

Google's Strategy in 2013

Google was the leading Internet search firm in 2013, with nearly a 67 percent market share in search from home and work computers and a 97 percent share of searches performed from mobile devices. Google's business model allowed advertisers to bid on search terms that would describe their product or service on a cost-per-impression (CPI) or cost-per-click (CPC) basis. Google's search-based ads were displayed near Google's search results and generated advertising revenues of more than \$43.6 billion in 2012. The company also generated revenues of about \$2.4 billion in 2012 from licensing fees charged to businesses that wished to install Google's search appliance on company intranets. In addition, a variety of new ventures contributed to the company's consolidated revenues. The most notable of which was the company's recently acquired Motorola Mobility division that contributed revenues of \$4.1 billion in 2012. New ventures such as the acquisition of Motorola's smartphone operations were becoming a growing priority with Google management since the company dominated the market for search-based ads and sought additional opportunities to sustain its extraordinary growth in revenues, earnings, and net cash provided by operations.

Another important initiative under way in 2013 was Google's cloud computing productivity package that was intended to change the market for commonly used business applications such as word processing, spreadsheets, and presentation software by moving them from the desktop to the Internet. Google had also entered

into alliances with Intel, Sony, DISH Network, Logitech, and other firms to develop the technology and products required to launch Google TV. Google TV was launched in the United States in 2011 and allowed users to search live network and cable programming, streaming videos from providers such as Netflix, Amazon Video On Demand, and YouTube, and recorded programs on a DVR. The company also launched its Google+ social networking site in 2011 to capture additional advertising opportunities. The company's Google Glass wearable interactive computer display was among the company's most publicized new projects and ventures. The eyeglasses containing a camera and computer display were expected to be available to consumers by year-end 2013. The company was also developing an Android-powered wristwatch and a video game console to compete against Microsoft's Xbox One, Sony's PlayStation 4, and Nintendo's Wii.

While Google's growth initiatives seemed to take the company into new industries and thrust it into competition with companies ranging from Facebook to Microsoft to Apple, its CEO, Eric Schmidt, saw the new ventures as natural extensions of the company's mission to "organize the world's information and make it universally accessible and useful."¹ In April 2012, he explained the company's wide-ranging strategic initiatives by commenting, "In some ways we have run the company as to let

1,000 flowers bloom, but once they do bloom you want to put together a coherent bouquet.”²

Company History

The development of Google’s search technology began in January 1996 when Stanford University computer science graduate students Larry Page and Sergey Brin collaborated to develop a new search engine. They named the new search engine BackRub because of its ability to rate websites for relevancy by examining the number of back links pointing to the website. The approach for assessing the relevancy of websites to a particular search query used by other websites at the time was based on examining and counting meta tags and keywords included on various websites. By 1997, the search accuracy of BackRub had allowed it to gain a loyal following among Silicon Valley Internet users. Yahoo co-founder David Filo was among the converted, and in 1998 he convinced Brin and Page to leave Stanford to focus on making their search technology the backbone of a new Internet company.

BackRub would be renamed Google, which was a play on the word *googol*—a mathematical term for a number represented by the numeral 1 followed by 100 zeroes. Brin and Page’s adoption of the new name reflected their mission to organize a seemingly infinite amount of information on the Internet. In August 1998, a Stanford professor arranged for Brin and Page to meet at his home with a potential angel investor to demonstrate the Google search engine. The investor, who had been a founder of Sun Microsystems, was immediately impressed with Google’s search capabilities but was too pressed for time to hear much of Brin and Page’s informal presentation. The investor stopped the two during the presentation and suggested, “Instead of us discussing all the details, why don’t I just write you a check?”³ The two partners held the investor’s \$100,000 check, made payable to Google Inc., for two weeks while they scrambled to set up a corporation named Google Inc. and open a corporate bank account. The two officers of the freshly

incorporated company went on to raise a total of \$1 million in venture capital from family, friends, and other angel investors by the end of September 1998.

Even with a cash reserve of \$1 million, the two partners ran Google on a shoestring budget, with its main servers built by Brin and Page from discounted computer components and its four employees operating out of a garage owned by a friend of the founders. By year-end 1998, Google’s beta version was handling 10,000 search queries per day and *PC Magazine* had named the company to its list of “Top 100 Web Sites and Search Engines for 1998.”

The new company recorded successes at a lightning-fast pace, with the search kernel answering more than 500,000 queries per day and Red Hat agreeing to become the company’s first search customer in early 1999. Google attracted an additional \$25 million in funding from two leading Silicon Valley venture capital firms by midyear 1999 to support further growth and enhancements to Google’s search technology. The company’s innovations in 2000 included wireless search technology, search capabilities in 10 languages, and a Google Toolbar browser plug-in that allowed computer users to search the Internet without first visiting a Google-affiliated web portal or Google’s home page. Features added through 2004 included Google News, Google Product Search, Google Scholar, and Google Local. The company also expanded its index of web pages to more than 8 billion and increased its country domains to more than 150 by 2004.

The Initial Public Offering

Google’s April 29, 2004, initial public offering (IPO) registration became the most talked-about planned offering involving an Internet company since the dot-com bust of 2000. At the conclusion of the first day of trading, Google’s shares had appreciated by 18 percent to make Brin and Page each worth approximately \$3.8 billion. Also, an estimated 900 to 1,000 Google employees were worth at least \$1 million, with 600 to 700 holding at least \$2 million in Google stock. On average, each of Google’s 2,292 staff

members held approximately \$1.7 million in company stock, excluding the holdings of the top five executives. Stanford University also enjoyed a \$179.5 million windfall from its stock holdings granted for its early investment in Brin and Page's search engine. Some of Google's early contractors and consultants also profited handsomely from forgoing fees in return for stock options in the company. One such contractor was Abbe Patterson, who took options for 4,000 shares rather than a \$5,000 fee for preparing a PowerPoint presentation and speaking notes for one of Brin and Page's first presentations to venture capitalists. After two splits and four days of trading, her 16,000 shares were worth \$1.7 million.⁴ The company executed a second public offering of 14,159,265 shares of common stock in September 2005. The number of shares issued represented the first eight digits to the right of the decimal point for the value of π (pi). The issue added more than \$4 billion to Google's liquid assets.

Exhibit 1 tracks the performance of Google's common shares between August 19, 2004, and June 2013.

Google Feature Additions between 2005 and 2013

Google used its vast cash reserves to make strategic acquisitions that might lead to the development of new Internet applications offering advertising opportunities. Google Earth was launched in 2005 after the company acquired Keyhole, a digital mapping company, in 2004. Google Earth and its companion software Google Maps were enhanced in 2007 with the addition of street-view images taken by traveling Google camera cars. Digital images, webcam feeds, and videos captured by Internet users could be linked to locations displayed by Google Maps. Real estate listings and short personal messages could also be linked to Google Maps locations. In 2010, Google further enhanced Google Maps with the inclusion of an Earth View mode that allowed users to view 3-D images of various locations from the ground level. Other search features added to

Google between 2005 and 2013 that users found particularly useful included Book Search, Music Search, Video Search, Patent Search, and the expansion of Google News to include archived news articles dating to 1900.

Google also expanded its website features beyond search functionality to include its Gmail software, a web-based calendar, web-based document, and spreadsheet applications, its Picasa web photo albums, and a translation feature that accommodated 71 languages. The company also released services for mobile phone uses such as Mobile Web Search, Blogger Mobile, Gmail, Google News, and Maps for Mobile.

Google's Business Model

Google's business model had evolved since the company's inception to include revenue beyond the licensing fees charged to corporations needing search capabilities on company intranets or websites. The 2000 development of keyword-targeted advertising expanded its business model to include revenues from the placement of highly targeted text-only sponsor ads adjacent to its search results. Google was able to target its ads to specific users based on the user's browsing history. The addition of advertising-based revenue allowed Google to increase annual revenues from \$220,000 in 1999 to more than \$86 million in 2001. A summary of Google's financial performance for selected years between 2001 and 2012 is presented in Exhibit 2. The company's balance sheets for 2011 and 2012 are presented in Exhibit 3.

Google Search Appliance

Google's search technology could be integrated into a third party's website or intranet if search functionality was important to the customer. Google's Site Search allowed enterprises ranging from small businesses to public companies to license Google's search appliance for use on their websites for as little as \$100 per year. The Google Search Appliance was designed for use on corporate intranets to allow employees to search company documents and databases. The Search

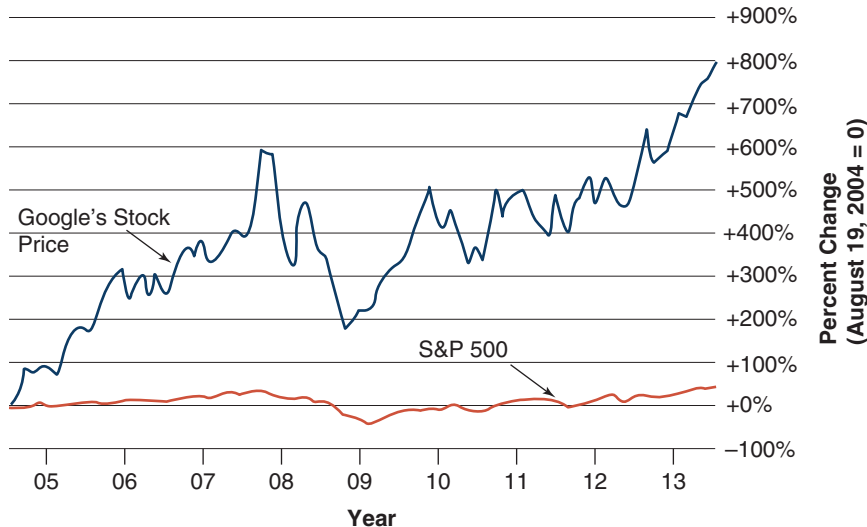
EXHIBIT 1

Performance of Google's Stock Price, August 19, 2004, to June 2013

(a) Trend in Google Inc.'s Common Stock Price



(b) Performance of Google Inc.'s Stock Price versus the S&P 500 Index



Appliance included a variety of security features to ensure that only employees with proper authority were able to view restricted documents. The Google Mini Search Appliance was designed for small businesses with 50,000 to 300,000 documents stored on local PCs and servers. The Google Mini hardware and software package could be licensed online (at www.google.com/enterprise/mini) at prices ranging from \$2,990 to \$9,900, depending on document count capability.

Google's more robust search appliance had a document count capability of up to 30 million documents and was designed for midsized to global businesses. Licensing fees for the Google Search Appliance ranged from \$30,000 to \$600,000, depending on document count capability.

AdWords

Google AdWords allowed advertisers, either independently through Google's automated

EXHIBIT 2

Financial Summary for Google, 2001, 2005, 2008–2012 (\$ millions, except per share amounts)

	2012	2011	2010	2009	2008	2005	2001
Revenues:							
Google (advertising and other)	\$46,039	\$37,905	\$29,321	\$23,651	\$21,796	\$6,139	\$ 86
Motorola Mobility	4,136	—	—	—	—	—	—
Total revenues:	\$50,175	\$37,905	\$29,321	\$23,651	\$21,796	\$6,139	\$ 86
Costs and expenses:							
Cost of revenues—Google	17,176	13,188	10,417	8,844	8,622	2,577	14
Cost of revenues—Motorola	3,458	—	—	—	—	—	—
Mobile							
Research and development	6,793	5,162	3,762	2,843	2,793	600	17
Sales and marketing	6,143	4,589	2,799	1,984	1,946	468	20
General and administrative	3,845	2,724	1,962	1,667	1,803	387	25
Contribution to Google Foundation	—	—	—	—	—	90,000	—
Total costs and expenses	37,415	26,163	18,940	15,338	15,164	4,121	75
Income (loss) from Operations	12,760	11,742	10,381	8,312	6,632	2,017	11
Impairment of equity investments	—	—	—	—	(1,095)	—	—
Interest income (expense) and other, net	626	584	415	69	316	124	(1)
Income (loss) before income taxes	13,386	12,326	10,796	8,381	5,854	2,142	10
Provision for income taxes	2,598	2,589	2,291	1,861	1,627	676	3
Net income (loss)	\$ 10,737	\$ 9,737	\$ 8,505	\$ 6,520	\$ 4,227	\$ 1,465	\$ 7
Net income (loss) per share:							
Basic	\$32.81	\$30.17	\$26.69	\$20.62	\$13.46	\$5.31	\$0.07
Diluted	\$32.31	\$29.76	\$26.31	\$20.41	\$13.31	\$5.02	\$0.04
Number of shares used in per share calculations:							
Basic	327	323	319	316	314	276	95
Diluted	331	327	323	319	318	292	187
Net cash provided by operating activities	\$ 16,619	\$14,565	\$11,081	\$ 9,316	\$ 7,853	\$ 2,459	n.a.
Cash, cash equivalents, and marketable securities	48,088	44,626	34,975	24,485	15,846	8,034	n.a.
Total assets	93,798	72,574	57,851	40,497	31,768	10,272	n.a.
Total long-term liabilities	7,746	5,516	1,614	1,745	1,227	107	n.a.
Total stockholders' equity	71,715	58,145	46,241	36,004	28,239	9,419	n.a.

Source: Google, Form S-1, filed April 29, 2004; Google 10-K reports, various years.

tools or with the assistance of Google's marketing teams, to create text-based ads that would appear alongside Google search results. AdWords users could evaluate the effectiveness of their advertising expenditures with Google through the use of performance reports that tracked the effectiveness of each ad. Google also offered a keyword targeting program that suggested synonyms for keywords entered by advertisers, a traffic estimator that

helped potential advertisers anticipate charges, and multiple payment options that included charges to credit cards, debit cards, and monthly invoicing.

Larger advertisers were offered additional services to help run large, dynamic advertising campaigns. Such assistance included the availability of specialists with expertise in various industries to offer suggestions for targeting potential customers and identifying relevant

EXHIBIT 3

Google's Balance Sheets, 2011–2012 (\$ millions, except per share amounts)

	2012	2011
Assets		
Current assets:		
Cash and cash equivalents	\$14,778	\$ 9,983
Marketable securities	33,310	34,643
Accounts receivable, net of allowance of \$133 and \$101	7,885	5,427
Inventories	505	—
Receivable under reverse repurchase agreements	700	745
Deferred income taxes, net	1,144	215
Prepaid revenue share, expenses, and other assets	2,132	1,745
Total current assets	<u>60,454</u>	<u>52,758</u>
Prepaid revenue share, expenses, and other assets, non-current	2,011	499
Non-marketable equity securities	1,469	790
Property and equipment, net	11,854	9,603
Intangible assets, net	7,473	1,578
Goodwill	<u>10,537</u>	<u>7,346</u>
Total assets	<u>\$93,798</u>	<u>\$72,574</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 2,012	\$ 588
Short-term debt	2,549	1,218
Accrued compensation and benefits	2,239	1,818
Accrued expenses and other current liabilities	3,258	1,370
Accrued revenue share	1,471	1,168
Securities lending payable	1,673	2,007
Deferred revenue	895	547
Income taxes payable, net	240	197
Total current liabilities	<u>14,337</u>	<u>8,913</u>
Long-term debt	2,988	2,986
Deferred revenue, long-term	100	44
Income taxes payable, long-term	2,046	1,693
Deferred income taxes, net, non-current	1,872	287
Other long-term liabilities	740	506
Stockholders' equity:		
Common stock and additional paid-in capital	22,835	20,264
Accumulated other comprehensive income	538	276
Retained earnings	<u>48,342</u>	<u>37,605</u>
Total stockholders' equity	<u>71,715</u>	<u>58,145</u>
Total liabilities and stockholders' equity	<u>\$93,798</u>	<u>\$72,574</u>

Source: Google 2012 10-K report.

keywords. Google's advertising specialists helped develop ads for customers that would increase click-through rates and purchase rates. Google also offered its large advertising customers bulk posting services that helped launch and manage campaigns including ads using hundreds or thousands of keywords.

Google's search-based ads were priced using an auction system that allowed advertisers to bid on keywords that would describe their product or service. Bids could be made on a cost-per-impression (CPI) or cost-per-click (CPC) basis. Most Google advertisers placed bids based on CPC frequency rather than how

many times an ad was displayed by Google. Google's auction pricing model assigned each bidder a quality score, which was determined by the advertiser's past keyword click-through rate and the relevance of the ad text. Advertisers with high quality scores were offered lower minimum bids than advertisers with poor quality scores.

Google allowed users to pay a CPC rate lower than their bid price if their bid was considerably more than the next highest bid. For example, an advertiser who bid \$0.75 per click for a particular keyword would be charged only \$0.51 per click if the next highest bid was only \$0.50. The AdWords discounter ensured that advertisers paid only 1 cent more than the next highest bid, regardless of the actual amount of their bid.

AdSense

Google's AdSense program allowed web publishers to share in the advertising revenues generated by Google's text ads. The AdSense program served content-relevant Google text ads to pages on Google Network websites. For example, an Internet user reading an article about the state of the economy at Reuters.com would see Google text ads by investment magazines and companies specializing in home business opportunities. Google Network members shared in the advertising revenue whenever a site visitor clicked a Google ad

displayed on their sites. The more than 1 million Google Network members did not pay a fee to participate in the program and received about 60 percent of advertising dollars generated from the ads. Google's AdSense program also allowed mobile phone operators to share in Google revenues if text and image ads were displayed on mobile handsets. Owners of dormant domain names, web-based game sites, video sites, and news feed services could also participate in the AdSense program. The breakdown of Google's revenues by source for 2008 through 2012 is presented in Exhibit 4.

Motorola Mobility and Other Revenue Sources

The 2006 acquisition of YouTube allowed Google to receive advertising revenues for ads displayed during Internet videos, while its 2008 \$3.1 billion acquisition of DoubleClick allowed the company to generate advertising revenues through banner ads. The company's 2008 launch of Google Checkout generated fees of as much as 2 percent of the transaction amount for purchases made at participating e-retailer sites. Google's business model was further expanded in 2008 to include licensing fees paid by users of its web-based Google Apps document, spreadsheet, and presentation software. While the number of Google Apps users were growing, the cloud-based productivity software package had yet to develop significant revenues

EXHIBIT 4

Google's Revenues by Source, 2008–2012 (\$ millions)

	2012	2011	2010	2009	2008
Advertising revenues:					
Google websites	\$31,221	\$26,145	\$19,444	\$15,722	\$14,414
Google Network websites	12,465	10,386	8,792	7,167	6,715
Total advertising revenues	43,686	36,531	28,236	22,889	21,129
Licensing and other revenues	2,353	1,374	1,085	762	667
Total Google revenues	46,039	37,905	29,321	23,651	21,796
Total Motorola Mobility revenues	4,136	—	—	—	—
Consolidated revenues	\$50,175	\$37,905	\$29,321	\$23,651	\$21,796

Source: Google 10-K reports, various years.

through 2012. And, while generating YouTube advertising revenues had proven challenging through 2010, Google's revenues from banner ads displayed on YouTube and other websites were projected to approach \$3.7 billion in 2013.

The company's most ambitious new venture was its 2012 acquisition of Motorola Mobility for \$12.5 billion, which put it in the hardware segment of the smartphone and tablet computer industries. Analysts following the transaction saw the move to acquire Motorola Mobility as a direct attempt to mimic Apple's strategy used for the iPhone and iPad that tightly integrated hardware and software for its most profitable and fastest growing products. Google had launched its Android operating system for mobile phones in 2008 and allowed wireless phone manufacturers such as Samsung, HTC, and Nokia to produce Internet-enabled phones boasting features similar to those available on Apple's iPhone. By 2012, Android was the leading smartphone platform with a 50.9 percent market share. Google's acquisition of Motorola Mobility boosted 2012 revenues by more than \$4 billion from the sale of smartphones, tablet computers, and communication devices for the home.

Google's Strategy and Competitive Position in 2013

Google's Strategies to Dominate Internet Advertising

The majority of Google's acquisitions since its 2004 IPO, and its research and development activities, were directed at increasing the company's dominance in Internet advertising. The addition of Google Maps, local search, airline travel information, weather, Book Search, Gmail, Blogger, and other features increased traffic to Google sites and gave the company more opportunities to serve ads to Internet users. However, not all of Google's innovations became a success in the marketplace. For example, the company abandoned its Knol open-source encyclopedia in 2012, and its Orkut social networking site had proven to be an abject failure.

Google made a second attempt at developing a social networking site in 2011 when it launched Google+ . Like Facebook, users could maintain profiles, post comments, link to content from other Internet sites, and keep online photo albums. Google+ also worked on mobile devices, and allowed users to participate in multiperson video chats. In 2013, Google+ had 100 million users, who were logged on an average of 6.8 minutes per month, compared to Facebook's 850 million users, who spent about 6.7 hours per month updating their pages. The company believed that Google+ would grow to challenge Facebook since Google+ account information could be linked with Google's other products and services. For example, Google+ users who used Google to search for a friend with a common name could pull up information on the exact individual linked to their Google+ account.

Google's strategy to dominate Internet advertising also entailed becoming the number one search engine used not only in the United States but also around the world. In 2013, Google's search-based ads could be delivered to Internet users in 41 languages. More than 50 percent of the company's 2012 revenues and traffic were generated from outside the United States, and the percentage of sales from outside the United States was expected to grow as Google entered emerging markets such as Russia and China. China was a particularly attractive market for Google since it had more Internet users (over 300 million) than any other country in the world. However, Google's 2006 entry into China was accompanied by challenges, including strong competition from local search provider Baidu and requirements by the Chinese government to censor search results that were critical of the government. Google complied with government censorship requirements until early 2010, when it began redirecting users of its censored Google.cn site in China to its uncensored Hong Kong search site, Google.com.hk. After continuing disagreements with the Chinese government, Google agreed in June 2010 to stop the automatic redirects to its Hong Kong site. Instead, it presented

Google.cn users with a link to Google.com.hk. In 2013, 65 percent of Internet searches in China were performed by Baidu, while Google held a 3 percent share of searches in that country.

Google's Emerging Rivalry with Apple in Smartphones and Tablet Computers

In 2012, more than 6.8 billion people worldwide and 234 million Americans ages 13 and older owned and used mobile phones. More than 103 million Americans and about 2 billion mobile phone users worldwide accessed the Internet from smartphones. Apple Inc. built its early reputation in the 1980s and 1990s on its innovative Mac computer lines, but in 2012, only \$23.2 billion of its net sales of \$156.5 billion came from the sale of computers. In 2013, Apple was the world's largest seller of tablet computers and personal media players with market shares of 40 percent and 73 percent, respectively. The company's iPhone was the second best-selling smartphone with a 17 percent market share in early 2013. The iPhone's market share had declined from 25 percent at year-end 2012, as had its share of the tablet computer market. The iPad's market share had fallen from 85 percent in 2011 and 58 percent in 2012. Nevertheless, Apple's sales of iPads and iPhones had grown dramatically since 2010. The iPhone accounted

for \$80.5 billion of Apple's total sales of \$156.5 billion in 2012 compared to \$25.2 billion of total sales of \$65.2 billion in 2010. The iPad contributed revenues of \$32.4 billion in 2012 compared to \$5 billion in 2010. The iPod and related music products accounted for sales of more than \$14.1 billion in 2012. The company's hefty profit margins on its electronic devices allowed it to record a net income of \$41.7 billion in 2012.

Apple's revenue growth continued in 2013, with the company setting a revenue record during the second quarter of 2013. The record sales and earnings were driven largely by the iPhone, which grew to a record 37.4 million units during the quarter, compared to 35.1 million in the same quarter during 2012. iPad sales had increased from 11.8 million units in the second quarter of 2012 to 19.5 million units during the second quarter of 2013. The company's strong performance in 2011 allowed its stock price to increase so much that it became the most valuable company in the world, as measured by market capitalization. Even though the company continued to set new revenue records each quarter during 2012 and early 2013, the company's declining market shares in key product categories and declining profit margins had contributed to a drop in its stock price from a high of \$702 in September 2012 to a range of \$390 to \$425 in mid-2013. A summary of Apple's financial performance between 2008 and 2012 is presented in Exhibit 5.

EXHIBIT 5

Financial Summary for Apple Inc., 2008–2012 (\$ millions)

	Fiscal Year Ended June 30				
	2012	2011	2010	2009	2008
Net sales	\$156,508	\$108,249	\$65,225	\$42,905	\$37,491
Operating income	55,241	33,790	18,385	11,740	8,327
Net income	41,733	25,922	14,013	8,235	6,119
Cash, cash equivalents, and marketable securities	\$121,251	\$81,570	\$51,011	\$33,992	\$24,490
Total assets	176,064	116,371	75,183	47,501	36,171
Long-term obligations	16,664	10,100	5,531	3,502	1,745
Stockholders' equity	118,210	76,615	47,791	31,640	22,297

Source: Apple Inc. 10-K reports, various years.

Google's introduction of its Android operating system for smartphones in 2008 allowed it to increase its share of mobile searches from about 60 percent to approximately 97 percent in 2013. Android was not a phone but an operating system that Google made available free to any phone manufacturer wishing to market mobile devices with Internet capability. Android's core applications matched most features of Apple's iPhone. By 2010, all major mobile phone providers had added smartphone models running Android software to its lineup of handsets, and despite Google's late entry into the market, Android's market share had increased from zero in 2008 to more than 52 percent in May 2013 (see Exhibit 6).

Similar to its relationship with mobile phone manufacturers, Google allowed mobile apps developers to use the Android operating system free of licensing fees. The worldwide market for mobile apps was estimated at \$17.5 billion by 2012, and in 2013 more than 800,000 free and paid smartphone apps were available at both Apple's App Store and the Google Play Store. Google escalated its growing competitive rivalry with Apple in 2012 with its \$12.5 billion acquisition of Motorola Mobility. The acquisition would allow Google to design and market its own line of smartphones and tablet computers and begin earning profits from the sale of hardware. Google launched its first internally developed tablet computer in June 2012. The \$199 Nexus 7 included a 7-inch screen and a camera and was designed to display books and other media available through the company's

Google Play service. The second-generation Nexus tablets were expected to be launched in July 2013. Also in 2013, Google's Motorola Mobility division offered 22 various smartphone models and a dual-core XOOM tablet computer. Motorola Home division that produced and marketed modems, digital baby monitors, cordless telephones, weather radios, and other home communication devices was divested by Google in December 2012 for \$2.35 billion.

Google's Strategic Offensive to Control the Desktop

Google's senior management believed that, in the very near future, most computer software programs used by businesses would move from local hard drives or intranets to the Internet. Many information technology analysts agreed that cloud computing would become a common software platform that was expected to become a \$95 billion market by 2013. Moving software applications to the cloud offered many possible benefits to corporate users, including lower software acquisition costs, lower computing support costs, and easier collaboration among employees in different locations. Google Apps was launched in 2008 as a competing product to Microsoft Office and was hosted on computers in Google's data centers and included Gmail, a calendar, instant messaging, word processing, spreadsheets, presentation software, and file storage space. Google Apps could be licensed by corporate customers

EXHIBIT 6

U.S. Smartphone Platform Market Share Rankings, Selected Periods, May 2010–May 2013

Smartphone Platform	May 2010	May 2011	May 2012	May 2013
Android	13.0%	38.1%	50.9%	52.4%
Apple	24.4	28.6	31.9	39.2
BlackBerry	41.7	24.7	11.4	4.8
Microsoft	13.2	5.8	4.0	3.2
Others	7.7	2.8	1.8	0.4
Total	100.0%	100.0%	100.0%	100.0%

at \$50 per user per year. The licensing fee for the Microsoft Office and Outlook package was typically \$350 per user per year. Five million businesses had subscribed to Google Apps by year-end 2012, generating an estimated \$1 billion in revenue for the year. Microsoft had developed a competing cloud-based Office 365 productivity package that small businesses could subscribe to for \$150 per year.

Google's Chrome browser, which was launched in September 2008, and Chrome operating system (OS) launched in July 2009 were developed specifically to accommodate cloud computing applications. The bare-bones Chrome browser was built on a multiprocessor design that would allow users to operate spreadsheets, word processing, video editing, and other applications on separate tabs that could be run simultaneously. The Chrome browser also provided Google with a defense against moves by Microsoft to make it more difficult for Google to deliver relevant search-based ads to Internet users. Microsoft's Internet Explorer 10 allowed users to hide their Internet address and viewing history, which prevented Google from collecting user-specific information needed for ad targeting. Mozilla's Firefox browser employed a similar feature that prevented third parties from tracking a user's viewing habits. Google had entered into agreements with Samsung, Acer, Hewlett-Packard, and Lenovo to begin producing Chromebook portable computers that would use the Chrome OS and Chrome browser to

access the cloud-based Google Apps productivity software. Worldwide market share statistics for the leading browsers for selected periods between June 2010 and June 2013 are presented in Exhibit 7.

Google's Initiatives to Expand Search to Television

In mid-2010, Google entered an alliance with Intel, Sony, Logitech, Best Buy, DISH Network, and Adobe to develop Google TV. Google TV would be built on the Android platform and would run the Chrome browser software to search live network and cable programming; streaming videos from providers such as Netflix, Amazon Video On Demand, and YouTube; and recorded programs on a DVR. Google TV users would also be able to use their televisions to browse the web and run cloud-based applications such as Google Apps. DISH Network satellite service customers could use Google TV's features with the addition of a Logitech set-top box or Sony Internet TV.

Google acquired On2 Technologies, which was the leading developer of video compression technology, in February 2010 in a \$124 million stock and cash transaction. The acquisition of On2 was expected to improve the video streaming capabilities of Google TV. Google also lobbied the U.S. Federal Communications Commission for "Net neutrality" rules that would require Internet providers to manage traffic in a manner that would not restrict

EXHIBIT 7

Worldwide Browser Market Share Rankings, Selected Periods, June 2010–June 2013

Browser	June 2010	June 2011	June 2012	June 2013
Chrome	9%	22%	32%	43%
Internet Explorer	53	42	32	25
Firefox	31	28	25	20
Safari	4	5	7	8
Opera	2	2	2	1
Others	1	1	2	3
Total	100%	100%	100%	100%

high-bandwidth services such as Internet television. The company was also testing an ultra-fast broadband network in several cities across the United States that was as much as 100 times faster than what was offered by competing Internet providers. Google management had stated that the company did not intend to launch a nationwide Internet service, but did want to expose consumers to Internet applications and content that would be possible with greater bandwidth and faster transmission speeds.

Google's Internet Rivals

Google's ability to sustain its competitive advantage among search companies was a function of its ability to maintain strong relationships with Internet users, advertisers, and websites. In 2012, Google was the world's most-visited Internet site, with more than 900 million unique Internet users going to Google sites each month to search for information. A comparison of the percentage of Internet searches among websites offering search capabilities for selected periods between May 2010 and June 2013 is shown in Exhibit 8.

Microsoft Online Services

Microsoft Corporation recorded fiscal 2012 revenues and a net income of approximately \$73.7 billion and \$17.0 billion, respectively, through the sales of computer software, consulting

services, video game hardware, and online services. Windows and Microsoft Office accounted for more than one-half of the company's 2012 revenues and nearly all of its operating profit. The company's online services business recorded sales of nearly \$2.9 billion and an operating loss of \$8.2 billion during fiscal 2012. The operating loss in 2012 included a onetime goodwill impairment charge of \$6.2 billion. Microsoft's online services business generated revenues from banner ads displayed at the company's MSN Web portal and its affiliated websites and search-based ads displayed with Bing results. Microsoft's websites made the company among the most-visited Internet destinations in 2013, with approximately 500 million unique visitors each month. A financial summary for Microsoft Corporation and its Online Services Division is provided in Exhibit 9.

Microsoft's search business was launched in November 2004 as Live Search to compete directly with Google and slow whatever intentions Google might have to threaten Microsoft in its core operating system and productivity software businesses. Microsoft's concern with threats posed by Google arose shortly after Google's IPO, when Bill Gates noticed that many of the Google job postings on its site were nearly identical to Microsoft job specifications. Recognizing that the position announcements had more to do with operating-system design than search, Gates e-mailed key Microsoft executives, warning, "We have to watch these

EXHIBIT 8

U.S. Search Engine Market Share Rankings, Selected Periods, May 2010–June 2013

Search Entity	Percent of Searches			
	May 2010	July 2011	May 2012	June 2013
Google Sites	63.7%	65.1%	66.7%	66.7%
Microsoft Sites	12.1	14.4	15.4	17.9
Yahoo Sites	18.3	16.1	13.4	11.4
Ask.com	3.6	2.9	3.0	2.7
AOL	2.3	1.5	1.5	1.3
Total	100.0%	100.0%	100.0%	100.0%

EXHIBIT 9

Financial Summary for Microsoft Corporation and Microsoft's Online Services Business Unit, 2008–2012 (\$ millions)

Financial Summary for Microsoft Corporation					
	2012	2011	2010	2009	2008
Revenue	\$73,723	\$69,943	\$62,484	\$58,437	\$60,420
Operating income	21,763	27,161	24,098	20,363	22,492
Net income	16,978	23,150	18,760	14,569	17,681
Cash, cash equivalents, and short-term investments	\$63,040	\$52,772	\$36,788	\$31,447	\$23,662
Total assets	121,271	108,704	86,113	77,888	72,793
Long-term obligations	22,220	22,847	13,791	11,296	6,621
Stockholders' equity	66,363	57,083	46,175	39,558	36,286
Financial Summary for Microsoft's Online Services Business Unit					
	2012	2011	2010	2009	2008
Revenue	\$2,867	\$2,528	\$2,201	\$2,121	\$3,214
Operating income (loss)	(8,121)	(2,557)	(2,337)	(1,641)	(1,233)

Source: Microsoft 10-K reports, various years.

guys. It looks like they are building something to compete with us.”⁵ Gates later commented that Google was “more like us than anyone else we have ever competed with.”⁶

Gates speculated that Google's long-term strategy involved the development of web-based software applications comparable to Word, Excel, PowerPoint, and other Microsoft products. Microsoft's strategy to compete with Google was keyed to making its search tool more effective than Google at providing highly relevant search results. Microsoft believed that any conversion of Google users to Live Search would reduce the number of PC users who might ultimately adopt Google's web-based word processing, spreadsheet, and presentation software packages. In 2008, Microsoft paid more than \$100 million to acquire Powerset, which was the developer of a semantic search engine. Semantic search technology offered the opportunity to surpass the relevancy of Google's search results since semantic search evaluated the meaning of a word or phrase and considered its context when returning search results. Even though semantic search had the capability to answer questions stated in

common language, semantic search processing time took several seconds to return results. The amount of time necessary to conduct a search had caused Microsoft to limit Powerset's search index to only articles listed in Wikipedia. Microsoft's developers were focused on increasing the speed of its semantic search capabilities so that its search index could be expanded to a greater number of Internet pages. The company's developers also incorporated some of Powerset's capabilities into its latest-generation search engine, Bing, which was launched in June 2009. Banner ads comprised the bulk of Microsoft's online advertising revenues, since its Bing search engine accounted for only 17.9 percent of online searches in July 2013.

Microsoft was also moving forward with its own approach to cloud computing. The company's Windows Live service allowed Internet users to store files online at its password-protected SkyDrive site. SkyDrive's online file storage allowed users to access and edit files from multiple locations, share files with co-workers who might need editing privileges, or make files available in a public folder for wide distribution. Office 365 was Microsoft's

cloud-based productivity software package and Azure was intended to allow businesses to reduce computing costs by allowing Microsoft to host its operating programs and data files. In addition to reducing capital expenditures for software upgrades and added server capacity, Azure's offsite hosting provided data security in the event of natural disasters such as fires or hurricanes.

Google's Performance in Early 2013

During its first quarter of fiscal 2013, Google had been able to achieve year-over-year revenue growth of 31 percent. The company's advertising revenues increased by 16 percent compared to the same period in 2012, and its operating income and net income recorded year-over-year increases of 25 percent and 24 percent, respectively. Commenting on the company's early 2013 successes, CEO Larry Page said the company was "investing in our products that aim to improve billions of people's lives all around the world."⁷

The company's strategic priorities in 2013 focused on expanding its share of mobile search and smartphone platforms, making Google+ some a strong competitor to Facebook, pushing forward with its plans to become the dominant provider of cloud computing solutions, expanding its broadband television service, increasing search advertising revenues from markets outside the United States, and extending its migration into hardware design, production, and marketing.

Generating an acceptable return on its \$12.5 billion Motorola Mobility acquisition was Google's highest priority in its hardware-related ventures. Google was able to offset the cost of the acquisition through the sale of Motorola patents that generated \$4 billion and through the sale of the Motorola Home division for \$2.35 billion. However, some industry observers were skeptical of the value of the

acquisition at any price given the maturity of the market and Google's lack of experience in hardware design and manufacturing. As of mid-2013, Motorola was not among the leading brands of smartphones, and reviews on the Moto X—the first Google-designed Motorola product—were lackluster. Such reviews were expected by Google executives since the company had been careful not to provide the Motorola division with any technological advantages that might adversely affect its key Android hardware partners such as Samsung, HTC, or LG. Additionally, the market growth for smartphones in most developed countries had slowed considerably since Google announced its intention to acquire Motorola Mobility. The maturing of the smartphone market in developed countries had already given rise to increased price competition in the United States in 2013. Google's Motorola division recorded operating losses of \$353 million during the fourth quarter of 2012 and \$271 billion during the first quarter of 2013.

The company did expect its acquisition of Motorola Mobility to provide the capabilities needed to expand into a variety of consumer electronics product categories beyond smartphones. In mid-2013, the company had a waiting list for its \$1,500 developer model Google Glass models and expected to launch a lower-priced mass market line by year-end 2013. The Glass project was not without challenges as individuals and privacy groups were concerned about the capacity of Google Glass wearers to record the conversations and actions of those near the wearer. Less-controversial new hardware projects under development at Google in 2013 were a wristwatch powered by the Android operating system and a video-game console. The company's ability to sustain its lofty stock price, which had appreciated by approximately 30 percent during the first six months of 2013, would ultimately be determined by the quality of its strategy and execution in all of its business units.

ENDNOTES

¹ Google, www.google.com/corporate, accessed July 13, 2010.

² As quoted in Brad Stone, "The Education of Larry Page," *Bloomberg Businessweek*, April 15, 2012, pp. 12–14.

³ Quoted in Google's Corporate Information, www.google.com/corporate/history.html.

⁴ "For Some Who Passed on Google Long Ago, Wistful Thinking," *The Wall Street Journal Online*, August 23, 2004.

⁵ Quoted in "Gates vs. Google," *Fortune*, April 18, 2005.

⁶ *Ibid.*

⁷ As quoted in "Google Announces First Quarter 2013 Results," Google press r elease, April 18, 2013.