage and tagging; modest growth in price per click.

**Display and Sponsorship** could grow at a 15% 2005-2010 CAGR as marketers experience the overall effectiveness of the Internet in building brands and delivering online and offline sales.

**Rich Media** could experience fast growth (26% 2005-2010 CAGR) as share of time spent watching multiple formats of rich media (audio, video, animated) continues to shift towards the online medium.

**Classifieds** could grow at a 13% 2005-2010 CAGR as classifieds (primarily driven by help-wanted and category visitation in automotive, real estate, personals, for sale) dominate local, online advertising spending.

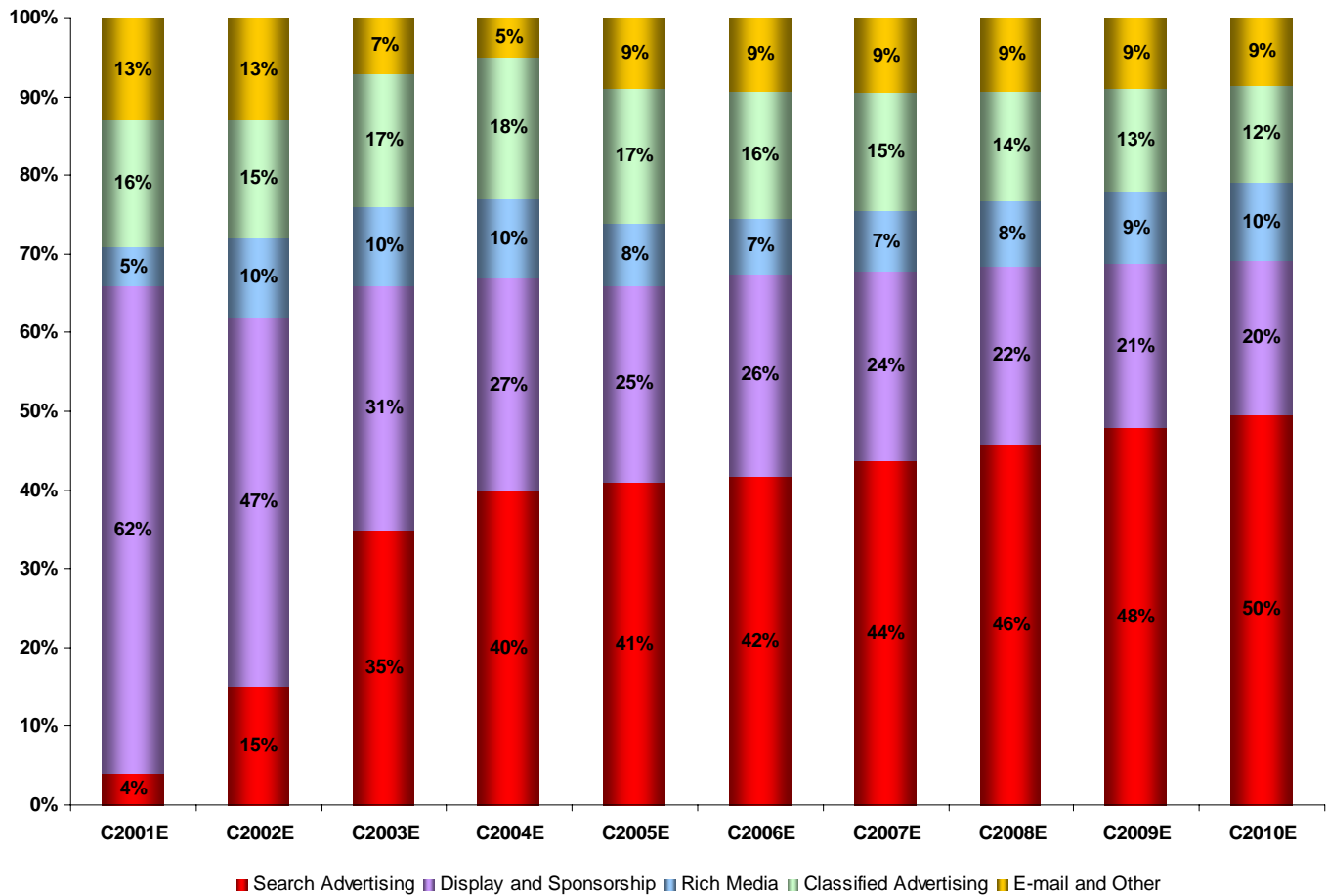
**E-mail and Other** could grow at a 19% 2005-2010 CAGR as the branding effectiveness of e-mail marketing goes mainstream and technology / compliance improvements to address the CAN-SPAM Act gain traction.

e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research

Exhibit 2

## Morgan Stanley US Internet Advertising Forecast



e = Morgan Stanley Research estimates

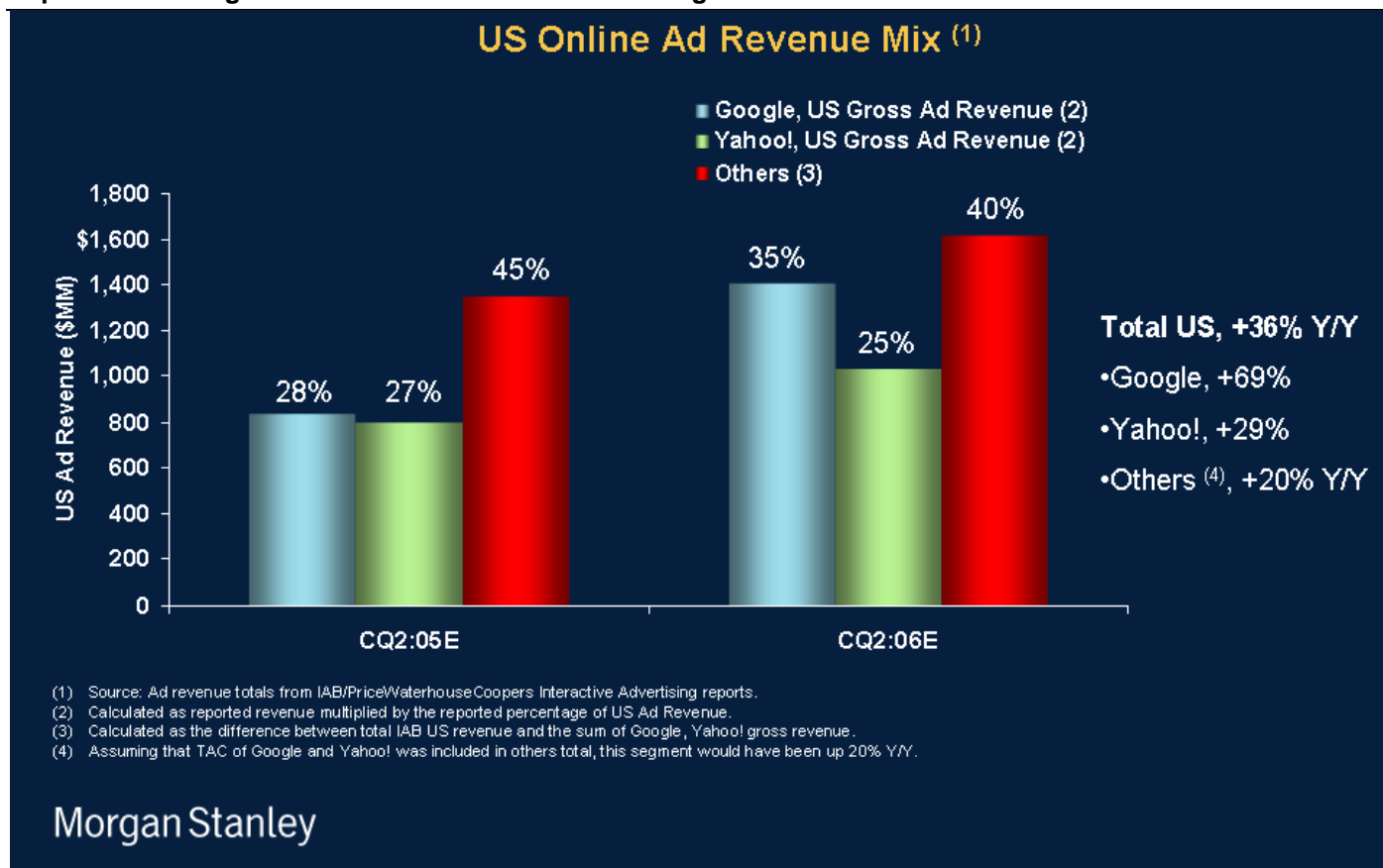
Source: Internet Advertising Bureau and Morgan Stanley Internet Research

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Exhibit 3

## Important of Google / Yahoo! to US Internet Advertising Revenue



Source: Company data, Morgan Stanley Research

At the risk of sounding melodramatic, we can't recall seeing as many things gaining rapid traction on the Internet as we see today. We recall Paul Saffo's comments from 1995...

*"It's a very consistent pattern in this business that collectively as a society and as individuals we all suffer from what I call macro-myopia. A pattern where our hopes and our expectations or our fears about the threatened impact of some new technology causes us to overestimate its short-term impacts and reality always fails to meet those inflated expectations. And, as a result our disappointment then leads us to turn around and underestimate the long term implications — and I can guarantee you this time will be no different. The short-term impact of this stuff will be less than the hype would suggest, but **the long-term implications will be vastly larger than we can possibly imagine today...** this revolution is more than unpredictable. We are performing a great unwitting experiment that is changing*

*our social structures, our governmental structures and our business structure. **Everything, absolutely everything, is up for grabs and nothing's going to make any sense at all for a couple of decades, so we may as well sit back and enjoy the ride.**"*

You can find Paul Saffo's comments and a great Q&A session from June 1995 at:  
<http://www.pbs.org/wgbh/pages/frontline/cyberspace/saffo.html>

We maintain that Internet usage growth (determined by an evolving measure of page views and / or minutes and / or relevance) should remain robust; subsequently, monetizable inventory growth should remain strong.

One forecasting riddle relates to determining how monetization of inventory will evolve. Another riddle relates simply to defining what advertising is and how it is priced in an increasingly connected world.

On the *inventory* side, in addition to core growth, the acceptance of relatively new services has been staggering. Note the growth in VoIP (including Skype's growth to 113MM users in 34 months); video (including YouTube's growth to 72MM global unique visitors, up 23x Y/Y, and 4.8B minutes, up 250x Y/Y, by the end of August, per comScore); user-generated content (including MySpace's growth to 100MM+ accounts in 3 years and growth in blogging to 70MM blogs, per Technorati); search query optimization and monetization (including Google's growth to \$1.7B in quarterly revenue in 5 years) and mobile premium content services (estimated at \$19B in global revenue in 5 years, with 1.1B, or ~59% of 1.9B global mobile phone users, being a mobile Internet user – defined as someone who regularly uses data a minimum of once per week). As best as we can tell, based on the types of product improvements and launches we believe are on the horizon, usage / inventory growth will remain healthy – and the younger generation is showing the way.

On the *monetization* side, ways to monetize the majority of the “new” aforementioned types of inventory (and “old” inventory – note eBay's recent move to open its eBay.com inventory to Yahoo! and Google search tools), for the most part, are still in the early stages of development. We are confident that personalization and targeting will be at the core of effective monetization. Just as the likes of Amazon's recommendation engine, Google's search engine, and Yahoo!'s LAUNCHcast Radio have dramatically improved user satisfaction (and related monetization) over the past half decade, ongoing developments like collaborative filtering, sponsored search (perhaps including click-per-action [CPA]), click-to-call, broadband and mobile digital coupons (especially for local goods / services), and in-game advertising, in our view, should surprise on the upside over the long term.

In addition, while we are optimistic about monetization related to advertising spending, we also believe that user-based subscription and a la carte payments should show ongoing traction. In the near-to medium-term, we think that content purchased a la carte could support robust growth, as that type of content tends to be more convenient / appealing to purchase on-the-fly (the pleasure of immediacy).

The challenge (and perhaps opportunity) for content creators that have thrived in the traditional advertising-supported media world is that they need to optimize their content for volume-based consumption via the Internet and break through the royalty challenges associated with decades of doling out content rights on a piecemeal basis. We believe the trends are unstoppable, and if the content creators don't

adapt, the growth will happen without them – we are encouraged by the recent announcements of video-related relationships for Google + YouTube + video content partnerships with Warner Music Group / Sony BMG Music + YouTube's deals with CBS / Universal Music Group. In addition, MTV's relationship with Motricity demonstrates its aggressive focus on mobile content.

Longer-term, we estimate the subscription model may help drive usage. Take the example of music. While online music services offer a large library of songs for purchase, they don't always make it easy to discover new music. A subscription model, based on a web-services approach, solves the music discovery problem and offers more inventory to the end-user / listener. Companies like Yahoo!, Microsoft, Real Rhapsody, and Napster offer easy-to-manage playlists. Similar to basic programmable cable, the playlists can be overlaid with personal recommendation features to deliver a rich listening experience.

In the mobile TV world, two prevalent business models also stand out: 1) pay-per-view on a per-session basis or by metered time spent viewing and 2) monthly subscription as a standalone service or as part of a broader entertainment package with music, games, and video (or extended from basic cable subscriptions with products like SlingMedia's SlingBox). To date, pay-per-view and subscription models have not been mutually exclusive. Both payment plans are likely to coexist in the near term, with subscriptions as the basic level of entry for access to channels and pay-per-view provided for premium content. Similar to the mobile music business model, a subscription-based model may become prominent over the long term, offering all-you-can-eat value to consumers and recurring revenue sources to carriers.

On defining *advertising*, owing to interactivity, the very core of how advertising can work changed with the evolution of broadband networks for PCs and mobile devices. In our view, it's a given that the overall advertising market will look very different in five years and that interactivity will be at the core of the change. In effect, with increasing frequency anywhere and anytime, users can click on contextually relevant advertisements and consummate transactions, in part, by leveraging eBay's PayPal base of 114MM online payment users. This trend will continue to evolve at a fast, furious, and surprising pace, in our view.

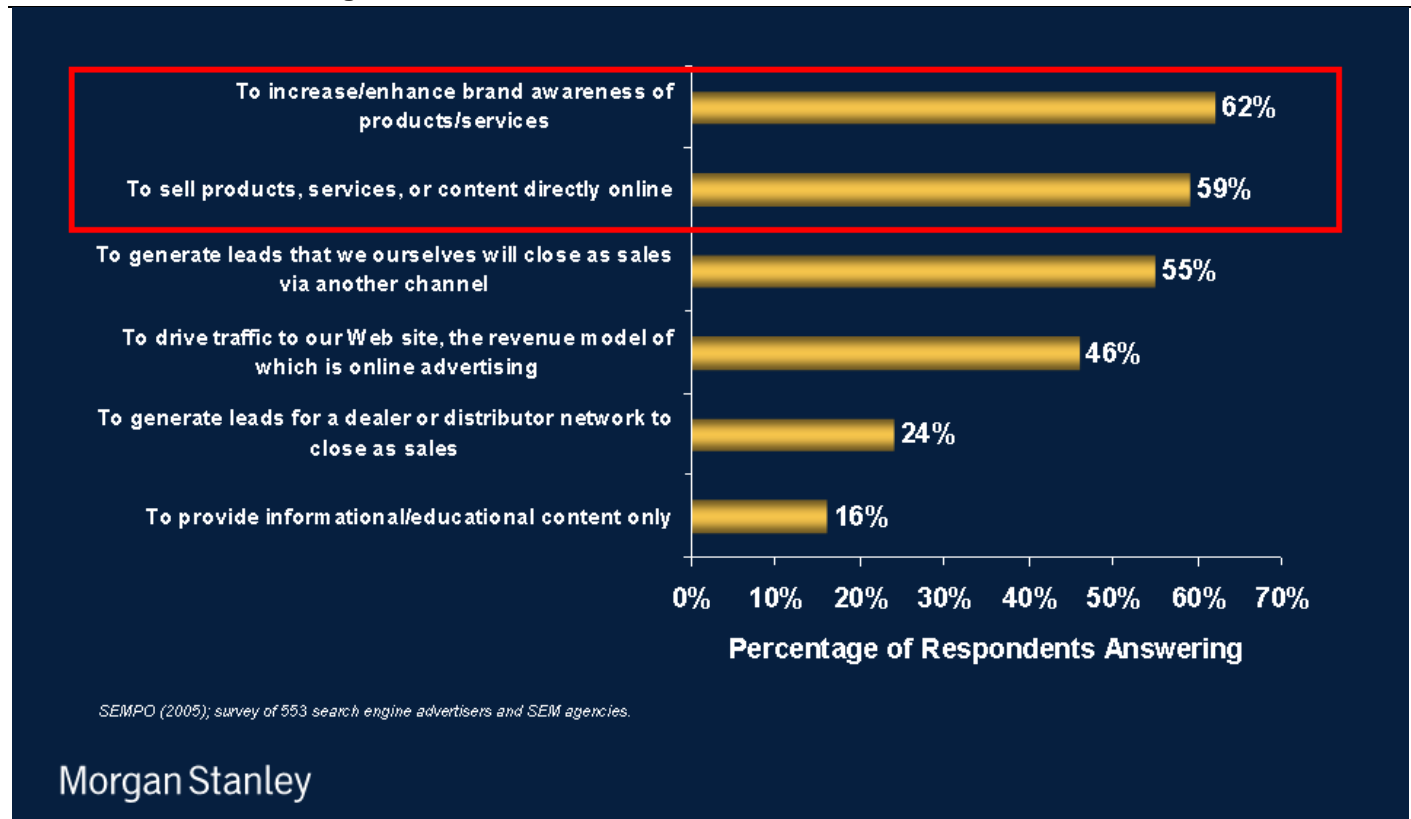
In this report, we take what we know now and endeavor to forecast five-year growth rates. In general, we believe our forecasts are conservative in part because we haven't added material revenue from new forms of

advertising that are nascent today (like click-to-call, digital coupons, mobile and in-game advertising).

Exhibit 4

Another wild card that could surprise to the upside relates to how search may evolve beyond a direct

## Search Can Drive Branding and Sales



Source: Company data, Morgan Stanley Research

response form of advertising, and gain ongoing mind share with advertisers as a branding tool – as shown in Exhibit 5, a 2005 SEMPO survey suggested that 62% of respondents used search as a medium to increase / enhance brand awareness of products / services.

## 5-Year Outlook for Internet Advertising Remains Upbeat

Yahoo! management splashed some cold uncertainty on the Internet advertising market recently with comments describing the company's Q3 financial performance as coming in at the low end of guidance (implying ~20% Y/Y and ~(1%) Q/Q revenue growth) due, in part, to softening advertising budgets in the Financial and Automotive sectors as refinancings weaken and the Automotive industry suffers through draconian change, and perhaps in part to some high-level share shifts. Since then, mixed comments have come from industry players and third parties alike, with some pointing to a weak ad environment and others pointing to a

healthy market still benefiting from a mix-shift in budgets and company-specific issues for Yahoo!.

Given these mixed messages, we thought it was a good time to revisit our outlook for the Internet advertising industry. The result? We remain upbeat on the 1-5 year outlook and forecast that Internet Advertising could grow at a 20% five-year CAGR in the US from 2005E through 2010E, supported by 3% and 17% five-year CAGRs in Internet users and advertising spending per user, respectively.

While we have concerns that industry leader Yahoo! could pull down CQ4 consensus revenue forecasts of 23% Y/Y and 14% Q/Q to something closer to 19% Y/Y and 12% Q/Q, we remain upbeat about general long-term trends for industry growth and Yahoo!'s ability to benefit from them. Looking at today's valuation -- YHOO shares trade at \$24 (as of 10/12/06) or at a C2007E EV/EBITDA multiple of 9, excluding Yahoo! Japan, vs. our coverage mean of 14.



What's Yahoo!'s share price telling us the market assumes? Per our 10-year DCF calculation, \$24 assumes something like the following: a 10% 2006-2016 revenue CAGR, a drop off in growth in global sponsored search (~47% growth in 2005E, ~21% in 2006E, ~17% in 2007E) and branded advertising (~39% growth in 2005E, ~34% in 2006E, ~18% in 2007E), and EBITDA margin expansion to 49% in C2016E from 41% in CQ2:06E. Our valuation also includes \$4 related to the Yahoo! Japan investment (or \$6.1B in market capitalization) and assumes a hurdle rate of 12%.

Our view is that Yahoo!'s long-term revenue growth potential is higher than 10% annually. While the shares could easily trade down if the company delivers more negative news on its earnings call on 10/17/06, we believe the shares are relatively close to a bottom.

Going forward, a key secret to Yahoo!'s success is the launch of its new advertising platform (Project Panama) in CQ1:07 and effective execution / monetization of its vast user base (whether through display, sponsorship, streaming / rich media, or user-generated advertising). If Panama is a success and visibility in branded advertising improves (with assists from improvements in targeting), it is possible we would see a re-acceleration in revenue growth beginning CH2:07E. That said, execution is key.

Specifically, for the near-term quarters and estimates, as we indicated when Yahoo! stated that CQ3 results would likely come in at the low end of the range, we believe there's a good chance that Yahoo! reduces CQ4 guidance from our current estimates of \$1,320MM (up 24% Y/Y, up 14% Q/Q) to perhaps something closer to \$1,276MM (up 19% Y/Y, up 12% Q/Q). If so, this could imply that CQ4 non-GAAP operating EPS could be reduced from \$0.21 to \$0.20. For C2007E, if we assume the following Q/Q and Y/Y revenue growth rates of (2)% and 15%, respectively for CQ1; 3% and 15% for CQ2; 6% and 20% for CQ3; and 16% and 25% for CQ4, this could lead us to reduce our C2007E revenue from \$5,962MM (ex-TAC), + 27% Y/Y, to \$5,494MM (ex-TAC), + 19% Y/Y, and our C2007E non-GAAP Operating EPS from \$0.77 to \$0.70. If these adjustments were made, YHOO shares would be trading today at a C2007E EV/EBITDA multiple of 10, still a 29% discount to our coverage mean.

We continue to maintain that in challenging economic times, Internet advertising (in part, given its relative transparency and high ROI) may be less economically sensitive than most other forms of advertising. At the margin, while Yahoo!'s usage and revenue growth has been robust, the company has been dealing with some challenges related to upgrading

products to its especially large user base, search-related revenue share loss and delays in the launch of a new advertising platform.

## **Gap Between Internet Advertising Spending and Internet Usage Remains Very Large... Too Large, in Our Opinion**

For the overall Internet advertising market, we continue to believe that a huge gap between the percentage of advertising budgets allocated to Internet (at 7% for 2005E) and the consumption of Internet media, as measured by time spent, is a positive indicator for future growth opportunities. As shown in Exhibit 6, we forecast Internet advertising spending per user will grow from \$64 in 2005E to \$139 in 2010E, representing a 17% CAGR.

As shown in Exhibit 7, the Internet drives interaction and usage for the younger generation. Communication is the key driver of time spent online for a "super-connected" generation that seamlessly mixes email and instant messenger services with mobile phone and SMS use.

## **Continue to Believe Internet Advertising Will Gain Share from Offline Advertising Owing to Rapid Pace of Technology Improvements Which Drive Usage and Monetization**

Going forward, we believe corporate advertising budgets will continue to skew toward Internet advertising in the coming years due to ongoing trends, including: 1) key advancements in technology / relevancy / targeting – the successes of Amazon.com's recommendation engine and Google's sponsored search efforts continue to set the bar here; 2) media migration online, which is boosting consumer minutes spent online – the recent traction of the likes of Skype, MySpace, and YouTube proves how rapidly customer adoption can rise when new products / services hit value-added sweet spots; 3) improvements in technological literacy among advertisers and consumers (increased expertise in searching and finding); and 4) superior ROI and manageability for Internet advertising vs. traditional advertising.

Risks to these trends include economic uncertainty plus supply and demand imbalances, increased intensity in click fraud, spamming (email and index), and privacy issues (see page 30 for more details) that detract from the value of the medium and hinder monetization.

Our overriding thesis is that while we expect there will be volatility in the sector, we expect the innovating leaders to

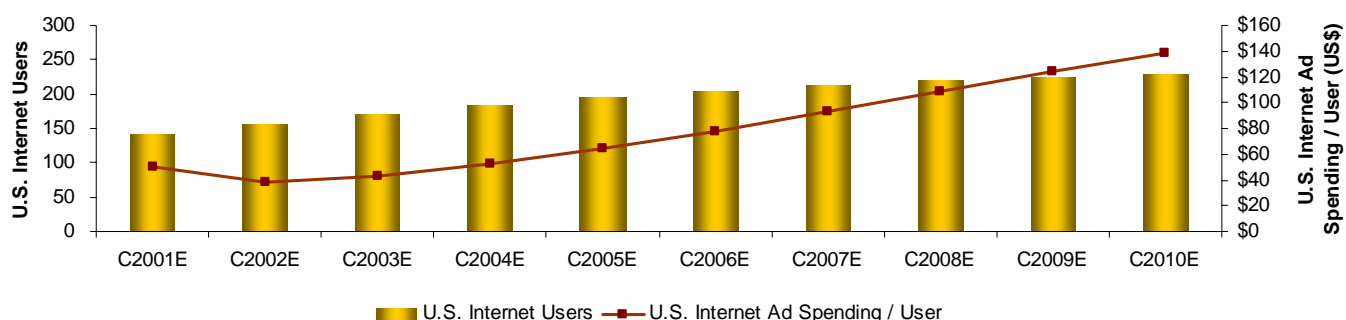
continue to benefit from the mix shift of budgets from traditional advertising to Internet advertising. As shown in Exhibit 8, this is particularly apparent in the promotions, newspapers, direct mail, and TV categories. In 2005E, the average household spent \$177 on Internet advertising vs. \$980 for newspapers.

Against this backdrop of low share for Internet advertising penetration, Internet leaders have made substantial progress

related to monetization from two perspectives: 1) supply (advertisers / subscribers and inventory) and 2) demand (customers and spending budgets). See Exhibit 9 for revenue per user metrics for Google, Yahoo!, and eBay. In this report, we present an update of our forecasts for Internet advertising spending over the next five years. For context, we also outline two other scenarios for the industry over the same period (a downside case and an upside case), including the detailed assumptions behind each.

Exhibit 5

## Morgan Stanley US Internet Users vs. Internet Advertising / User

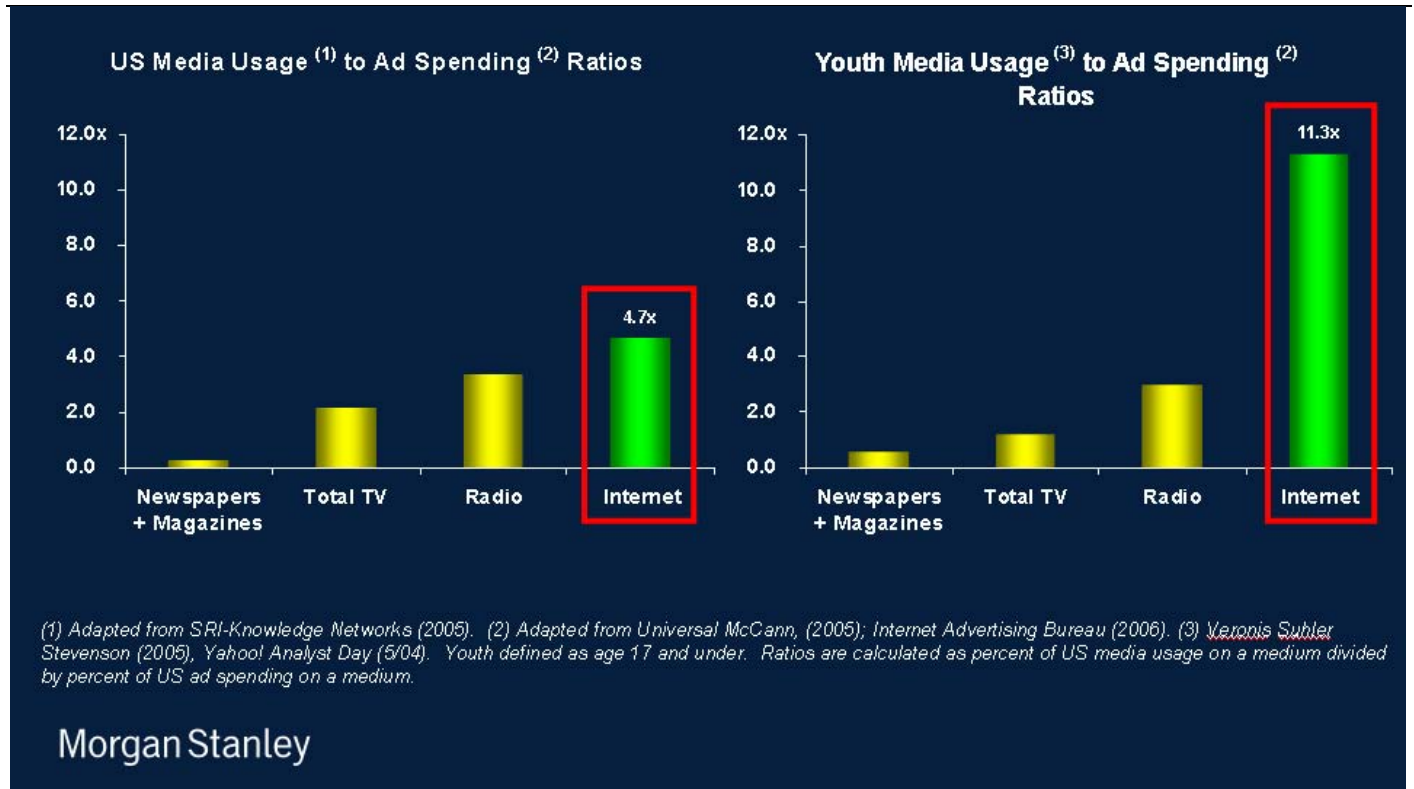


e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research

Exhibit 6

## Large Gap Between Internet Consumption / Ad Spending



Source: Company data, Morgan Stanley Research

Exhibit 7

## Morgan Stanley US Internet Users vs. Internet Advertising / User

Medium	2005 Advertising Spending (\$B)	Households (MM)	Ad Spending / Household (\$)
Promotions	\$106	99	\$1,071
Newspapers	49	50	980
Classifieds	17	55	309
Direct Telephone	97	99	980
Direct Mail	57	99	576
Broadcast TV	44	99	444
Radio	20	60	333
Cable TV	24	74	324
Internet / Online	13	71	177
Yellow Pages	16	99	162
Total	\$426	750	\$5,053
Average	47	83	561

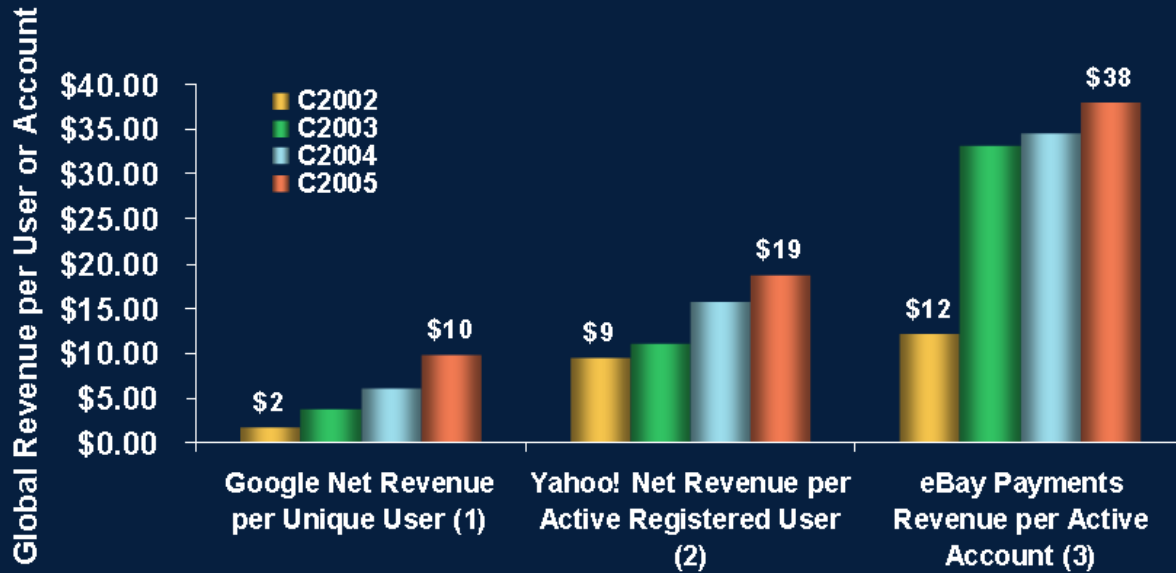
Morgan Stanley Research, PricewaterhouseCoopers, IAB, Jupiter Research, McCann-Erickson, RAB; Newspapers include Classifieds. Promotions (\$106B) include: incentives (\$28B), promotional products (\$23B), point-of-purchase (\$18B), specialty printing (\$8B), coupons (\$7B), premiums (\$7B), promotional licensing (\$6B), promotional fulfillment (\$5B), product sampling (\$2B), and in-store marketing (\$2B). Households may use multiple advertising mediums.

Morgan Stanley

Source: Company data, Morgan Stanley Research

Exhibit 8

## Improvements in Monetization Continue to Rise



(1) Google unique user count from comScore and Morgan Stanley estimates of global users at year-end ('02 – 209MM, '03 – 251MM, '04 – 327MM, '05 – 409MM). (2) Yahoo! active registered users per company reports and Morgan Stanley estimates ('02 – 101MM, '03 – 133MM, '04 – 165MM, '05 – 199MM). (3) eBay Payments users per company reports and Morgan Stanley estimates ('02 – 8MM, '03 – 13MM, '04 – 20MM, '05 – 27MM). eBay figures not presented pro-forma for PayPal acquisition, acquired 10/02.

Morgan Stanley

Source: Company data, Morgan Stanley Research

## Industry Overview

### **Our Media Team Continues to Believe Advertising Spending Should Mirror GDP Growth Rates**

Our media team believes that the past will prove to be the prologue for advertising overall and that global advertising spending will rise at nominal GDP growth rates over the next five years (estimated at 4.5-5.0%). We note that historically there has been a very strong, positive correlation between global GDP and advertising growth – over the past 6 years the correlation coefficient was 0.9.

Against this backdrop, Internet advertising has been able to achieve and sustain sizable CPM premiums for highly trafficked sites relative to other forms of traditional media. See Exhibit 10 for what we believe to be market-driven CPMs potentially illustrating differences in media value. Although Internet advertising CPMs tend to vary widely today according to the quality of the site, we expect this variance to narrow at a higher level than traditional media due to superior transparency in ROI.

### **Our Media and Internet Teams Forecast 5% Base-Case 5-Year Growth for Total US Advertising and 20% Growth for Internet Advertising (with 3% Growth for non-Internet Advertising)**

Our Media team assumes that US advertising grows in line with expected nominal secular GDP growth over the next five years. In our base case, we estimate that US Internet advertising spending nearly triples to ~\$32B in 2010E, from \$12.5B in 2005E, reflecting a 20% five-year CAGR (see Exhibit 2).

This base case scenario has three high-level trends driving the growth: 1) strong growth in Search due to ongoing improvements in efficacy + the launch of Yahoo!'s new platform + ramps in monetization of video and local searches and content; 2) continuing emergence of the digital channel for ad-based media; 3) shrinking of the gap between Internet consumption and ad spending (we go into more detail on these assumptions later on).

### **Continue to Maintain Monetization Will Grow Faster than Usage Which Will Grow Faster than Users**

Our base case also assumes that US Internet user growth will rise by 2-5% annually over the next three to five years. At the same time, usage growth may rise by 10-15% (assisted by rapid acceptance of broadband and mobile + improvements in quality of content available and findable on the web), while monetization could rise by 20% owing to improvements in products / services related to targeting and payments (including tools from the likes of Google, Yahoo!, and PayPal).

### **From 2002-2005E, US Internet Advertising Spending Grew at a three-year CAGR of 28% While Total US Advertising Grew at 5% and Traditional Advertising Grew at 4% - Internet Share Gains, at the Margin, Have Come from Newspapers, Magazines, TV and Radio**

While Internet advertising has grown from 0% of advertising spending in 1995E to 7% at year-end 2005E, we estimate that more than 80% of Internet advertising growth has come from search and classified advertising since 2002E (implying 28% CAGR from 2002-2005E with 65% growth from search, 5% from display and sponsorship (which experienced two years of decline during this period), 6% from rich media, 19% from classifieds, 5% for email and other). Although Internet advertising has been a net driver of growth to the overall advertising market, our data also suggest that the majority of Internet advertising growth has come primarily at the expense of traditional newspapers and magazines, but also, and to a lesser extent, across other media such as TV (broadcast, syndicated, and cable) and radio.

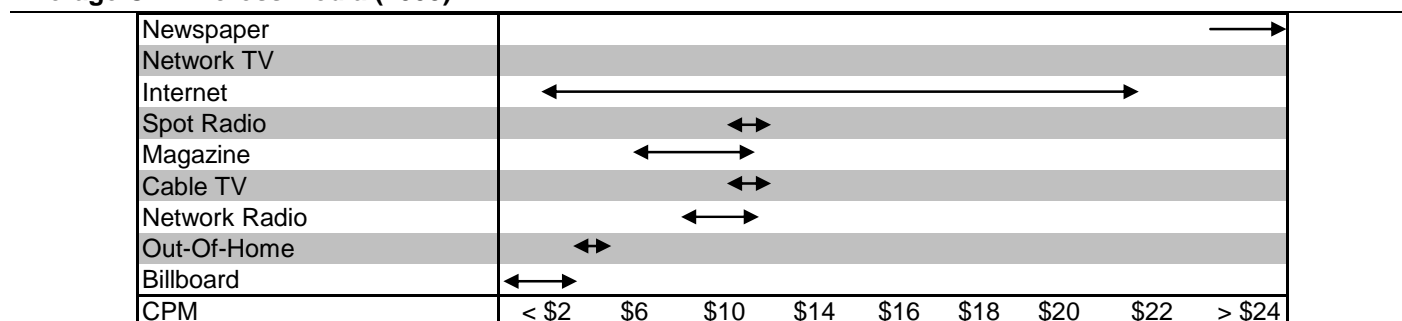
As of 2005E, based on revenue, the US Internet advertising market was larger than the markets for business magazines and outdoor advertising, respectively, and about even with consumer magazines (see Exhibits 12 and 13). If current growth rates continue, we estimate US Internet advertising market to overtake cable TV advertising in 2006E / 2007E and radio in 2007E / 2008E.

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Exhibit 9

## Average CPM Across Media (2005)



Source: Media Dynamics

Exhibit 10

## Summary Advertising Forecast

(MM's of Gross \$'s)	C2001E	C2002E	C2003E	C2004E	C2005E	C2006E	C2007E	C2008E	C2009E	C2010E	CAGR '05-10
Broadcast Networks	\$14,300	\$15,000	\$15,030	\$16,713	\$16,128	\$17,096	\$17,438	\$18,309	\$18,676	\$19,423	4%
% Change	(10%)	5%	0%	11%	(4%)	6%	2%	5%	2%	4%	
% of Total U.S. Advertising	9%	9%	9%	9%	8%	8%	8%	8%	8%	8%	
Broadcast Stations	\$21,479	\$24,034	\$23,468	\$25,877	\$24,300	\$26,001	\$26,001	\$28,341	\$28,058	\$29,741	4%
% Change	(17%)	12%	(2%)	10%	(6%)	7%	0%	9%	(1%)	6%	
% of Total U.S. Advertising	13%	15%	14%	14%	13%	13%	12%	13%	12%	12%	
Cable Networks- National	\$11,777	\$12,071	\$13,954	\$16,424	\$18,296	\$19,760	\$21,143	\$22,517	\$23,981	\$25,420	7%
% Change	0%	2%	16%	18%	11%	8%	7%	6%	6%	6%	
% of Total U.S. Advertising	7%	7%	8%	9%	10%	10%	10%	10%	10%	10%	
Cable Networks- Local	\$3,959	\$4,226	\$4,860	\$5,103	\$5,358	\$5,733	\$6,134	\$6,533	\$6,958	\$7,375	7%
% Change	7%	7%	15%	5%	5%	7%	7%	6%	6%	6%	
% of Total U.S. Advertising	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Syndication /Weblets	\$3,102	\$3,034	\$3,434	\$3,674	\$3,865	\$4,058	\$4,261	\$4,474	\$4,698	\$4,933	5%
% Change	(0%)	(2%)	13%	7%	5%	5%	5%	5%	5%	5%	
% of Total U.S. Advertising	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
<b>TV Subtotal</b>	<b>\$54,617</b>	<b>\$58,365</b>	<b>\$60,746</b>	<b>\$67,791</b>	<b>\$67,947</b>	<b>\$72,648</b>	<b>\$74,977</b>	<b>\$80,175</b>	<b>\$82,370</b>	<b>\$86,891</b>	<b>5%</b>
% Change	(9%)	7%	4%	12%	0%	7%	3%	7%	3%	5%	
% of Total U.S. Advertising	34%	35%	35%	36%	35%	36%	36%	36%	36%	36%	
Radio	\$18,369	\$19,409	\$19,603	\$20,013	\$20,071	\$20,330	\$20,736	\$21,359	\$21,892	\$22,505	2%
% Change	(7%)	6%	1%	2%	0%	1%	2%	3%	2%	3%	
% of Total U.S. Advertising	11%	12%	11%	11%	10%	10%	10%	10%	9%	9%	
Outdoor	\$5,193	\$5,232	\$5,504	\$5,834	\$6,301	\$6,680	\$7,014	\$7,399	\$7,769	\$8,197	5%
% Change	(1%)	1%	5%	6%	8%	6%	5%	5%	5%	5%	
% of Total U.S. Advertising	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Newspapers (ex. online)	\$44,304	\$44,102	\$44,939	\$46,703	\$47,407	\$47,263	\$47,552	\$48,456	\$49,454	\$50,475	1%
% Change	(9%)	(0%)	2%	4%	2%	(0%)	1%	2%	2%	2%	
% of Total U.S. Advertising	28%	27%	26%	25%	25%	23%	23%	22%	21%	21%	
Magazines	\$16,214	\$17,254	\$19,216	\$21,518	\$23,068	\$23,991	\$24,951	\$25,886	\$26,792	\$27,663	4%
% Change	(8%)	6%	11%	12%	7%	4%	4%	4%	3%	3%	
% of Total U.S. Advertising	10%	10%	11%	12%	12%	12%	12%	12%	12%	11%	
Yellow Pages (ex. online)	\$14,430	\$14,507	\$14,336	\$14,707	\$14,942	\$14,994	\$15,042	\$15,063	\$15,061	\$15,032	0%
% Change	5%	1%	(1%)	3%	2%	0%	0%	0%	(0%)	(0%)	
% of Total U.S. Advertising	9%	9%	8%	8%	8%	7%	7%	7%	7%	6%	
<b>Total Traditional Advertising</b>	<b>\$153,127</b>	<b>\$158,869</b>	<b>\$164,344</b>	<b>\$176,566</b>	<b>\$179,737</b>	<b>\$185,905</b>	<b>\$190,272</b>	<b>\$198,338</b>	<b>\$203,339</b>	<b>\$210,763</b>	<b>3%</b>
% Change	(7%)	4%	3%	7%	2%	3%	2%	4%	3%	4%	
% of Total U.S. Advertising	96%	96%	96%	95%	93%	92%	91%	89%	88%	87%	
Internet	\$7,133	\$6,009	\$7,267	\$9,626	\$12,542	\$15,998	\$19,699	\$23,754	\$27,928	\$31,796	20%
% Change	(12%)	(16%)	21%	32%	30%	28%	23%	21%	18%	14%	
% of Total U.S. Advertising	4%	4%	4%	5%	7%	8%	9%	11%	12%	13%	
<b>Total U.S. Advertising</b>	<b>\$160,260</b>	<b>\$164,878</b>	<b>\$171,611</b>	<b>\$186,192</b>	<b>\$192,279</b>	<b>\$201,903</b>	<b>\$209,972</b>	<b>\$222,093</b>	<b>\$231,266</b>	<b>\$242,559</b>	<b>5%</b>
% Change	(8%)	3%	4%	8%	3%	5%	4%	6%	4%	5%	

e = Morgan Stanley Research estimates

Source: Morgan Stanley Media Research and Morgan Stanley Internet Research

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Exhibit 11

## Historical Advertising Mix...

(US\$ in billions)

	C1999E	C2000E	C2001E	C2002E	C2003E	C2004E	C2005E
Direct Mail	\$41.6	\$49.5	\$46.2	\$46.1	\$49.0	\$50.1	\$56.6
Y/Y Growth	--	19%	(7%)	(0%)	6%	2%	13%
% of Total	23%	24%	25%	24%	25%	23%	25%
Newspapers	46.3	48.7	44.3	44.1	44.9	46.7	47.4
Y/Y Growth	--	5%	(9%)	(0%)	2%	4%	1%
% of Total	26%	24%	24%	23%	23%	22%	21%
Broadcast & Syndicated TV	40.0	44.8	38.9	42.1	41.9	46.3	44.3
Y/Y Growth	--	12%	(13%)	8%	(0%)	11%	(4%)
% of Total	22%	22%	21%	22%	21%	22%	20%
Radio	17.6	19.8	18.4	19.4	19.6	20.0	20.1
Y/Y Growth	--	13%	(7%)	5%	1%	2%	1%
% of Total	10%	10%	10%	10%	10%	9%	9%
Cable TV	9.4	11.8	11.8	12.1	14.0	16.4	18.3
Y/Y Growth	--	26%	0%	3%	16%	17%	12%
% of Total	5%	6%	6%	6%	7%	8%	8%
Consumer Magazines	11.1	11.2	10.9	11.0	12.4	12.4	12.9
Y/Y Growth	--	1%	(3%)	1%	13%	0%	4%
% of Total	6%	5%	6%	6%	6%	6%	6%
Internet	4.6	8.2	7.2	6.0	7.3	9.6	12.4
Y/Y Growth	--	78%	(12%)	(17%)	22%	32%	29%
% of Total	3%	4%	4%	3%	4%	4%	5%
Business Magazines	4.4	4.8	4.5	4.0	4.2	7.5	7.8
Y/Y Growth	--	9%	(6%)	(11%)	5%	79%	4%
% of Total	2%	2%	2%	2%	2%	3%	3%
Outdoor	4.8	5.2	5.2	5.2	5.5	5.8	6.3
Y/Y Growth	--	8%	0%	0%	6%	5%	9%
% of Total	3%	3%	3%	3%	3%	3%	3%
<b>Total</b>	<b>\$179.8</b>	<b>\$204.0</b>	<b>\$187.4</b>	<b>\$190.0</b>	<b>\$198.8</b>	<b>\$214.8</b>	<b>\$226.1</b>
	--	13%	(8%)	1%	5%	8%	5%

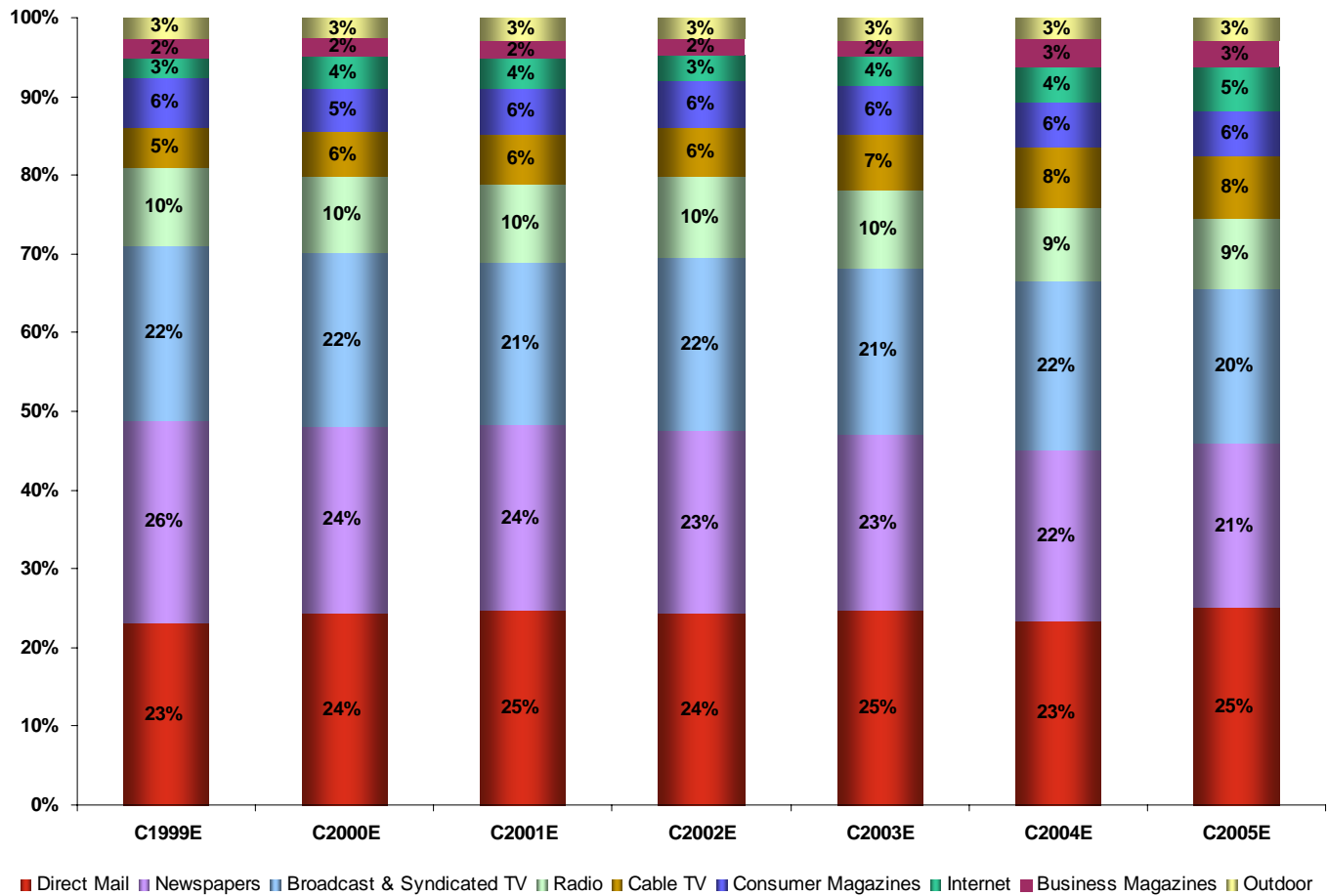
e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Media Research



Exhibit 12

## ...Historical Advertising Mix



e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Media Research

## US Internet Advertising Forecast

Our Internet Team's base-case scenario reflects a 20% CAGR over the next five years. Below we outline in detail the key assumptions behind our forecasts.

### US Internet Search Market

#### Summary

**Enhanced Efficacy of Search and Targeting, the Accelerating Migration of Media Content (including video) to the Web, Local and Mobile Initiatives, Rollout of Yahoo!'s Project Panama, and Initial Traction from Microsoft's AdCenter Could Drive Growth Re-acceleration in 2007**

Our base case scenario has the US Internet search market growing at a 25% CAGR over the next five years. We expect a number of key developments to potentially support this strong growth beginning possibly as early as 2007E. We forecast this growth to be driven by:

- a. Improvements in technology / targeting;
- b. Accelerating migration of video / audio content onto the Web;
- c. New product launches and traction;
- d. Continued traction in local search;
- e. Emergence of mobile Internet;
- f. Enhanced online sophistication of advertisers and consumers.

#### Media Content Continues to Migrate to Internet at an Accelerated Pace

The rapid evolution / emergence of the likes of YouTube, Google Video, Apple iTunes, Yahoo!'s "The 9", AOL Video, msn tv, CBS.com, ABC.com, NBC.com, Fox.com, etc. speak volumes to the opportunity that lies ahead in Internet media distribution, particularly as 60% of Internet traffic was driven by P2P file sharing (mostly video—per CacheLogic's 2004 data). This opportunity is both long term and near term, with the lower hanging fruit existing in immediately making the miles and miles of digital 'footage' on the Internet today easily searchable, monetized, and sponsored. Longer term, we expect more creative monetization to come from user-

generated / viral advertising, click-to-play, "quick-hit" interstitials / trailers, dynamic display advertising, interactive product placement, and revenue sharing (e.g. CPA or cost per action). We are quite optimistic about the potential ramp / monetization of online video – key is effective tagging of the content so it's easily searchable and YouTube has done a fantastic job here. While industry participants tend to believe that monetization of this content will largely be ad supported (note Pepsi's sponsorship of 'The 9' on Yahoo!, forthcoming ramp in Google's AdSense for YouTube video, and Microsoft's pact with video search engine Blinkx) we remain optimistic that search-related 'pay-per-download' of video content (similar to Disney / ABC's + Apple's successful downloads of the likes of 'Lost' and 'Desperate Housewives' could drive compelling revenue share revenue for the content providers and search facilitators like Google.

#### We View the Launch of Yahoo!'s Project Panama, Expected in the US in CQ1:07, as a Potential Boost to Relevancy, the Selection of Content, and Expanded Services for Advertisers

Project Panama, in addition to new campaign management features ranging from an intuitive control panel, ad testing, and goal-based optimization, will include an enhanced algorithm similar to that of Google, which ranks search-engine ads by both the amount advertisers pay for keywords and the relevance of the ad. For example, Yahoo!'s anticipated 'visible quality index' will score ads based on quality, bid and other relevance variables, and will be made visible to advertisers to enable them to gauge and optimize placement when the quality-based ranking model is implemented. In our view, this enhanced algorithm should result in higher relevancy than Yahoo!'s older product, which ranked ads only by the amount paid for keywords, and, as a result, higher click-through rates for the company and industry. We would also view it as a negative to the company and our Internet advertising industry forecasts if the launch of the product slipped beyond CQ1:07 or proved to be too buggy in the initial stages of deployment.

#### Microsoft's adCenter Traction Could Become more Apparent in 2007E and Have the Net Effect of Expanding Coverage

At the same time, we estimate Microsoft's adCenter (launched in CQ2:06) to possibly begin seeing minor incremental traction throughout 2007E and Google to

continue to leverage its core competitive advantage in algorithmic and local search to further enhance efficacy and functionality for advertisers and consumers alike. These developments should help drive growth of industry coverage (i.e. the number of sites participating in sponsored search) and the industry conversion rate, each of which are key drivers of growth.

## On-going Technology Improvements and User Sophistication Could Serve Advertisers Well

We also forecast 2007E to be a key year for technological advancements in local search and for the initial traction of the mobile Internet, all of which have positive implications for more sophisticated targeting and relevancy, but also query volume growth and coverage.

Lastly, perhaps less intangible, but nonetheless important, we expect the sophistication of consumers and advertisers to continue to improve in 2007E. For consumers, increased sophistication means the use of more specific / relevant search terms in finding what they need. For advertisers, it means the use of longer, more specialized queries — queries that might not command premium prices per clicks (PPCs), but have the net effect of increasing coverage and conversion. Although the net effect of this trend may be flattish growth in PPCs in 2007E, and beyond, when little numbers (PPCs) are multiplied by really big and rapidly growing numbers (leads), we see big results.

## Key Assumptions for Search

Our base-case scenario for the US Internet search market reflects a 25% five-year CAGR and a deceleration of growth from 34% in 2005E to 18% in 2010E. This forecast is based on four key factors: search query volume, coverage, click-through rates, and price per click. As you will see in the following sections, the Morgan Stanley search forecast is driven first and foremost by enhancements in conversion / click-through rates, second by expanded coverage, third by growth in queries, and less so by increases in PPCs.

We detail these assumptions and more in the following sections.

### a. Query Volume

**We forecast search query volume to grow at a 15% 2005-2010E CAGR.** The first driver of the US Internet search market is the search query volume. As Internet users continue to grow in the US (we forecast a 2-5% five-year CAGR), spend more time online, and become more

comfortable with search as a primary means of accessing information for various purposes (e.g. local, social, business, geographical, etc.), search query volume should inevitably continue to grow, in our view. In addition, we forecast broadband penetration to reach its sweet spot in the US of 60-70% during this time.

We estimate search query volume of 187B in 2005E growing at a 15% CAGR to 378B in 2010E, driven by the secular tailwinds outlined above.

### b. Coverage

**We estimate coverage to expand to 66% in 2010E from 56% in 2005E.** As new advertisers migrate to the Internet channel, as advertisers bid on more specialized queries, as the mobile Internet begins to take off and as search technology improves for suggesting relevant keywords for customers, coverage should continue to increase from current levels, in our view.

We also forecast search to be rapidly approaching its full range of coverage by 2010E due to the increased focus on relevancy and ROI. As the number of sites in operation continues to proliferate over the next five years, we estimate the average quality to deteriorate and to provide a natural cap to search coverage. In other words, as more sites of low quality / traffic / relevancy come to market, they will find themselves possibly blocked out of the market by search engines focused on quality (i.e. higher click-through rates) or find it cost-prohibitive to participate. Anecdotally, we are told that Google does this today by setting a minimum click-through rate an advertiser must achieve in order to be allowed to bid on a particular query.

For 2007E, we forecast a 300bps improvement to 61% from 58% in 2006E. In our view, this assumption should be supported by incremental coverage provided from the rollout of Microsoft's adCenter as well as improved matching capabilities from Yahoo!'s Project Panama.

### c. Click-Through Rates

**Click-through rates expanding to 12.6% in 2010E from 10.8% in 2005E.** The click-through rate is one of the key drivers of growth in our model and could improve significantly over time owing to improvements in search relevancy. Given Google's overriding focus / mission to index all of the world's information and provide the best search / customer experience around, we forecast Google to be the primary driver of industry click-through rates over time. But, as we mentioned above, we would also estimate incremental

impact from Yahoo!'s Project Panama; Microsoft's adCenter, at the margin; the advent of local, video, and mobile search; and enhanced sophistication among searchers and advertisers.

For 2007E, we forecast a 40bps improvement to 11.5% from 11.1% in 2006E.

#### d. Price per Click (PPC)

**We estimate PPC to demonstrate flattish growth of 2% per year through 2010, in line with inflation, to \$0.50 from \$0.45 in 2005E.** To date, the migration of advertising dollars online has created strong competition for highly sought-after keywords and, in turn, strong growth in PPCs. Looking ahead, we would not forecast PPC growth to be as strong, as coverage increases and advertisers increasingly enter into sophisticated bidding on lengthier, more specialized and lower-priced queries.

For 2007, we forecast 2% Y/Y growth to \$0.47 price per click from \$0.46 in 2006E.

#### Definitions and Drivers of Search

Revenue per search is the product of coverage, click-through rate and price per click (see Exhibit 14)

**Search query volume** increases could be driven by secular trends, such as increased Internet user penetration worldwide, increased broadband penetration, and the emergence of the mobile Internet. Search query volume increases could also be driven by technological improvements in relevancy, as well as an increasing reliance on, and familiarity with, search as a primary means of accessing information—for example, imagine the monetization opportunity if the full range of purchasable digital media becomes openly searchable (i.e. text, audio and video search).

**Coverage** could increase as search technology improves for suggesting related keywords for advertisers to bid on.

Concurrently, advertisers themselves may become savvier about the bidding process, and move into more specialized queries that users are searching for. We compare this to the assistance that companies such as eBay provide their seller universe, and the improvements that the seller universe, itself, suggests.

**Click-through rates** could increase as advertiser savviness improves, new technologies gain traction, and the relevancy of ads and their presentation improves. For instance, Google ranks ads based on the product of the click-through rate for the ad and the price per click that the advertiser bids. This way, ads that have low relevance—and consequently low click-through rates—get moved down in the rankings. As such, we believe that increasing numbers of bids for scarce phrases, combined with advertisers' economic incentives to create the most relevant possible ad, could boost click-through rates.

**Price per click** could increase as more bidders come onto the medium, and bid up the prices for a scarce set of keywords. The important difference between bidding for keywords and bidding for physical goods is the degree of scarcity involved. For keywords, it is possible to create multiple combinations of words, which has the effect of increasing the supply. Although there is practically an infinite number of combinations of letters into words in the English language, Yahoo! estimates that there were 620MM+ monetizable keywords as of 5/04. As new products are launched (such as "Motorola MPX220", "Motorola MPX221", "Motorola MPX222", etc.) and new concepts are invented, it is plausible that this universe could expand over time. With that concept in mind, coupled with search advertisers' increasingly sophisticated bidding on lengthier, more specialized queries, we believe that price per click may show more muted gains than either coverage or click-through rates. Our US search market forecast is driven by improvements from all three fronts—coverage, click-through rate, and price per click, with the most sizeable potential gains in search query volume, coverage and click-through rate.

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Exhibit 13

## Revenue per Search (RPS) Derivation

$$\begin{aligned}
 &\boxed{\text{RPS} = \text{Coverage} \times \text{Click-through Rate} \times \text{Price Per Click}} \\
 &\quad \downarrow \qquad \qquad \qquad \downarrow \qquad \qquad \qquad \downarrow \\
 &\text{RPS} = \frac{\text{\# Searches that Show Ads}}{\text{Total \# Searches}} \times \frac{\text{Total \# Clicks on Ads}}{\text{\# Searches that Show Ads}} \times \frac{\text{Total Amount Received from Advertisers}}{\text{Total \# Clicks on Ads}} \\
 &\quad \downarrow \\
 &\text{RPS} = \frac{\text{Total Amount Received from Advertisers}}{\text{Total \# Searches}}
 \end{aligned}$$

Source: Morgan Stanley Internet Research, Yahoo! Analyst Day (5/04)

Exhibit 14

## Morgan Stanley US Internet Search Forecast

(US\$ in MM, except where noted)

	C2001E	C2002E	C2003E	C2004E	C2005E	C2006E	C2007E	C2008E	C2009E	C2010E	CAGR '05-10
Searches (1)	--	--	118,800	152,000	187,000	224,400	263,670	303,221	342,639	378,274	15%
Y/Y Growth	--	--	--	28%	23%	20%	18%	15%	13%	10%	
Multiplied by: Coverage Rate (2)	--	--	52%	55%	56%	58%	61%	63%	65%	66%	
Multiplied by: Click-through Rate (2)	--	--	10.4%	10.6%	10.8%	11.1%	11.5%	11.9%	12.3%	12.6%	
Equals: Leads Generated	--	--	6,358	8,760	11,427	14,499	18,345	22,732	27,394	31,557	23%
Y/Y Growth	--	--	--	38%	30%	27%	27%	24%	21%	15%	
Price per Click (3)	--	--	\$0.40	\$0.44	\$0.45	\$0.46	\$0.47	\$0.48	\$0.49	\$0.50	2%
Y/Y Growth	--	--	--	10%	2%	2%	2%	2%	2%	2%	
Revenue per Search	--	--	\$21	\$25	\$27	\$30	\$33	\$36	\$39	\$42	9%
Y/Y Growth	--	--	--	18%	9%	8%	10%	10%	9%	7%	
<b>Search Advertising</b>	<b>\$285</b>	<b>\$901</b>	<b>\$2,543</b>	<b>\$3,850</b>	<b>\$5,142</b>	<b>\$6,681</b>	<b>\$8,622</b>	<b>\$10,898</b>	<b>\$13,396</b>	<b>\$15,786</b>	<b>25%</b>
Y/Y Growth	--	216%	182%	51%	34%	30%	29%	26%	23%	18%	

### Terminology

**Searches** defined as the sum of search result pages viewed per distinct search query. In 2005, the ratio of search result pages viewed per distinct search query was approximately 1.8x.

**Coverage** calculated as the number of searches that shows ads divided by the total number of searches.

**Click-through rate** calculated as the total number of clicks on ads divided by the number of searches that shows ads.

**Price per click** calculated as the total amount received from advertisers divided by the total number of clicks on ads.

### Comments

**Search market** could grow by a CAGR of 25% over the next five years due to growth in queries + improved efficacy + increasing traction in video, local, and mobile.

**Searches** could be driven by increased broadband penetration, improvements in relevancy, and search becoming a primary means of accessing information.

**Coverage** could increase as relevancy improves, video/local/mobile gain traction, and advertisers become savvier about the bidding process.

**Click-through rate** could increase as relevancy improves, advertiser savviness improves (e.g. increasing numbers of bids for scarce phrases), and new technologies gain traction (video, local, mobile, click-to-call).

**Price per click** could be flat (we assume it increases by inflation).

(1) Based on traffic data reported by comScore.

(2) Estimated by Morgan Stanley Internet Research and based on Yahoo! Analyst Day (5/04) framework.

(3) Estimated by Morgan Stanley Internet Research and based on proprietary survey conducted on Google and Yahoo! (Overture).

e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research

## US Internet Display and Sponsorship Market

### Summary

#### a. US Internet Display & Sponsorship

##### **We Believe There is Still a Large Amount of Inventory in Internet Display and Sponsorship to be Monetized**

Our base case scenario has the US Internet Display and Sponsorship market growing at a 15% CAGR over the next five years. While the focus since 2002 has been on performance-based advertising methods (e.g. natural / paid search, contextual ads), improved targeting, interactivity, and streaming / rich media technology have brought a renewed focus to branded advertising more recently. Today, advancements in interactive rich media, banner, and search advertising allow advertisers to use each format for generating brand awareness / affinity and customer acquisition almost interchangeably.

##### **Because of These Developments, the Lines between Performance-based and Branded Internet Advertising Have Continued to Blur**

In addition to blurring tactical lines, this development has also thrown a little bit of confusion into the industry related to the appropriate metrics to use for pricing Internet 'branded' advertising (but more on that later).

As opposed to the traditional media world, Internet Display and Sponsorship products can create a directly measurable impression on a consumer – an imprint that can be tied to the action of a consumer – and these actions can be measured and analyzed almost on a real-time basis. Advertising campaigns are therefore supported by addressability and accountability.

Up until 2006, the introduction of basic ad formats such as static banner ads and pop-ups, along with IAB standardization, has resulted in efficient branded advertising campaigns – advertising that is dynamic, flexible, measurable and provides relatively high ROI. One example of this kind of advertising is Yahoo!'s recent successful display and sponsorship campaign for the movie 'Mission Impossible III'. Yahoo! helped Viacom successfully raise user awareness and consideration, with 30MM+ users viewing a branded ad on Yahoo! and 51% of the 'Mission Impossible III' audience viewing an Internet ad for the movie (the majority of which were viewed on Yahoo!).

#### b. US Rich Media

##### **Rich Media Could Experience Very Rapid Growth Owing to Advertiser Interest in Video and Interactivity**

We forecast the US Internet Rich Media market growing 26% over the next five years. As with display and sponsorship advertising, while the Internet has enabled performance-based advertising methods such as sponsored search, it has also generated interest in rich media branded advertising.

##### **We Believe that We Are Still in the Very Early Stages of Adoption of Internet Rich Media**

Over the past year, rich media has lifted Internet branded advertising to new realms of interactivity, from audio, video, and games, to flash or java script ads. In addition, rich media has offered a new way to transition television advertising for traditional media companies to the Internet medium. In particular, we view Internet video as a key way to help generate / strengthen brand awareness.

But we don't believe the future of rich media advertising will be merely taking the traditional TV, 30-second spot and pasting it on the Web. The two distribution channels remain very different (passive vs. active) and tolerance levels for sitting through lengthy ads remain lower on the Internet than on TV. Supporting this thesis is commentary we've been hearing from some of the Internet media players related to observing significant drop off in viewership when traditional ads are inserted in the front of content. Long term, advertisers and their agencies will have to become far more creative to leverage the format effectively – perhaps through shorter clips. In the meantime, the migration of video / audio online provides opportunities in other areas such as Search (i.e. tagging), contextual advertising (e.g. Google AdSense), click-to-play, display / sponsorship, and user-generated / viral advertising (to name a few).

##### **Like Display Advertising, Rich Media is Supported by Addressability and Accountability**

Similar to display and sponsorship, Internet Rich Media products can create an impression on a consumer – an imprint that can be tied to a consumer action – and these actions can be measured and analyzed and therefore support accountability.

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Along with rich media features, come a range of rich metrics beyond the typical click-through rate. To illustrate, advertisers can track the time the ad is displayed on the page, the time people spend interacting with the ad, whether the viewer becomes a customer (clicks through) and other various levels of user engagement. In addition, traditional media metrics, such as brand quality and message association, have become key components of post-campaign reporting for rich media advertising.

## Key Assumptions for Display / Sponsorship / Rich Media

We have put together a forecast for the display and sponsorship markets based on our analysis of growth in Internet users and usage, with an eye on where CPMs / CPA (cost per action) / other general pricing metrics may go from here. In the end, the world of Internet media advertising (streaming and downloadable) is much like the old, 'wild and woolly' days of Internet advertising, with no clear set of standards and no consistent use of video / audio advertising. This isn't to say that a huge opportunity doesn't exist, and we may see these issues resolved soon, it just throws a couple of wrenches into today's forecasting process. All in, our 15% five-year CAGR for the US Internet Display and Sponsorship market and 26% 2005-2010 CAGR for the Rich Media advertising market is driven by the assumptions outlined below:

### a. Internet Users

We forecast US Internet users growing at a 3% five-year CAGR to 229MM in 2010E, representing 70-75% of the population in the US. For Internet users 18-49 years of age, the sweet spot of demographics, Jupiter Research forecasts a 1% 2005-2010E CAGR, reaching 102MM by 2010E or 86% penetration.

Similar to the US cable subscriber and PC user adoption cycle, after ramping up and growing rapidly, US Internet user growth is entering a phase of steady growth. Cable and PC user penetration leveled off after reaching the 60-70% threshold, similar to where the Internet is in the US today. A continued mix shift from narrowband to broadband Internet access could further support growth over the next few years. For 2007, we assume 4% Internet user growth to 212MM and, per Jupiter Research, slight growth in Internet user growth among the 18-49 age demographic.

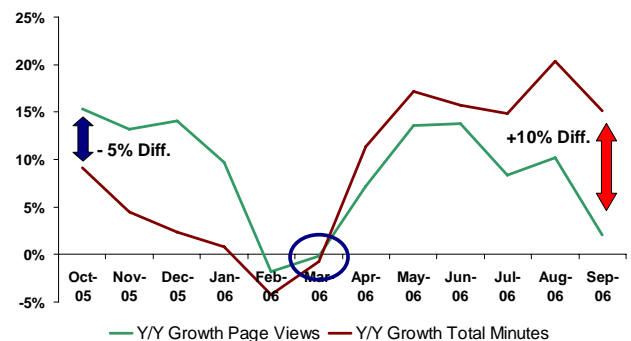
### b. Usage

We continue to believe that US Internet usage will grow at a 15-20% 2005-2010E CAGR. But the mix may begin to shift

from page views to minutes rather soon, if the trend hasn't already begun. As video / audio continue to migrate online, we estimate the average length a user spends on a Web page to increase. As a result, we may begin to see slower growth in page views per user and total page views and more rapid growth in minutes per user and total minutes. An example of this trend can be found in YouTube's recent performance – per comScore, total page views for YouTube increased by 100 times Y/Y in August 2006E to 4.8B, while total minutes increased by 250 times Y/Y to 4.7B. This is not to say that we don't still expect to see users increasing their browsing experience over time across various types of activities (e.g. shopping, social networking, information seeking, etc.). But near-term it is possible that the growth in minutes spent online outstrips the growth of browsing, hence pressuring page view growth.

Exhibit 15

## Minutes Growth Beginning to Outstrip Page Views Growth?



Source: comScore

### c. Monetization

We forecast monetization of this strong growth in traffic in the US to grow by roughly a 20% five-year CAGR. The lower hanging fruit will be Search, sponsorship / display and user-generated / viral advertising. The growth longer term may come from short interstitials and click-to-play.

To try and size the market opportunity a little more, let's use the recent Google / YouTube deal as an example, where the immediate opportunity is for Google to monetize YouTube's huge footprint through Search (tagging all of the video), AdSense / contextual advertising, and branded advertising (display / sponsorship). Doing the simple math: if we assume that Google is as able to monetize the 72MM YouTube monthly unique visitors much the way Yahoo! monetizes its 400MM+ users today through marketing services (at roughly \$8.65 per user as of CQ2:06 numbers), we estimate YouTube to generate about \$620MM per year.

We believe this number is conservative because we assume no growth in YouTube unique visitors and exclude other forms of monetization in the calculation, such as AdSense, short-form interstitials, click-to-play, user-generated

advertising, etc. But even assuming that Google achieves only 50% of the monetization of Yahoo!, then the revenue would be roughly \$310M per year. And keep in mind that this is only one channel.



## US Internet Classifieds Market

### Summary

#### Classifieds Market Should Experience Solid Growth Led By Local Spending and Recruitment Industry

We forecast the US Internet Classifieds market to grow at a 13% five year CAGR, reaching \$3.9B in 2010E. At a high level, the key drivers supporting this strong growth include the narrowing gap between 7% of advertising budgets allocated to the Internet medium vs. 20% of Internet media consumption as measured by time spent and a pickup in local advertising spending.

As the Internet classifieds market develops, we estimate consolidation to occur in this fragmented market as well as increased emphasis toward specialization and monetization from the major players. Like search engines, classified Web sites are often vertical in nature with the sites providing

advertising platforms for niche markets of buyers and sellers.

It should be noted that we are not including eBay auction / store listings in Classifieds, as some parties might do. We continue to believe that auction / store listings are eCommerce, with auction listings being enlisting direct bidding activity and an eventual transaction and a listing in eBay Stores being as good as a product placed on a shelf for purchase.

Select verticals such as automotive, real estate, and personals have been particularly successful at classifieds. In addition, as Internet users become more sophisticated online shoppers and the 'Search, Find, Obtain' (SFO) phenomenon becomes more local and specific, we forecast classifieds to gain increasing market adoption.

Exhibit 16

#### eBay vs. Newspapers Classified Ads



Source: Newspaper Association of America, eBay, Morgan Stanley Research.

## Key Assumptions for Classifieds

Our US Internet Classifieds market forecast is based on an analysis of several verticals, including recruitment, automotive, real estate, for sale, personals, and other. We estimate the recruitment verticals to contribute the majority of market growth over the next few years, as the other verticals remain largely fragmented and non-monetized today, with little to no visibility as to when they might consolidate and see more thoughtful revenue generation.

Similar to most forms of traditional media, classifieds have found their way to the Internet. While printed classified ads are typically just a few lines in length, Internet classified ads do not typically use per-line pricing models, so they tend to be longer. Internet classifieds are also more readily searchable unlike their offline counterpart, and tend to be local in nature and within a daily / weekly / monthly structure.

Because of their self-policing nature and low cost structure, we are in the early stages of monetization and revenue growth for most classifieds verticals, with the exception of recruitment. For example, some companies offer free Internet classified ads such as Craigslist. Some companies focus mainly on urban centers, while others blanket all areas by using zip codes.

Our 13% 2005-2010E CAGR for the US Internet Classifieds market is driven by the assumptions outlined below:

### a. Recruitment

**We estimate recruitment to grow at a five-year CAGR of 11% to \$2.3B in 2010E.** The Internet recruitment market is highly concentrated, with 3 major online players (Monster, CareerBuilder, and HotJobs), while the other online classified verticals are much more fragmented. Going forward, we forecast newspaper companies to benefit from the shift to Internet classified advertising although the industry as a whole should continue to lose share in recruitment to Monster.

### b. Automotive (Lisa Monaco, CFA, Publishing)

**We estimate automotive classifieds to grow at a five-year CAGR of 18% to \$495MM in 2010E.** Internet automotive classifieds should continue to become an integral part of the research process for Internet car buyers. As the Internet automotive classifieds category remains relatively under-penetrated, car dealer budgets should have room to increase from current levels. According to Jupiter, a third of automotive dealers do not use Internet classifieds as part of their Internet advertising, despite the fact that dealers are

most likely to receive car leads from Internet classified sites (28%) among all Internet lead sources (i.e., automotive manufacturer or third-party sites). In addition, we estimate large dealers to increase their budgets relative to smaller dealers.

### c. Real Estate

**We estimate real estate classifieds to grow at a five year CAGR of 14% to \$775B in 2010E.** Consumer behavior for buyers and sellers should continue to drive real estate classifieds growth from current levels. A recent study by the National Association of Realtors (NAR) suggests that 70% of buyers begin searches on the Internet, often by visiting sites like Move's or Realtor.com. Another survey by the NAR showed that 77% of buyers started searching online for homes in 2005E, up from 71% Y/Y.

The newspaper industry is reacting to the competition from third-party classifieds Web sites. Classified Ventures, a joint venture of Belo, Gannett, Tribune, McClatchy, and The Washington Post, acquired a number of real estate Internet sites, including home-appraisal site Homegain, apartment search site Apartments, and Homescape, a portal linking the online real estate sections of different newspaper sites around the country.

### d. For Sale Items

**We estimate for sale classifieds to grow at a five-year CAGR of 17% to \$44MM in 2010E.** We forecast the 'for sale' classifieds category to continue experiencing strong growth rates, albeit, off a small base. When it comes to the Internet, anyone can be a media buyer, owing to 'for sale' classifieds, a form of media especially crafted for the average Joe. Suddenly, a consumer with a limited budget and a need to unload a piece of furniture can have his ad exposed to a large audience on the Internet.

### e. Personals

**We estimate personals to grow at a five-year CAGR of 17% to \$193MM in 2010E.** We forecast the personals category to experience the fastest growth within Internet classifieds, owing to the rapid growth of young Internet users (age 25-44) using the medium to socialize and meet others. The expansion of content available on personals sites has also improved the overall user experience with Flash technology supporting live text and audio / video communications. Communication tools such as chat, instant message, and email have fostered user growth, which in turn, has driven usage higher.

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Properties that have addressed specific affinity / socio-demographic areas (i.e., religion, nationality, language, hobbies) and incorporate community events have been most successful in boosting conversion rates. Lastly, the personals category has transitioned from a free model to a

subscription service, which has translated into lower churn and more recurring revenues.

Exhibit 17

## Morgan Stanley US Internet Classifieds Forecast

(US\$ in MM, except where noted)

	C2001E	C2002E	C2003E	C2004E	C2005E	C2006E	C2007E	C2008E	C2009E	C2010E	CAGR '05-10
Recruitment	815	618	752	1,100	1,378	1,680	1,908	2,075	2,225	2,336	11%
Y/Y Growth	—	(24%)	22%	46%	25%	22%	14%	9%	7%	5%	
% of Total	71%	69%	61%	63%	65%	65%	64%	63%	61%	60%	
Automotive	82	88	148	195	216	265	315	375	435	495	18%
Y/Y Growth	—	7%	68%	32%	11%	23%	19%	19%	16%	14%	
% of Total	7%	10%	12%	11%	10%	10%	11%	11%	12%	13%	
Real Estate	176	145	255	331	400	475	550	625	700	775	14%
Y/Y Growth	—	(18%)	76%	30%	21%	19%	16%	14%	12%	11%	
% of Total	15%	16%	21%	19%	19%	18%	19%	19%	19%	20%	
For Sale	7	9	14	16	20	24	28	33	38	44	17%
Y/Y Growth	—	29%	56%	14%	25%	20%	18%	16%	16%	15%	
% of Total	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	
Personals	45	31	48	66	89	110	134	157	177	193	17%
Y/Y Growth	—	(31%)	55%	38%	35%	27%	22%	17%	13%	9%	
% of Total	4%	3%	4%	4%	4%	4%	5%	5%	5%	5%	
Other	16	10	18	25	29	33	37	41	45	49	11%
Y/Y Growth	—	(39%)	80%	39%	16%	14%	13%	10%	9%	8%	
% of Total	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	
<b>Classified Advertising</b>	<b>\$1,141</b>	<b>\$901</b>	<b>\$1,235</b>	<b>\$1,733</b>	<b>\$2,132</b>	<b>\$2,587</b>	<b>\$2,973</b>	<b>\$3,306</b>	<b>\$3,621</b>	<b>\$3,892</b>	<b>13%</b>
Y/Y Growth	—	(21%)	37%	40%	23%	21%	15%	11%	10%	7%	

e = Morgan Stanley Research estimates

Source: Jupiter Research and Morgan Stanley Internet Research.

## US Internet Email and Other Market

### Summary

#### Email and Other Market may Grow at a Solid Clip Led By Email Marketing and Lead Generation Segments

We forecast the US Internet email and 'other' market to grow 19% over the next five years. At a high level, email offers advertisers the opportunity to acquire and retain customers in a personalized, targeted and low-cost fashion. We believe that concerns over privacy and spam may continue to deter many consumers from 'opting in' over the short-term, and hinder volume growth and ROI for the medium in the process. But we also believe that as some of these concerns ebb; filtering technology improves; advertisers begin to embrace the medium more fully as a marketing tool; and more targeted / informative tactics emerge, email may become more valuable to advertisers and consumers alike. And if this happens, the market for email will be waiting – per eMarketer, the number of US email users is estimated to grow at a 3% five-year CAGR to 181MM in 2010E from 162MM in 2006E.

#### Key Assumptions for Email and Other

Our US Internet email and other market forecasts are driven by our analyses of the email market and, at the margin, by lead generation and slotting (the two main components of 'other'). Within email, we include banner ads, links or advertiser sponsorships that appear in email newsletters or marketing. Lead generation includes fees advertisers pay to Internet companies that refer qualified purchase inquiries. Slotting includes fees charged to advertisers by Internet companies to secure premium positioning of an ad on their site.

Below we outline the assumptions behind our forecasts in more detail.

#### a. Email

**We estimate email-related revenue to grow at a five-year CAGR of 19% to \$601MM in 2010E.** Per Kelsey research, 95% of advertisers use or are planning to use e-mail as a marketing tool in 2006E. We expect ongoing technology improvements in privacy protection and spam prevention, as well as recent legislation such as the CAN-SPAM Act, led by the efforts of companies such as Datran Media, to help improve the integrity of email as a marketing tool. This assumption is the basis of our longer-term growth forecast

and would be further supported by increased advertiser adoption, higher return on investment relative to most traditional direct response media (e.g. direct mail), and proliferation of marketing campaigns aimed at customer acquisition / retention (e.g., newsletters, B2B, B2C, customer service, promotional offers). In such an environment, online retailers might adopt email more fully than they are today to drive customer purchase frequency and loyalty, and strengthen brand awareness / affinity.

#### b. Lead Generation

**We estimate lead generation to grow at a five-year CAGR of 23% to \$2,076MM in 2010E.** Lead generation has been particularly successful with service oriented industries (e.g. insurance agencies, educational institutions, office supply companies, etc.). We forecast lead generation to resume solid growth, as the business model presents a 'win-win' situation for both the buyer and seller – a buyer is able to select a specific service / product from several different sellers and the seller is given the opportunity to pitch to a prospective customer looking for the sellers specific service / product. As a result, conversion rates on leads have a higher success rate than cold contacts because the prospect is pre-qualified. Lead generation should continue to gain traction because it enables a business to determine pricing on a per lead basis, choose the product or service it wishes to offer to prospects, and control the number of leads a business wishes to receive per month (this assists with budgeting).

#### c. Slotting

**We estimate slotting to decline by a 12% five-year CAGR to \$66MM in 2010E.** We forecast slotting to continue to decline from its current base, consistent with historical trends, owing primarily to advertisers moving away from the lower-ROI marketing tactic in favor of contextual advertising. The problem facing most content Web sites today is that most sites want to make money from advertising, but they don't want to serve untargeted ads to their users. Google has solved this problem with AdSense by automatically delivering text and image ads that are targeted to Web sites and their content – ads so well-matched and positioned, in fact, that readers have actually found them useful. For example, Google's AdSense program, targeted at Web publishers, allows Google to deliver targeted ads against content on third-party sites ranging from the NYTimes.com to nameadog.com.

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Contextual search also has post-campaign reporting benefits over slotting. With AdSense, an advertiser can monitor its ad performance with customizable, real-time analytics that offer details such as the number of page impressions, clicks and

click-through rate. An advertiser can track the performance of specific ad formats, colors and pages, and spot trends quickly and easily.

Exhibit 18

## Morgan Stanley US Internet Email and Other Classifieds Forecast

(US\$ in MM, except where noted)

	C2001E	C2002E	C2003E	C2004E	C2005E	C2006E	C2007E	C2008E	C2009E	C2010E	CAGR '05-10
Email	\$214	\$240	\$218	\$96	\$251	\$339	\$417	\$488	\$551	\$601	19%
% Change	--	12%	(9%)	(56%)	161%	35%	23%	17%	13%	9%	
% of Total	23%	31%	43%	20%	22%	23%	22%	22%	22%	22%	
Other	\$713	\$541	\$325	\$385	\$878	\$1,159	\$1,450	\$1,724	\$1,961	\$2,142	20%
% Change	--	(24%)	(40%)	18%	128%	32%	25%	19%	14%	9%	
% of Total	77%	69%	64%	80%	78%	77%	78%	78%	78%	78%	
Lead Generation	\$143	\$60	\$73	\$193	\$751	\$1,051	\$1,356	\$1,641	\$1,887	\$2,076	23%
% Change	--	(58%)	20%	166%	289%	40%	29%	21%	15%	10%	
% of Total	15%	8%	14%	40%	67%	70%	73%	74%	75%	76%	
Slotting	\$570	\$481	\$218	\$192	\$127	\$108	\$94	\$83	\$74	\$66	(12%)
% Change	--	(16%)	(55%)	(12%)	(34%)	(15%)	(13%)	(12%)	(11%)	(10%)	
% of Total	62%	62%	43%	40%	11%	7%	5%	4%	3%	2%	
Email and Other	\$927	\$781	\$509	\$481	\$1,129	\$1,498	\$1,867	\$2,211	\$2,512	\$2,743	19%

### Terminology

**E-mail** – Banner ads, links or advertiser sponsorships that appear in e-mail newsletters, e-mail marketing campaigns and other commercial e-mail communications. Includes all types of electronic mail.

**Lead Generation** – Fees advertisers pay to Internet companies that refer qualified purchase inquiries.

**Slotting** – Fees charged to advertisers by Internet companies to secure premium positioning of an ad on their site.

### Comments

**E-mail and Other** could grow at a 19% 2005-2010 CAGR as the effectiveness of e-mail marketing and lead generation go mainstream and compliance improvements address the CAN-SPAM Act gain traction.

e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research.

## Solving Spam, Click Fraud, Privacy Issues

Three trends that continue to dog the US Internet advertising market are click fraud, index spamming, and privacy. To date, these trends have had an off-setting impact on the growth and value of Internet advertising at the margin; however, if these trends continue unabated, these trends may move from minimal to material over the next couple of years.

**Click fraud** – Click fraud occurs in pay per click Internet advertising, when a person, automated script, or computer program imitates a legitimate user of a Web browser clicking on an ad for the purpose of generating an improper ‘charge per click.’ Recent academic studies have indicated that click fraud could be anywhere from 5%-15% of all clicks. SEMPO research finds that 45% of surveyed marketers are concerned about click fraud but don't track it; another 19% thinks it's a moderate problem and do track it; 5% feel it's a significant problem and track it; 31% either weren't concerned or had never heard of click fraud. While companies such as Google, Yahoo!, and Microsoft have a robust set of tools that monitor repeated manual clicks, they have regularly refunded revenue to advertisers that were victims of click-through fraud.

Today, we believe click fraud is more a public relations than material issue. However, if the leading innovators in the industry (e.g. Google, Yahoo!, Microsoft) don't continue to address the issue with more advanced tools / algorithms / monitoring aimed at capping this trend, click fraud may begin to have a material impact on conversion / click-through rates for advertisers and, in turn, price per click for the search engines (i.e. reduce the value, and growth, of search).

**Index spamming** – There is an ongoing and increasing effort by ‘index spammers’ to develop ways to manipulate

Internet search results. For instance, because Google's Internet search technology ranks a Web page's relevance based in part on the importance and the number of the Web sites that link to it, people have attempted to link a group of Web sites together to manipulate Web search results. This phenomenon, while seemingly harmless, could make searchers less confident in the relevance of search results. Here's how: vendors and Web-site owners could potentially artificially inflate their rankings on frequently searched commercial terms (such as digital cameras), at the expense of sites that may be more relevant, by creating separate pages that link to their sites. The net result is that search credibility and relevance could be undermined by such efforts.

**Privacy** – Privacy advocates fear that the potential storage of email profiles, the linking of persistent state cookies to search habits, and the potential for law enforcement subpoena of private communications may violate informational privacy laws or at the very least set a dangerous precedent for other email scanning applications. To illustrate, Google's Gmail email service has raised privacy concerns among several privacy groups, including the Electronic Privacy Information Center, the Electronic Frontier Foundation and Privacy International. Gmail, uses computers to match advertisements to the content of a user's email message when email messages are viewed using the Gmail service. While Google has tried to reiterate that it is not linking sensitive information and has compared the scanning engine to spam blockers currently in use by other Web mail programs, the company still faces potential litigation. California and Massachusetts have filed legislation seeking to prohibit the aspects of the service that serve advertisements based on keywords in email.

## The Metrics – Understanding Advertiser Objectives

As rich media / streaming media have begun to migrate online and the technologies continue improve, we have been hearing from service providers (i.e. Microsoft, Yahoo! and Google) and advertisers that the metrics used for the traditional measurement of success and advertising on the Internet (i.e. the metrics behind CPM, PPC, etc.) have become less applicable. Although we expect the need for standardized metrics in the new and emerging world to work itself out over time, one trend we would prepare you for in the near future is the possible increase in minutes spent online and a resulting reduction in page views and page views per Internet user over the next 6-12 months. We believe this trend will emerge as users continue to spend more time watching streaming media online and more minutes on individual pages, hence possibly reducing page views.

This trend is a good example of the dilemmas facing the service providers and advertisers today as they try to price and monitor advertising in a world where media continues to migrate online and re-define itself. But we believe this is both a short-term and high-class problem to have because where eyes go, ads follow.

### Assigning Value to the Medium

Why do advertisers find Internet advertising compelling? We believe the following attributes help explain the migration of traditional advertising to the Internet medium:

- Ability to target – deliver the right offer to the right customer at the right time
- Measurable
- Flexible
- High ROI

### Understanding Advertiser Objectives

In addition, Internet advertising meets all the key components of the buying funnel:

- Awareness
- Consideration or research
- Decision
- Purchase

We define below a set of metrics / concepts advertisers use when it comes to discussing advertising format, performance, and metrics.

**Behavioral targeting** – A technology for presenting ads based on past behavior of a user. For example, if a user visited the real estate section of a site one day and returned later to read news coverage, the site might deliver real estate ads on news pages.

**Click-through rate (CTR)** – A click-through rate is calculated as the percentage of people who click on an ad relative to total impressions. In the early days of Internet advertising, click-through rates were seen as a primary measure of banner-ad effectiveness, even though they were purchased on a CPM basis. As click-through rates declined, more focus has been placed on measuring lift in brand awareness. Clicks are most meaningful to pay-per-click advertising and direct-response campaigns.

**Contextual targeting** – Generally refers to a method of ad placement based on the content of a page, usually analyzed by software. For example, a reader of an article about the last episode of 'Friends' might see ads to buy DVDs of early seasons or to purchase show merchandise. Contextual targeting also refers to the placement of ads on search result pages based on the keywords in the search.

**Cost per action (CPA)** – Cost per action is considered the optimal form of buying Internet advertising from the advertiser's point of view. An advertiser only pays for the ad when an action has occurred. The actions defined in a cost-per-action agreement relate directly to some type of conversion, with sales and registrations among the most common. This does not include deals based solely on clicks, which are referred to specifically as cost-per-click or CPC. The cost-per-action (CPA) model is at the other end of the spectrum from the cost-per-impressions model (CPM), with the cost-per-click (CPC) model somewhere in the middle. In a CPA model, the publisher is taking most of the advertising risk, as its commission is dependant on solid conversion rates from the advertiser's creative units and Web site.

**Cost per click** – Cost per click systems, like pay for performance, charge an advertiser only when an ad is clicked, sending the user to the advertiser's Web site.

**Cost per thousand (CPM)** – Cost per thousand impressions is the way most display or banner advertising is sold online.

An advertiser is charged for every impression regardless of whether the user saw the ad or reacted to it. (The “M” in CPM refers to the Roman numeral for “thousand.”).

**Demographic targeting** – The presentation of ads to each user based on demographic data, typically collected through registration. With demographic targeting, an advertiser could buy impressions served only to males aged 16 to 24, if the site had collected age and gender during registration.

**Impression** – An impression is measured when a page containing an ad is downloaded to a user’s computer whether the user sees the ad or not.

**Natural search results** – The list of Web sites found and ranked by the search algorithms of a search engine. While sites can often influence their ranking in natural search results through search engine optimization, these results are supposed to be based solely on the software used to determine relevance and not on payments.

**Paid inclusion** – Some search engines accept payments from sites to ensure that their sites are indexed and ranked higher in search results listings.



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# The Scenarios

Exhibit 19

## Morgan Stanley US Internet Advertising Forecast – Base Case

(US\$ in MM, except where noted)

	C2001E	C2002E	C2003E	C2004E	C2005E	C2006E	C2007E	C2008E	C2009E	C2010E	CAGR '05-10
Search Advertising	\$285	\$901	\$2,543	\$3,850	\$5,142	\$6,681	\$8,622	\$10,898	\$13,396	\$15,786	25%
% Change	--	216%	182%	51%	34%	30%	29%	26%	23%	18%	
% of Total Internet Advertising	4%	15%	35%	40%	41%	42%	44%	46%	48%	50%	
Display and Sponsorship	\$4,423	\$2,824	\$2,253	\$2,599	\$3,136	\$4,108	\$4,765	\$5,337	\$5,818	\$6,225	15%
% Change	--	(36%)	(20%)	15%	21%	31%	16%	12%	9%	7%	
% of Total Internet Advertising	62%	47%	31%	27%	25%	26%	24%	22%	21%	20%	
Rich Media	\$357	\$601	\$727	\$963	\$1,003	\$1,123	\$1,472	\$2,001	\$2,582	\$3,150	26%
% Change	--	68%	21%	32%	4%	12%	31%	36%	29%	22%	
% of Total Internet Advertising	5%	10%	10%	10%	8%	7%	7%	8%	9%	10%	
Classified Advertising	\$1,141	\$901	\$1,235	\$1,733	\$2,132	\$2,587	\$2,973	\$3,306	\$3,621	\$3,892	13%
% Change	--	(21%)	37%	40%	23%	21%	15%	11%	10%	7%	
% of Total Internet Advertising	16%	15%	17%	18%	17%	16%	15%	14%	13%	12%	
E-mail and Other	\$927	\$781	\$509	\$481	\$1,129	\$1,498	\$1,867	\$2,211	\$2,512	\$2,743	19%
% Change	--	(16%)	(35%)	(5%)	135%	33%	25%	18%	14%	9%	
% of Total Internet Advertising	13%	13%	7%	5%	9%	9%	9%	9%	9%	9%	
<b>Total Internet Spending</b>	<b>\$7,134</b>	<b>\$6,009</b>	<b>\$7,267</b>	<b>\$9,626</b>	<b>\$12,542</b>	<b>\$15,998</b>	<b>\$19,699</b>	<b>\$23,754</b>	<b>\$27,928</b>	<b>\$31,796</b>	<b>20%</b>
% Change	--	(16%)	21%	32%	30%	28%	23%	21%	18%	14%	
Internet Users	141	157	171	183	195	205	212	219	225	229	3%
% Change	--	11%	9%	7%	7%	5%	4%	3%	3%	2%	
Total Internet Spending per User	\$50	\$38	\$43	\$53	\$64	\$78	\$93	\$109	\$124	\$139	17%
% Change	--	(24%)	11%	23%	22%	22%	19%	17%	15%	12%	
Internet Households	51	55	62	68	71	73	77	81	84	88	4%
% Change	--	9%	12%	10%	4%	3%	5%	5%	4%	4%	
Total Internet Spending per Internet Household	\$140	\$108	\$117	\$141	\$177	\$218	\$255	\$293	\$331	\$362	15%
% Change	--	(23%)	8%	20%	26%	23%	17%	15%	13%	9%	

### Terminology

**Search** – Fees advertisers pay Internet companies to list and/or link their company site / domain name to a specific search word or phrase (includes paid search revenues).

**Display and Sponsorship** – For display, advertiser pays an Internet company for space to display a static or hyper-linked banner or logo on one or more of the Internet company's pages.

For sponsorship, advertiser sponsors targeted Web site or email areas (e.g., entire web site, site area, an event, parts or all of an email message).

**Rich Media** – Advertisements that integrate some component of streaming video and/or audio and interactivity, in addition to flash or java script ads, and can allow users to view and interact with products or services.

**Classifieds** – Fees advertisers pay Internet companies to list specific products or services (e.g., Internet job boards and employment listings, real estate listings, automotive listings, yellow pages).

**E-mail and Other** – Banner ads, links or advertiser sponsorships that appear in e-mail newsletters, e-mail marketing campaigns and other commercial e-mail communications. Includes all types of electronic mail.

### Comments

**Search** could represent 50% of total Internet ad revenue in 2010E from 41% in 2005E and grow at a 25% CAGR. Key drivers include: online video/audio, local, mobile driving strong growth in queries, coverage and tagging;

**modest growth in price per click.**

**Display and Sponsorship** could grow at a 15% 2005-2010 CAGR as marketers experience the overall effectiveness of the Internet in building brands and delivering online and offline sales.

**Rich Media** could experience fast growth (26% 2005-2010 CAGR) as share of time spent watching multiple formats of rich media (audio, video, animated) continues to shift towards the online medium.

**Classifieds** could grow at a 13% 2005-2010 CAGR as classifieds (primarily driven by help-wanted and category visitation in automotive, real estate, personals, for sale) dominate local, online advertising spending.

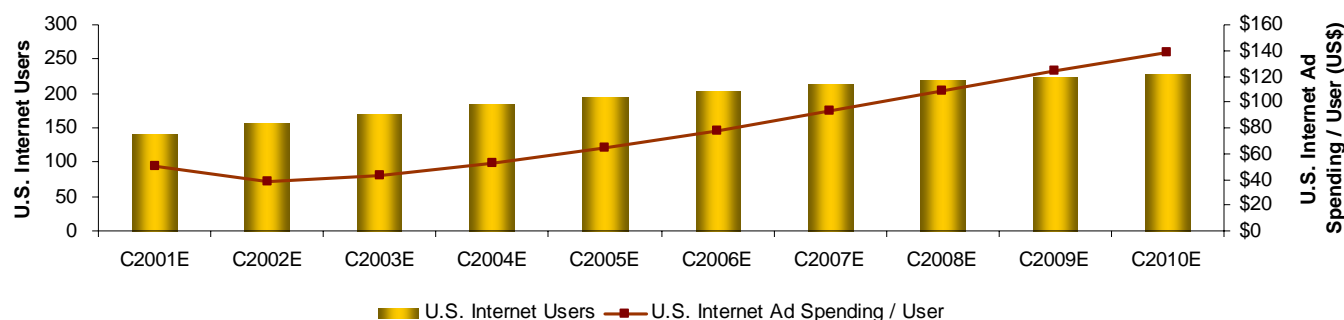
**E-mail and Other** could grow at a 19% 2005-2010 CAGR as the branding effectiveness of e-mail marketing goes mainstream and technology / compliance improvements to address the CAN-SPAM Act gain traction.

e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research.

Exhibit 20

## Morgan Stanley US Internet Users vs. Internet Advertising / User – Base Case



e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research.

## I. Base-Case Scenario – US Internet Advertising industry grows at a 20% CAGR

### Search

- Achieves a 25% five-year CAGR
- Gradual deceleration in growth from 34% in 2005E to 18% in 2010
  - Strong traction in Internet media revenue (Search, Sponsorship, Rich Media and, to a lesser extent, Display)
  - Yahoo!'s successful launch of 'Project Panama' (i.e. on time and with traction)
  - Meaningful, though still marginal, traction in Microsoft's adCenter
  - Additional product advancements by Google (e.g. relevancy / efficacy / ease-of-use for consumers and advertisers)
  - Further traction and improvements in local search
  - Initial signs of traction in the mobile Internet
  - Increased sophistication / specificity among advertisers and consumers in search

### Rich Media / Display and Sponsorship

- Achieve 26% / 15% five-year CAGRs
  - Media migration online accelerates (i.e. inventory meets demand)

- Pricing pressure possible near-term due to excess inventory
- User-generated content continues to develop
- Streaming takes over static display ads
- Technology advances for interactive ads / product placement / bundling / mobility
- Metrics are developed / improved for standardized measurement and pricing

### Classifieds

- Achieves a 13% five-year CAGR
  - Migration from traditional to Internet continues
  - No noticeable / incremental monetization beyond recruitment is achieved
  - Recruitment continues to decelerate into the single-digits of growth (11% five-year CAGR)

### Email and Other

- Achieves a 19% five-year CAGR
  - Email experiences strong growth owing to high ROI and efforts to address spam

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Exhibit 21

## Morgan Stanley US Internet Advertising Forecast – Downside Case

(US\$ in MM, except where noted)

	C2001E	C2002E	C2003E	C2004E	C2005E	C2006E	C2007E	C2008E	C2009E	C2010E	CAGR '05-10
Search Advertising	\$285	\$901	\$2,543	\$3,850	\$5,142	\$6,409	\$7,595	\$8,873	\$10,178	\$11,577	18%
% Change	--	216%	182%	51%	34%	25%	19%	17%	15%	14%	
% of Total Internet Advertising	4%	15%	35%	40%	41%	41%	42%	43%	44%	46%	
Display and Sponsorship	\$4,423	\$2,824	\$2,253	\$2,599	\$3,136	\$4,077	\$4,688	\$5,157	\$5,570	\$5,848	13%
% Change	--	(36%)	(20%)	15%	21%	30%	15%	10%	8%	5%	
% of Total Internet Advertising	62%	47%	31%	27%	25%	26%	26%	25%	24%	23%	
Rich Media	\$357	\$601	\$727	\$963	\$1,003	\$1,184	\$1,373	\$1,566	\$1,754	\$1,929	14%
% Change	--	68%	21%	32%	4%	18%	16%	14%	12%	10%	
% of Total Internet Advertising	5%	10%	10%	10%	8%	8%	8%	8%	8%	8%	
Classified Advertising	\$1,141	\$901	\$1,235	\$1,733	\$2,132	\$2,459	\$2,755	\$3,008	\$3,217	\$3,377	10%
% Change	--	(21%)	37%	40%	23%	15%	12%	9%	7%	5%	
% of Total Internet Advertising	16%	15%	17%	18%	17%	16%	15%	15%	14%	13%	
E-mail and Other	\$927	\$781	\$509	\$481	\$1,129	\$1,408	\$1,716	\$2,033	\$2,323	\$2,551	18%
% Change	--	(16%)	(35%)	(5%)	135%	25%	22%	18%	14%	10%	
% of Total Internet Advertising	13%	13%	7%	5%	9%	9%	9%	10%	10%	10%	
<b>Total Internet Spending</b>	<b>\$7,134</b>	<b>\$6,009</b>	<b>\$7,267</b>	<b>\$9,626</b>	<b>\$12,542</b>	<b>\$15,536</b>	<b>\$18,128</b>	<b>\$20,638</b>	<b>\$23,041</b>	<b>\$25,281</b>	<b>15%</b>
% Change	--	(16%)	21%	32%	30%	24%	17%	14%	12%	10%	
Internet Users	141	157	171	183	195	205	212	219	225	229	3%
% Change	--	11%	9%	7%	7%	5%	4%	3%	3%	2%	
Total Internet Spending per User	\$50	\$38	\$43	\$53	\$64	\$76	\$85	\$94	\$103	\$110	11%
% Change	--	(24%)	11%	23%	22%	18%	12%	10%	9%	7%	
Internet Households	51	55	62	68	71	73	77	81	84	88	4%
% Change	--	9%	12%	10%	4%	3%	5%	5%	4%	4%	
Total Internet Spending per Internet Household	\$140	\$108	\$117	\$141	\$177	\$212	\$235	\$255	\$273	\$287	10%
% Change	--	(23%)	8%	20%	26%	20%	11%	9%	7%	5%	

### Terminology

**Search** – Fees advertisers pay Internet companies to list and/or link their company site / domain name to a specific search word or phrase (includes paid search revenues).

**Display and Sponsorship** – For display, advertiser pays an Internet company for space to display a static or hyper-linked banner or logo on one or more of the Internet company's pages.

For sponsorship, advertiser sponsors targeted Web site or email areas (e.g., entire web site, site area, an event, parts or all of an email message).

**Rich Media** – Advertisements that integrate some component of streaming video and/or audio and interactivity, in addition to flash or java script ads, and can allow users to view and interact with products or services.

**Classifieds** – Fees advertisers pay Internet companies to list specific products or services (e.g., Internet job boards and employment listings, real estate listings, automotive listings, yellow pages).

**E-mail and Other** – Banner ads, links or advertiser sponsorships that appear in e-mail newsletters, e-mail marketing campaigns and other commercial e-mail communications. Includes all types of electronic mail.

### Comments

**Search** would represent 45% of total Internet spending in 2010 from 41% in 2005 and grow at a 18% CAGR.

**Display and Sponsorship** could grow at a 13% 2005-2010 CAGR.

**Rich Media** would experience a 14% 2005-2010 CAGR.

**Classifieds** would grow at a 10% 2005-2010 CAGR.

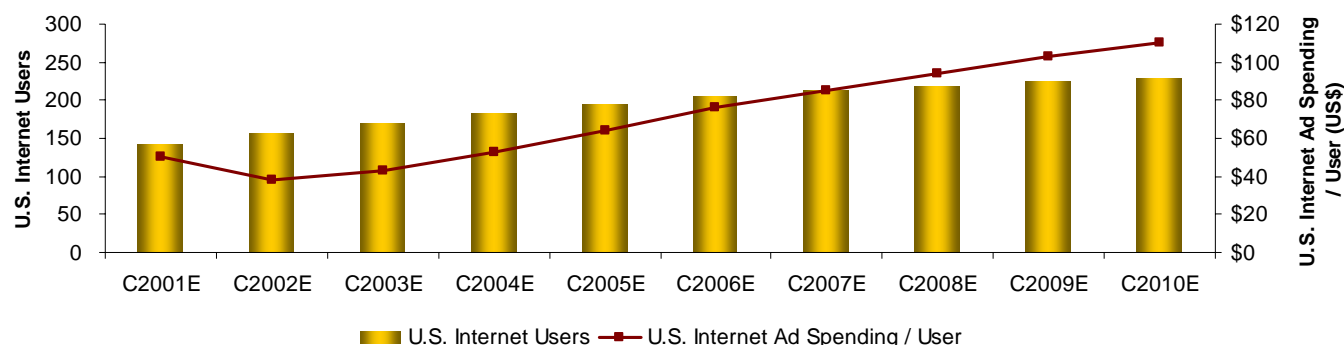
**E-mail and Other** would grow at a 18% 2005-2010 CAGR.

e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research.

Exhibit 22

## Morgan Stanley US Internet Users vs. Internet Advertising / User – Downside Case



e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research.

## II. Downside Case Scenario – US Internet Advertising industry grows at a 15% CAGR

### Search

- Achieves a 18% five-year CAGR
- Growth decelerates from 34% growth in 2005 to 14% in 2010
  - Media migration / monetization opportunity unfolds more slowly than anticipated
  - Yahoo!'s launch of 'Project Panama' slips / sees limited traction
  - Some traction in Microsoft's adCenter
  - Google continues to innovate (e.g. relevancy / efficacy / ease-of-use for consumers and advertisers), but not enough to drive meaningful improvements in click-through rates / off-set marginal impact of click fraud
  - Local search gains tractions, but is not monetized aggressively from 2007E through 2010E
  - The mobile Internet takes longer to develop than estimated

### Rich Media / Display and Sponsorship

- Achieve 14% / 13% five-year CAGRs
  - Media migration is gradual to slow (i.e. inventory meets demand)

- Extended pricing pressure possible near-term due to excess inventory
- User-generated content continues to develop
- Streaming takes over static display ads
- Technology advances for interactive ads / product placement / bundling / mobility
- Metrics are developed / improved for standardized measurement and pricing

### Classifieds

- Achieves a 10% five-year CAGR
  - Economic conditions (in employment, Real Estate, consumer spending, etc.) off-set migration of traditional classifieds to Internet
  - No noticeable / incremental monetization beyond recruitment is achieved
  - Recruitment continues to decelerate into the single-digits of growth (10% five-year CAGR)

### Email and Other

- Achieves a 18% five-year CAGR
  - Email experiences strong growth owing to high ROI and efforts to address spam

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Exhibit 23

## Morgan Stanley US Internet Advertising Forecast – Upside Case

(US\$ in MM, except where noted)

	C2001E	C2002E	C2003E	C2004E	C2005E	C2006E	C2007E	C2008E	C2009E	C2010E	CAGR '05-10
Search Advertising	\$285	\$901	\$2,543	\$3,850	\$5,142	\$6,666	\$9,265	\$12,392	\$15,538	\$18,779	30%
% Change	--	216%	182%	51%	34%	30%	39%	34%	25%	21%	
% of Total Internet Advertising	4%	15%	35%	40%	41%	41%	44%	46%	47%	49%	
Display and Sponsorship	\$4,423	\$2,824	\$2,253	\$2,599	\$3,136	\$4,108	\$4,930	\$5,817	\$6,748	\$7,693	20%
% Change	--	(36%)	(20%)	15%	21%	31%	20%	18%	16%	14%	
% of Total Internet Advertising	62%	47%	31%	27%	25%	25%	23%	22%	21%	20%	
Rich Media	\$357	\$601	\$727	\$963	\$1,003	\$1,204	\$1,806	\$2,456	\$3,070	\$3,592	29%
% Change	--	68%	21%	32%	4%	20%	50%	36%	25%	17%	
% of Total Internet Advertising	5%	10%	10%	10%	8%	7%	9%	9%	9%	9%	
Classified Advertising	\$1,141	\$901	\$1,235	\$1,733	\$2,132	\$2,649	\$3,176	\$3,740	\$4,344	\$4,986	19%
% Change	--	(21%)	37%	40%	23%	24%	20%	18%	16%	15%	
% of Total Internet Advertising	16%	15%	17%	18%	17%	16%	15%	14%	13%	13%	
E-mail and Other	\$927	\$781	\$509	\$481	\$1,129	\$1,571	\$2,055	\$2,590	\$3,039	\$3,408	25%
% Change	--	(16%)	(35%)	(5%)	135%	39%	31%	26%	17%	12%	
% of Total Internet Advertising	13%	13%	7%	5%	9%	10%	10%	10%	9%	9%	
<b>Total Internet Spending</b>	<b>\$7,134</b>	<b>\$6,009</b>	<b>\$7,267</b>	<b>\$9,626</b>	<b>\$12,542</b>	<b>\$16,198</b>	<b>\$21,232</b>	<b>\$26,996</b>	<b>\$32,739</b>	<b>\$38,457</b>	<b>25%</b>
% Change	--	(16%)	21%	32%	30%	29%	31%	27%	21%	17%	
Internet Users	141	157	171	183	195	205	212	219	225	229	3%
% Change	--	11%	9%	7%	7%	5%	4%	3%	3%	2%	
Total Internet Spending per User	\$50	\$38	\$43	\$53	\$64	\$79	\$100	\$123	\$146	\$168	21%
% Change	--	(24%)	11%	23%	22%	23%	26%	23%	18%	15%	
Internet Households	51	55	62	68	71	73	77	81	84	88	4%
% Change	--	9%	12%	10%	4%	3%	5%	5%	4%	4%	
Total Internet Spending per Internet Household	\$140	\$108	\$117	\$141	\$177	\$221	\$275	\$333	\$388	\$437	20%
% Change	--	(23%)	8%	20%	26%	25%	24%	21%	17%	13%	

### Terminology

**Search** – Fees advertisers pay Internet companies to list and/or link their company site / domain name to a specific search word or phrase (includes paid search revenues).

**Display and Sponsorship** – For display, advertiser pays an Internet company for space to display a static or hyper-linked banner or logo on one or more of the Internet company's pages.

For sponsorship, advertiser sponsors targeted Web site or email areas (e.g., entire web site, site area, an event, parts or all of an email message).

**Rich Media** – Advertisements that integrate some component of streaming video and/or audio and interactivity, in addition to flash or java script ads, and can allow users to view and interact with products or services.

**Classifieds** – Fees advertisers pay Internet companies to list specific products or services (e.g., Internet job boards and employment listings, real estate listings, automotive listings, yellow pages).

**E-mail and Other** – Banner ads, links or advertiser sponsorships that appear in e-mail newsletters, e-mail marketing campaigns and other commercial e-mail communications. Includes all types of electronic mail.

### Comments

**Search** would represent 49% of total Internet spending in 2010 from 41% in 2005 and grow at a 30% CAGR.

**Display and Sponsorship** would grow at a 20% 2005-2010 CAGR.

**Rich Media** would grow at a 29% 2005-2010 CAGR.

**Classifieds** could grow at a 19% 2005-2010 CAGR.

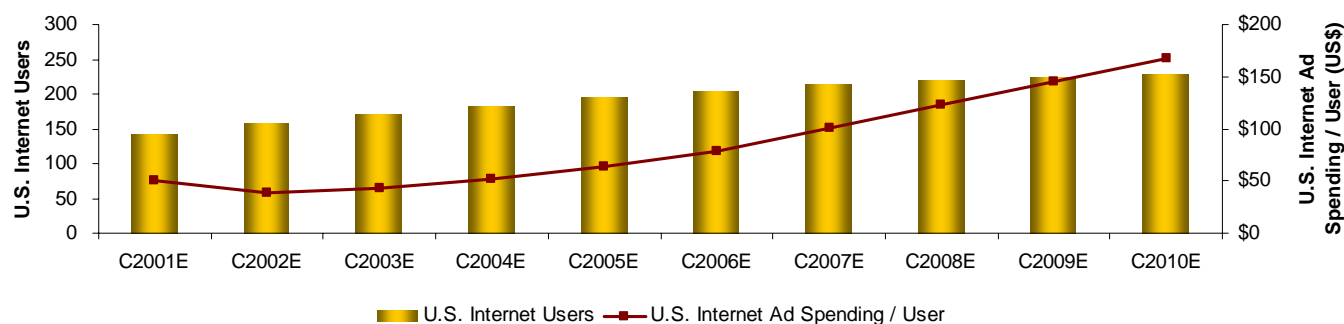
**E-mail and Other** could grow at a 25% 2005-2010 CAGR.

e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research.

Exhibit 24

## Morgan Stanley US Internet Users vs. Internet Advertising / User – Upside Case



e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research.

### III. Upside Case Scenario – US Internet Advertising industry grows at a 25% CAGR

#### Search

- Achieves a 30% five-year CAGR
- Growth accelerates in 2007 to 39%, vs. 30% in 2006
  - Media migration / monetization / video search accelerates rapidly
  - Yahoo!'s launch of 'Project Panama' is more powerful than estimated and more noticeably improves query volume, click-through rates and coverage
  - Microsoft's adCenter sees meaningful traction, also positively influencing volume, click-through rates and coverage
  - Google continues to innovate (e.g. relevancy / efficacy / ease-of-use for consumers and advertisers)
  - Local search takes off more meaningfully and is monetized successfully beginning in 2007E
  - The mobile Internet begins to take shape in 2007E

#### Rich Media / Display and Sponsorship

- Achieve 29% / 20% five-year CAGRs
  - Media migration online accelerates and begins to meaningfully impact Internet usage / take share from TV viewing

- Advertisers embrace user-generated content and begin to leverage it for viral marketing / brand development
- Streaming media reinvigorates display advertising as a critical component of branded advertising
- Technology advances for interactive ads / product placement / bundling / mobility
- Metrics are developed / improved for standardized measurement and pricing

#### Classifieds

- Achieves a 19% five-year CAGR
  - Economic conditions do not impact migration from traditional classifieds to Internet
  - Recruitment growth improves, although still decelerates to 2010E (15% five-year CAGR)

#### Email and Other

- Achieves a 25% five-year CAGR
  - Email experiences strong growth owing to high ROI and efforts to address spam

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# Appendix

Exhibit 25

## Historical Annual US Internet Advertising Spending

(US\$ in MM, except where noted)

	C2000E	C2001E	C2002E	C2003E	C2004E	C2005E	CH2006E
Search Advertising	\$81	\$285	\$901	\$2,543	\$3,850	\$5,142	\$3,164
Y/Y Growth	--	253%	216%	182%	51%	34%	37%
Q/Q Growth	--	--	--	--	--	--	--
% of Total Internet Advertising	1	4	15	35	40	41	40
Display and Sponsorship	\$6,146	\$4,423	\$2,824	\$2,253	\$2,599	\$3,136	\$1,977
Y/Y Growth	--	(28%)	(36%)	(20%)	15%	21%	34%
Q/Q Growth	--	--	--	--	--	--	--
% of Total Internet Advertising	76	62	47	31	27	25	25
Rich Media	\$485	\$357	\$601	\$727	\$963	\$1,003	\$475
Y/Y Growth	--	(26%)	68%	21%	32%	4%	3%
Q/Q Growth	--	--	--	--	--	--	--
% of Total Internet Advertising	6	5	10	10	10	8	6
Classified Advertising	\$566	\$1,141	\$901	\$1,235	\$1,733	\$2,132	\$1,582
Y/Y Growth	--	102%	(21%)	37%	40%	23%	56%
Q/Q Growth	--	--	--	--	--	--	--
% of Total Internet Advertising	7	16	15	17	18	17	20
Email and Other	\$809	\$927	\$781	\$509	\$481	\$1,129	\$712
Y/Y Growth	--	15%	(16%)	(35%)	(5%)	135%	37%
Q/Q Growth	--	--	--	--	--	--	--
% of Total Internet Advertising	10	13	13	7	5	9	9
<b>Total Internet Spending</b>	<b>\$8,087</b>	<b>\$7,134</b>	<b>\$6,009</b>	<b>\$7,267</b>	<b>\$9,626</b>	<b>\$12,542</b>	<b>\$7,909</b>
Y/Y Growth	--	(12%)	(16%)	21%	32%	30%	37%
Q/Q Growth	--	--	--	--	--	--	--

### Terminology

**Search** – Fees advertisers pay online companies to list and/or link their company site / domain name to a specific search word or phrase (includes paid search revenues).

**Display** – Advertiser pays an on-line company for space to display a static or hyper-linked banner or logo on one or more of the on-line company's pages.

**Sponsorship** – Advertiser sponsors targeted Web site or email areas (e.g., entire web site, site area, an event, parts or all of an email message).

**Rich Media** – Advertisements that integrate some component of streaming video and/or audio and interactivity, in addition to flash or java script ads, and can allow users to view and interact with products or services.

**Classifieds** – Fees advertisers pay online companies to list specific products or services (e.g., online job boards and employment listings, real estate listings, automotive listings, yellow pages).

**E-mail** – Banner ads, links or advertiser sponsorships that appear in e-mail newsletters, e-mail marketing campaigns and other commercial e-mail communications. Includes all types of electronic mail.

**Lead Generation/Referrals** – Fees advertiser pays to online companies that refer qualified purchase inquiries or provide consumer information where the consumer opts into being contacted by the marketer.

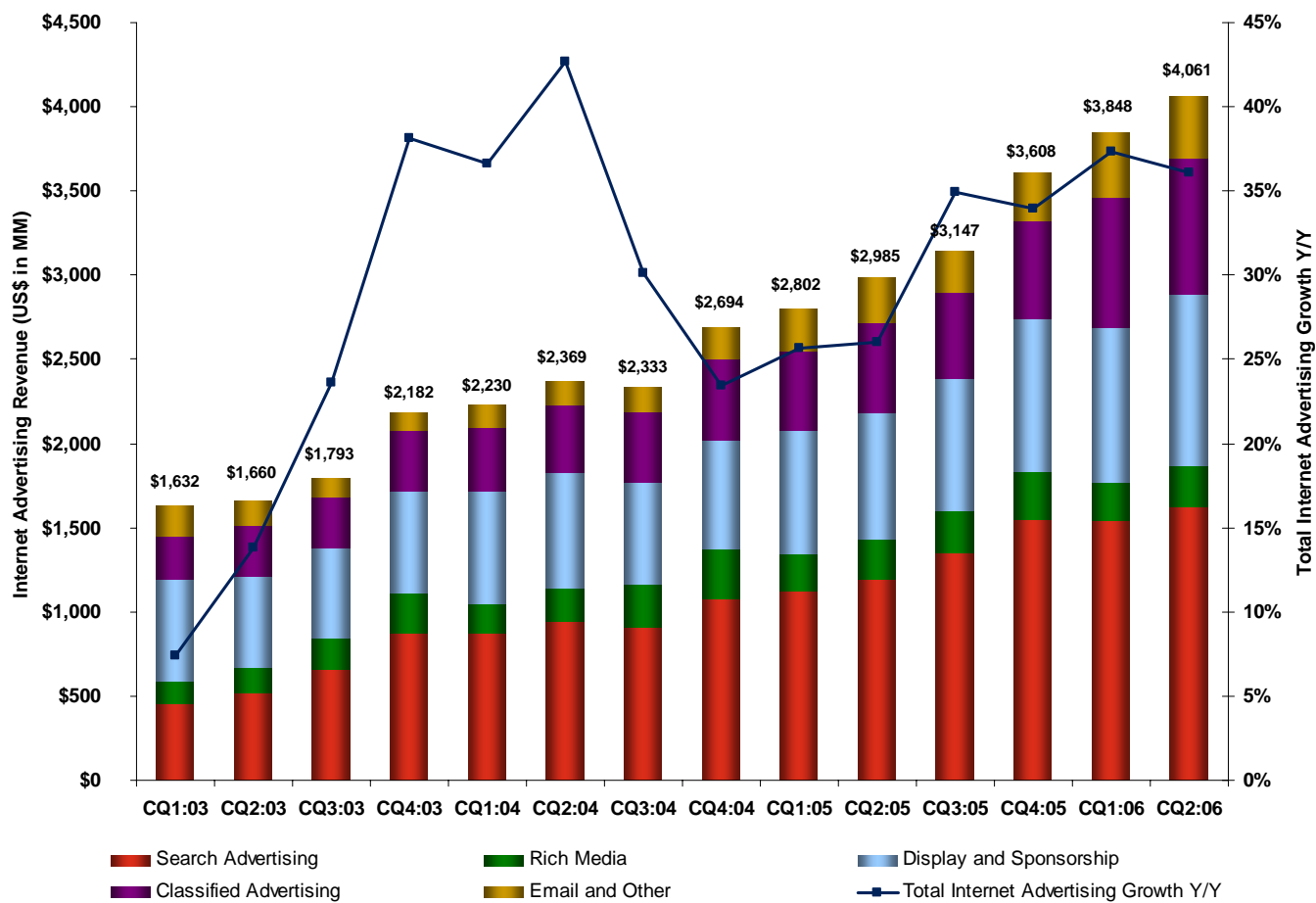
**Slotting Fees** – Fees charged to advertiser by on-line company to secure premium positioning of an advertisement on their site, category exclusivity or similar preference positioning.

e = Morgan Stanley Research estimates

Source: Internet Advertising Bureau and Morgan Stanley Internet Research

Exhibit 26

## Historical Quarterly US Internet Advertising Spending



Source: Internet Advertising Bureau and Morgan Stanley Internet Research



## Internet Ecosystem

### **Morgan Stanley Internet Ecosystem Framework reflects 27 Internet data points from 39 companies / agencies**

It has been frustrating that there is no single, truly dependable global source for Internet usage/user data. In an effort to examine the health, growth, and direction of the Internet, we created the first version of the Internet Ecosystem Framework in January 2001. We believe we have created the best data set for determining Internet usage / user trends, focusing on trends for Internet users, Internet usage, Internet advertising, eCommerce, digital media and WiFi / Wireless data.

### **Internet user / usage trends remain strong**

We remain upbeat about the outlook: we continue to estimate annual global growth of 10-15% for Internet users, 20-30% for usage and 30%+ for monetization.

- In CQ2, there were an estimated 1,089MM global Internet users (up 15% Y/Y) and 229MM global broadband subscribers (up 28% Y/Y).

- Global search query volume (per comScore) was up 39% Y/Y vs. 31% in CQ1.
- Yahoo!'s average daily page views were 3,941MM, up 33% Y/Y, while global unique visitors were 478MM, up 11% Y/Y vs. 24% / 10% Y/Y in CQ1, respectively.
- eBay's units traded were 251MM, up 16% Y/Y vs. 14% Y/Y in CQ1.
- eBay's GMV were tracking at \$12.9B, up 18% Y/Y.
- VeriSign's global registry was 57MM, up 29% Y/Y.
- Amazon's units shipped were up 25% Y/Y.
- PayPal payments rose 27% Y/Y.
- Apple iTunes' songs downloaded increased 203% Y/Y, while iPod units sold were up 182% Y/Y.
- Skype register users increased 163% Y/Y.

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Exhibit 27

## Internet Ecosystem Framework – Overall Internet Market Data

	Est. Metric Share	C2004E				C2005E				C2006E		
		Q1:04	Q2:04	Q3:04	Q4:04	Q1:05	Q2:05	Q3:05	Q4:05	Q1:06	Q2:06	Comments
Overall Internet Market Data												
Global Internet Users (MM)												
Y/Y Growth	100%	--	--	--	18%	17%	16%	15%	14%	14%	15%	While user growth rates are slowing, absolute rates remain healthy. Page view growth (usage) is key to monitor.
Q/Q Growth		4	4	4	3	4	4	3	3	4	4	
North America	23%	195	198	201	204	205	206	208	209	214	220	Market at 66% penetration in CQ2:06...
Y/Y Growth		--	--	--	7%	5%	4%	3%	2%	4%	6%	
Q/Q Growth		2	2	2	1	1	1	1	1	3	3	
Europe	27	206	217	228	236	245	254	263	271	275	282	Market at 48% penetration in CQ2:06...
Y/Y Growth		--	--	--	20%	19%	17%	15%	15%	13%	11%	
Q/Q Growth		5	5	5	4	4	4	4	3	2	2	
China	11	83	87	90	94	98	103	107	111	118	126	Accelerating growth of Internet users in China.
Y/Y Growth		--	--	--	18%	18%	18%	19%	18%	20%	25%	
Q/Q Growth		4	5	3	4	4	5	4	4	6	7	
Japan	8	66	68	71	73	75	77	80	82	83	83	Growth slowing down as market is getting close to saturation point (65% penetration in CQ2:06).
Y/Y Growth		--	--	--	14%	13%	13%	13%	12%	10%	8%	
Q/Q Growth		3	3	3	3	3	3	3	3	1	1	
Asia-Pacific (excl. China, Japan)	16	119	127	136	141	153	166	180	189	205	222	
Y/Y Growth		--	--	--	26%	29%	31%	32%	34%	34%	34%	
Q/Q Growth		7	7	7	4	9	8	8	5	9	8	
Asia-Pacific (incl. China, Japan)	35	268	282	297	308	326	346	367	382	408	434	Market at 13% penetration in CQ2:06... Asia-Pacific likely to remain fastest growing large market.
Y/Y Growth		--	--	--	21%	22%	23%	24%	24%	25%	25%	
Q/Q Growth		5	5	5	4	6	6	6	4	7	6	
Latin America	5	41	43	45	47	47	48	49	50	50	51	Market at 11% penetration in CQ2:06...
Y/Y Growth		--	--	--	19%	15%	12%	8%	6%	6%	6%	
Q/Q Growth		5	5	5	4	2	2	2	1	1	1	
Rest of World	10	72	77	83	87	94	95	96	97	100	103	Market at 6% penetration in CQ2:06...
Y/Y Growth		--	--	--	29%	30%	23%	16%	12%	7%	8%	
Q/Q Growth		7	7	7	5	8	2	1	1	3	3	
Global Broadband Subscribers												
Primarily Residential (000's) (a)	100%	112,051	123,286	133,992	147,699	165,803	178,471	192,796	208,979	219,779	229,327	229MM global broadband subscribers (up 28% Y/Y) in CQ2:06. Sub/user multiplier could be 2.2X+. Broadband users more active than narrowband users.
Y/Y Growth		61%	57%	52%	53%	48%	45%	44%	41%	33%	28%	
Q/Q Growth		16	10	9	10	12	8	8	8	5	4	
North America	26%	31,540	33,505	36,153	38,740	41,699	43,788	46,797	49,848	50,905	54,029	
Y/Y Growth		40%	38%	36%	34%	32%	31%	29%	29%	22%	23%	
Q/Q Growth		9	6	8	7	8	5	7	7	2	6	
Europe	29	28,572	32,376	36,237	42,225	47,738	51,624	55,436	60,301	62,992	66,553	
Y/Y Growth		75%	75%	73%	71%	67%	59%	53%	43%	32%	29%	
Q/Q Growth		16	13	12	17	13	8	7	9	4	6	
Japan	12	14,917	16,238	17,304	18,295	19,488	20,428	21,398	22,346	23,188	24,232	
Y/Y Growth		59%	48%	41%	34%	31%	26%	24%	22%	19%	19%	
Q/Q Growth		9	9	7	6	7	5	5	4	4	5	
Asia-Pacific (excl. Japan)	30	34,426	38,090	40,645	44,115	52,032	57,228	63,157	69,896	74,951	76,038	S. Korea is most penetrated global broadband market and serves as model market for what may occur with ramp.
Y/Y Growth		74%	65%	55%	64%	51%	50%	55%	58%	44%	33%	
Q/Q Growth		28	11	7	9	18	10	10	11	7	1	
Latin America	3	2,596	3,077	3,653	4,324	4,847	5,403	6,008	6,588	7,743	8,476	
Y/Y Growth		78%	85%	88%	91%	87%	76%	64%	52%	60%	57%	
Q/Q Growth		15	19	19	18	12	11	11	10	18	9	

Source: Company reports, Morgan Stanley Research. We believe that metrics highlighted in grey represent the best market proxies for Internet trends.

Italicized values represent Morgan Stanley Research Estimates.

(a) Morgan Stanley estimates updated 09/12/06; R. Bilotti, S. Flannery, S. Simon, N. Nema, M. Kim, N. Sebrell, B. Swinburne, L. Choi.

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Exhibit 28

## Internet Ecosystem Framework – Internet User and Usage Data Points

	Est. Metric Share	C2004E				C2005E				C2006E		Comments
		Q1:04	Q2:04	Q3:04	Q4:04	Q1:05	Q2:05	Q3:05	Q4:05	Q1:06	Q2:06	
Internet User Data Points												
Yahoo! (Meeker) - Global												
Global Monthly Unique Visitors (000's) (a)	~38%	343,760	355,042	378,306	410,510	428,927	431,513	442,203	456,308	470,938	477,807	Growth rates for unique visitors are flat since CQ4:05.
Y/Y Growth	--	48%	50%	54%	56%	25%	22%	17%	11%	10%	11%	
Q/Q Growth	--	31	3	7	9	4	1	2	3	3	1	
VeriSign (Kuper) - Global												
Global Registry (000's) (b)	~95%	32,300	34,000	36,100	38,400	41,400	44,200	46,700	50,000	54,000	57,000	Strong Y/Y global domain name growth assisted by monetization opportunities for websites.
Y/Y Growth	--	21%	24%	26%	26%	28%	30%	29%	30%	30%	29%	
Q/Q Growth	--	6	5	6	6	8	7	6	7	8	6	
SBC+Verizon+BellSouth+Qwest+Embarq (Flannery) - U.S.												
Digital Subscriber Line (DSL) Subscriptions (000's) (c)	~100%	9,338	10,196	11,193	12,289	13,575	14,444	15,764	17,201	18,798	19,900	Measures rising use of high capacity circuits by ILEC customers for their broadband needs. Growth rate slightly decelerating.
Y/Y Growth	--	57%	58%	56%	49%	45%	42%	41%	40%	38%	38%	
Q/Q Growth	--	13	9	10	10	10	6	9	9	9	6	
US Narrowband Subscribers (Bilotti) - U.S.												
Total Subscribers (000's)	33%	34,107	33,226	32,089	31,514	30,736	29,645	28,776	28,085	27,054	25,810	Narrowband continues to lose share. This is likely to persist, owing to low price/heavy promotions of broadband Internet + increased usage of rich media in Internet.
Y/Y Growth	--	(8%)	(7%)	(8%)	(9%)	(10%)	(11%)	(10%)	(11%)	(12%)	(13%)	
Q/Q Growth	--	(1)	(3)	(3)	(2)	(2)	(4)	(3)	(2)	(4)	(5)	
Internet Usage Data Points												
VeriSign (Kuper) - Global												
Daily Database Queries (MM) (d)	~95%	10,100	12,200	12,700	12,800	14,600	14,900	14,600	15,600	17,900	17,700	DNS query growth decelerating due to caching at the endpoints.
Y/Y Growth	--	29%	51%	53%	49%	45%	22%	15%	22%	23%	19%	
Q/Q Growth	--	17	21	4	1	14	2	(2)	7	15	(1)	
Yahoo! (Meeker) - Global												
Average Daily Page Views (MM)	--	2,413	2,504	2,760	2,727	3,070	2,961	3,219	3,283	3,799	3,941	Yahoo! may be best quarterly proxy for global Internet usage growth. Y/Y growth rates improving.
Y/Y Growth	--	29%	31%	35%	29%	27%	18%	17%	20%	24%	33%	
Q/Q Growth	--	14	4	10	(1)	13	(4)	9	2	16	4	
ComScore MediaMetrix (Meeker) - Global												
Total Minutes (MM)	--	--	--	--	--	--	--	806,206	812,525	786,665	922,241	As User Generated Content is becoming more important, total minutes spent will be key to monitor.
Y/Y Growth	--	--	--	--	--	--	--	--	--	--	--	
Q/Q Growth	--	--	--	--	--	--	--	--	1	(3)	17	
eBay (Meeker) - Global												
Skype Registered Users (MM)	--	4	7	12	20	33	43	53	75	95	113	Still showing a triple-digit growth - may be the fastest product ramp in history...
Y/Y Growth	--	--	--	2,427%	878%	696%	524%	359%	277%	188%	163%	
Q/Q Growth	--	103	66	68	72	65	31	23	42	26	19	
Residential IP Telephony (Coleman/Flannery) - U.S.												
Total Subscribers (MM)	--	2,498	2,623	2,827	3,102	3,450	3,883	4,353	4,932	5,617	6,288	VoIP a strong component of packaged "triple-play" (voice-video-data). Continued growth acceleration
Y/Y Growth	--	10%	15%	22%	30%	38%	48%	54%	59%	63%	62%	
Q/Q Growth	--	5	5	8	10	11	13	12	13	14	12	

Source: Company reports, Morgan Stanley Research. We believe that metrics highlighted in grey represent the best market proxies for Internet trends. Italicized values represent Morgan Stanley Research Estimates.

\* Italicized values represent Morgan Stanley Research estimates.

(a) Yahoo! stopped including Yahoo! Japan in Monthly Unique Visitors & Avg. Daily Page Views in CQ3:02; Historicals were only provided back to CQ1:01 accounting for the Q/Q decrease in Q1:01.

(b) VeriSign is the exclusive global registry for .com and .net domain names; The registry does not include the 7 new TLDs (.biz, .pro, .name, .info, .museum, .aero, and .coop) approved by ICANN. Starting in CQ3:02, .org is not included in VRSN registry

(c) Represents Top 5 US suppliers.

(d) VeriSign stopped processing queries for the .org domain in November 2003, accounting for the CQ4:03 decline.

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Exhibit 29

## Internet Ecosystem Framework – Internet Advertising and eCommerce Data Points

	Est. Metric Share	C2004E				C2005E				C2006E	Comments	
		Q1:04	Q2:04	Q3:04	Q4:04	Q1:05	Q2:05	Q3:05	Q4:05	Q1:06		Q2:06
Online Advertising Data Points												
Internet Advertising Bureau (Meeker) - US												
Internet Advertising Revenue (\$MM)	~100%	\$2,230	\$2,369	\$2,333	\$2,694	\$2,802	\$2,985	\$3,147	\$3,608	\$3,848	\$4,061	Online advertising growth accelerating
Y/Y Growth	--	37%	43%	30%	23%	26%	26%	35%	34%	37%	36%	Trend should continue with
Q/Q Growth	--	2	6	(2)	15	4	7	5	15	7	6	increasing seasonal impact.
Media Metrix (Meeker) - Global												
Search Query Volume (MM)	--	21,963	25,902	29,470	33,504	37,319	40,297	39,591	42,904	48,785	56,090	
Y/Y Growth	--	--	--	--	--	70%	56%	34%	28%	31%	39%	
Q/Q Growth	--	--	18	14	14%	11%	8%	(2%)	8%	14%	15%	
e-commerce Data Points												
Amazon.com (Meeker) - Global												
Total Units Shipped (MM)	--	78	73	76	121	98	92	97	147	122	115	18 consecutive quarters with 20%+ Y/Y growth demonstrates market strength.
Y/Y Growth	--	36%	26%	30%	26%	26%	27%	28%	22%	24%	25%	
Q/Q Growth	--	(19)	(7)	4	60	(19)	(6)	5	52	(17)	(5)	
eBay (Meeker) - Global												
Gross Merchandise Volume (\$MM)	--	\$8,039	\$8,012	\$8,307	\$9,810	\$10,602	\$10,884	\$10,800	\$12,013	\$12,504	\$12,896	18%+ Y/Y growth impressive Rebalance initiative should improve GMV further if executed as planned.
Y/Y Growth	--	51%	42%	44%	39%	32%	36%	30%	22%	18%	18%	
Q/Q Growth	--	14	(0)	4	18	8	3	(1)	11	4	3	
eBay (Meeker) - Global												
Estimated Units Traded (MM) (a)	--	168	166	171	198	213	217	215	240	242	251	16%+ estimated Y/Y unit growth. Showing slight decline, but still solid, in our view.
Y/Y Growth	--	49%	40%	42%	34%	27%	31%	26%	21%	14%	16%	
Q/Q Growth	--	14	(1)	3	16	8	2	(1)	11	1	4	
PayPal (Meeker) - Global												
Total \$ Volume (MM)	--	\$4,321	\$4,350	\$4,637	\$5,607	\$6,233	\$6,471	\$6,667	\$8,114	\$8,769	\$8,856	
Y/Y Growth	--	64%	53%	52%	51%	44%	49%	44%	45%	41%	37%	
Q/Q Growth	--	16	1	7	21	11	4	3	22	8	1	
PayPal (Meeker) - Global												
Total Payments (MM)	--	79	78	83	100	110	113	117	140	149	143	Strong demand for online payments + PayPal's expertise in online payment / identity security contribute to the sustained strong growth.
Y/Y Growth	--	57%	45%	45%	46%	39%	46%	41%	40%	35%	27%	
Q/Q Growth	--	16	(2)	7	19	11	3	4	19	7	(4)	
CheckFree (Meeker) - Global												
Est. Average Monthly Transactions Processed (MM)	--	51	55	69	73	78	82	89	90	98	101	23%
Y/Y Growth	--	36%	37%	62%	58%	54%	48%	29%	23%	25%	23%	
Q/Q Growth	--	9	9	25	7	7	4	9	2	8	3	
Yahoo! (Meeker) - Global												
Fee Paying Customers (000's)	--	5,800	6,400	7,600	8,400	8,900	10,100	11,400	12,600	13,300	14,300	Strong growth for Yahoo!'s fee paying customers has surprised many on the upside -- primary services include broadband.
Y/Y Growth	--	100%	83%	80%	71%	53%	58%	50%	50%	49%	42%	
Q/Q Growth	--	18	10	19	11	6	13	13	11	6	8	
Yahoo! Japan - Japan												
Total e-commerce Transactions Enabled (¥MM)	--	¥150,000	¥152,300	¥157,500	¥187,300	¥184,000	¥182,300	¥182,160	¥213,440	¥207,810	¥210,847	
Y/Y Growth	--	38%	28%	26%	26%	23%	20%	16%	14%	13%	16%	
Q/Q Growth	--	1	2	3	19	(2)	(1)	(0)	17	(3)	1	
U.S. Department of Commerce - U.S.												
US Retail e-commerce Transactions (\$MM) (b)	--	\$19,635	\$19,839	\$20,599	\$26,216	\$24,037	\$24,769	\$25,809	\$32,083	\$31,251	\$32,237	Strong Y/Y growth While still low, e-commerce penetration is improving.
Y/Y Growth	--	29%	25%	23%	24%	22%	25%	25%	22%	30%	30%	
Q/Q Growth	--	(7)	1	4	27	(8)	3	4	24	(3)	3	
e-commerce as % of Retail Sales	--	2.44	2.24	2.31	2.74	2.80	2.59	2.69	3.18	3.20	3.27	

Source: Company reports, Morgan Stanley Research. We believe that metrics highlighted in grey represent the best market proxies for Internet trends.

\* Italicized values represent Morgan Stanley Research estimates.

(a) Based on estimated ASP from Morgan Stanley Research eBay notes.

(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. eBay GMS added in CQ3:00.

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Exhibit 30

## Internet Ecosystem Framework – WiFi / WLAN / Wireless and Digital Media Data Points

	Est. Metric Share	C2004E				C2005E					C2006E	
		Q1:04	Q2:04	Q3:04	Q4:04	Q1:05	Q2:05	Q3:05	Q4:05	Q1:06	Q2:06	Comments
WiFi/WLAN & Wireless Data Points												
Access Points/Bridges/NICs/Client Devices - U.S.												
802.11b, 802.11g, 802.11a, Multimode - (000's)	~89%	10,162	9,333	11,090	11,579	12,340	11,960	13,525	13,619	14,440	14,453	WiFi growth remains impressive - 20%+ Y/Y...
Y/Y Growth	--	98%	47%	44%	21%	21%	28%	22%	18%	17%	21%	
Q/Q Growth	--	6	(8)	19	4	7	(3)	13	1	6	0	
NTT DoCoMo (iMode) (Tanaka) - Japan												
Wireless Data Subscribers (000's)	62%	41,077	41,723	42,362	43,027	44,021	44,658	45,139	45,616	46,360	46,823	Asia-Pacific is leader in wireless trends.
Y/Y Growth	--	9%	8%	7%	7%	7%	7%	7%	6%	5%	5%	
Q/Q Growth	--	1.8	1.6	1.5	1.6	2.3	1.4	1.1	1.1	1.6	1.0	
Mobile Data Association (Werner) - UK												
SMS Messages (MM)	--	6,380	6,290	6,473	6,970	7,310	7,751	8,067	8,872	8,900	9,630	Mobile messaging growth remains robust.
Y/Y Growth	--	30%	25%	27%	27%	15%	23%	25%	27%	22%	24%	
Q/Q Growth	--	16	(1)	3	8	5	6	4	10	0	8	
Digital Media Data Points												
RealNetworks (Meeker) - Global												
Paid Subscribers (000's)		1,300	1,400	1,550	1,550	1,850	2,000	2,200	2,250	2,400	2,400	
Y/Y Growth		30%	40%	35%	19%	42%	43%	42%	45%	30%	20%	
Q/Q Growth		0	8	11	0	19	8	10	2	7	0	
iPods (Runkle) - Global												
Total Cumulative Units Sold (000's)		2,848	3,708	5,724	10,304	15,615	21,770	28,221	38,415	52,818	61,344	Strong sales of iPod Video and Nano
Units Sold (000's)		807	860	2,016	4,580	5,311	6,155	6,451	10,194	14,403	8,526	
Y/Y Growth		326%	281%	338%	405%	448%	487%	393%	273%	238%	182%	
Q/Q Growth		40	30	54	80	52	39	30	36	37	16	
iTunes (Runkle) - Global												
Total Cumulative Songs Downloaded (MM)		58	83	130	207	323	463	565	806	1,100	1,400	Continued strong growth... Success in TV shows / Movies remains key to combat against competitors (e.g. MSFT Zune Marketplace)
Songs Downloaded (MM)		29	25	47	77	115	140	102	242	294	300	
Y/Y Growth		--	1,409%	1,003%	614%	452%	458%	334%	289%	241%	203%	
Q/Q Growth		101	42	57	59	56	44	22	43	36	27	
TiVo - Global												
Subscribers (000's)		1,596	1,884	2,303	3,001	3,320	3,574	4,008	4,364	4,417	4,418	
Y/Y Growth		127%	138%	130%	125%	108%	90%	74%	45%	33%	24%	
Q/Q Growth		20	18	22	30	11	8	12	9	1	0	
XM Radio & Sirius (Swinburne) - US												
Satellite Radio Subscriptions (000's)		2,034	2,581	3,178	4,372	5,219	6,232	7,209	9,250	10,580	11,578	
Y/Y Growth		269%	224%	194%	170%	157%	141%	127%	112%	103%	86%	
Q/Q Growth		25	27	23	38	19	19	16	28	14	9	

Source: Company reports, Morgan Stanley Research. We believe that metrics highlighted in grey represent the best market proxies for Internet trends.

\* Italicized values represent Morgan Stanley Research estimates

## Disclosure Section

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

### Analyst Certification

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: Mary Meeker.

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(as of September 30, 2006)

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Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)		
	Count	% of Total	Count	% of Total	% of Rating Category
<b>Overweight/Buy</b>	<b>783</b>	<b>38%</b>	<b>305</b>	<b>44%</b>	<b>39%</b>
<b>Equal-weight/Hold</b>	<b>915</b>	<b>45%</b>	<b>305</b>	<b>44%</b>	<b>33%</b>
<b>Underweight/Sell</b>	<b>336</b>	<b>17%</b>	<b>79</b>	<b>11%</b>	<b>24%</b>
<b>Total</b>	<b>2,034</b>		<b>689</b>		

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

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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.

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October 13, 2006

Internet & Consumer Software

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## Industry Coverage: Internet & Consumer Software

Company (Ticker)	Rating (as of)	Price (10/12/2006)
<b>Mary Meeker</b>		
Amazon.com (AMZN.O)	O-V (03/18/2002)	\$33.55
CNET (CNET.O)	E-V (03/18/2002)	\$9.19
GSI COMMERCE (GSIC.O)	O-V (07/27/2006)	\$15.58
Google (GOOG.O)	O-V (09/28/2004)	\$427.44
Intuit (INTU.O)	O-V (03/18/2002)	\$35.05
Microsoft (MSFT.O)	E-V (04/28/2006)	\$28.22
Yahoo! (YHOO.O)	O-V (03/18/2002)	\$24.12
drugstore.com (DSCM.O)	E-V (03/18/2002)	\$3.57
eBay (EBAY.O)	O-V (07/10/2002)	\$29.68

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