



Google Inc.
December 17, 2014

General Overview

Google is a global technology leader focused on improving the way people connect with information. The company innovates in web search and adverting to make *www.google.com* a top internet property and one of the most recognized brands in the world. Businesses use the AdWords program and AdSense program to promote their products and services through advertising both on Google-owned properties and publishers' sites across the web. Through their internet properties Google collected roughly 12% of all advertising spending on the planet in 2013.



Purchase Logic

Google Inc. is one of the most influential and dominant companies in the world. The company's search platform provides a critical service that is extremely difficult to duplicate or replace. In the last 5 years Google has compounded revenue at a rate of more than 28% per year and owner earnings at a pace of 14%. The company fits our investment philosophy as a debt free business with more than \$57 billion in net cash and a dominant market position with more than 50% of the global market share for search. The company benefits from a strong network effect and a disconnect between the users who select the service (individuals that search the web) and the companies that pay for the service (advertisers). This allows Google to offer most of the company's products and services for free – meaning competitors cannot undercut them on price. After backing out the excess cash we effectively paid 19x future earnings for the business. This is a slight premium to the forward looking P/E ratio of 18x earnings for the average S&P 500 constituent, but Google is no average business.

Key Metrics

The key drivers for Google are Revenue, Gross Margin, Paid Clicks, Cost Per Click, and Owner Earnings. These key drivers are described in detail below.

Revenue

Google derives approximately 91% of revenue from advertising through online channels and 9% through other business activities. In 2014 the company divested Motorola Mobile which will increase the percent of revenues derived from advertising to over 95% of the business. It is our expectation that Google will increase revenues at a rate between 5% and 25% in any given year with a 10-year average of approximately 15%.

Gross Margin

The gross margin is dependent on the volume of search traffic through Google owned sites versus Network Member Sites. Google owned sites include web properties such as *www.google.com*, *www.google.com/finance*, *www.youtube.com*, *www.gmail.com*, and many others. These properties owned directly by Google have gross margins of approximately 75% meaning that at an average Cost-Per-Click of \$0.40 Google would incur roughly \$0.10 in operating expenses leaving \$0.30 as gross profit. The operating expenses include data center and personnel costs associated with running these internet properties.

In addition to sites directly owned Google has Network Members and distribution partners that drive traffic to Google's platform. These Network Members receive a percentage of the advertising revenue in exchange for these services. For example, in 2013 Apple received an estimated \$1 billion from Google by setting Google.com as the default search engine in Safari. These agreements work as a revenue share between the two companies whereby Google pays a large percentage of search generated through these channels to their Network Members and partners. We estimate that Google pays approximately 60-70% of revenue generated through this channel to their partners and retains the remainder. The gross margin through Network Members is less than 10%. Our expectation is that the gross margin from the paid search business would fluctuate year-over-year but remain relatively stable for the next 10 years.

Paid Clicks

When users search for various products or services using Google the top search results are often a paid advertisement. When a user clicks on one of these paid advertisements Google is paid by the company that bid on that advertising slot. These are known as 'Paid Clicks'. Paid Clicks are the primary source of revenue for Google. We anticipate Paid Clicks to increase at a rate between 5% and 25% in any given year with a 10-year average of approximately 15%. The primary drivers for increasing Paid Clicks are secular forces – such as increased digital advertising spend in mature markets, increasing penetration of internet users, the development and growth of emerging nations, and more. The increase in Paid Clicks will be the primary driver of Google's revenue growth in the years to come.

Cost Per Click

Companies around the world bid for the top spots on Google's properties. The companies that bid the most and provide the most relevant content based on search results receive the top spots. When a user clicks on one of these advertisements Google gets paid based on the amount bid by the advertising company. The amount paid to Google per click is known as the Cost Per Click. This value varies widely depending on the type of advertisement. For example, car insurance companies frequently pay as much as \$50 dollars per click for the top spots on Google. The average cost per click is not officially published by Google, but third party sources have estimated this to be around \$0.40 in 2014. Google does however publish the percentage change in cost-per-click each year. Our expectation is that this number would fluctuate +/- 20% in any given year, but over long periods of time would generally trend upward as advertisers continue to compete for top spots.

Owner Earnings

Owner earnings is a calculation of the cash generated by the business that would be available to owners after all capital expenditures required to maintain the competitive position of the business. The value of the company is directly related to this figure – the higher the earning power the more valuable the business. It is our expectation that Google will increase owner earnings at a rate similar to growth in revenue - between 5% and 25% in any given year with a 10-year average of approximately 15%.

Historical Performance of Key Metrics

Year	'09	'10	'11	'12	'13	CAGR or AVG
Total Revenue	\$23,651,000,000	\$29,321,000,000	\$37,905,000,000	\$50,175,000,000	\$59,825,000,000	26.1%
Gross Margin	63%	64%	65%	59%	57%	62%
<i>Estimated Paid Clicks</i>	53,593,166,000	63,277,510,476	79,420,000,000	108,988,095,238	140,892,210,145	27.3%
<i>Estimated Cost Per Click</i>	\$0.44	\$0.46	\$0.48	\$0.42	\$0.39	\$0.44
Owner Earnings	\$8,448,048,000	\$10,882,368,000	\$11,742,000,000	\$12,760,000,000	\$14,611,968,000	14.7%
YOY Earnings Growth	-	29%	8%	9%	15%	-
Cash	\$24,614,000,000	\$35,498,000,000	\$45,416,000,000	\$49,557,000,000	\$60,693,000,000	-
Debt	\$0	\$3,465,000,000	\$4,204,000,000	\$5,537,000,000	\$5,245,000,000	-

Revenue

Historically revenue has grown at a rate of roughly 26.1% per year for the last 5 years. This figure includes the acquisition of Motorola – which added additional revenue but had no contribution to owner earnings. Google recently completed the disposition of Motorola Mobility which will decrease revenue growth in 2015. The growth in revenue has been attributed to a continuous rise in the number of Paid Clicks.

Gross Margin

In 2012 Motorola was purchased by Google which had an adverse effect on gross margins, but this division was disposed of in late 2014. Excluding this division the Gross Margin for Paid Clicks continues to rise as Google continues to capture additional search traffic and Paid Clicks through company owned properties. This shift away from Network Members and distribution partners has been attributed to increased market share gain of the Chrome browser and Android operating systems. The ‘ecosystem’ of free Google products continues to capture the world’s attention and drive paid search inquiries through the company owned sites.

Paid Clicks

The Paid Clicks in the table above is an estimated value. Google does not publish the number of Paid Clicks in a given year, but does report the percent change in Paid Clicks. The value in 2009 was estimated based on third party research and subsequent years were calculated based on company reported changes in Paid Clicks. In the last 5 years Paid Clicks has increased from an estimated 53 billion to more than 141 billion today. This represents an average annual increase of 27%. We believe that this trend will likely continue long into the future as the digital world continues to become more central in our daily lives. The number of Paid Clicks globally is rising due to several factors:

- 1) The number of internet users continues to climb globally, particularly in emerging markets, which in turn increases the number of individuals performing paid search. This runway for continued growth is very long.
- 2) The number of Paid Clicks per capita in fully penetrated markets continues to climb as users utilize search engines more frequently on an annual basis. The growth in Paid Clicks continues to climb in mature markets such as the United States.
- 3) Businesses globally are focusing time and energy on creating relevant digital sites as the door step to the physical world. This website design process includes key word targeting and paid search campaigns geared toward becoming more relevant for Google searches. As these businesses bring more website content online the number of Paid Clicks will continue to rise.
- 4) General increases in population.

Cost Per Click

The Cost Per Click in the table above is an estimated value. Google does not publish the average Cost Per Click, but does publish the annual percentage change in Cost Per Click. The value in 2009 was estimated based on third party research and subsequent years were calculated based on percent changes report by Google. The Cost Per Click fluctuates year-over-year for a variety of reasons which include:

- 1) Companies' intentionally designing paid search campaigns to minimize Cost Per Click and maximize advertisement ROI. As companies discover more efficient channels to advertise their products Cost Per Click would decrease. However, as other market participants discover these channels bidding would rise until an equilibrium ROI is established for that channel.
- 2) Mature markets, such as the United States, tend to see Cost Per Click increase as companies continue to compete against one another for market share through this channel.
- 3) As additional users come online in emerging markets the number of Paid Clicks will increase, but these clicks will likely have a lower Cost Per Click due to the lower income levels in these regions of the world. This will reduce the overall average Cost Per Click, but have an incrementally positive impact on total revenue and gross profits.

Owner Earnings

Owner earnings has grown at a rate of 14.7% per year over the last 5 years. The difference between growth in revenue and growth an owner earnings can be attributed to the purchase of Motorola. Motorola contributed materially to revenue, but operated at a loss negatively impacting owner earnings. The disposition of this asset should allow owner earnings and revenue to track more closely in the upcoming years.

Summary of Key Metrics

Metric	Expectations
Revenue	Growth ranging from 5% to 25% per year Average of ~15% over 10 years
Gross Margin	Fluctuate +/- 5% Remain relatively flat over 10 years @ 62%
Paid Clicks	Growth ranging from 5% to 25% per year Average of ~15% over 10 years
Cost Per Click	Fluctuate +/- 20% Remain relatively flat over 10 years @ \$0.40
Owner Earnings	Growth proportional to Revenue

The Moat Around The Metrics

There are three contributing factors that make up the wide economic moat surrounding Google's competitive position: Consumer / Payer Disconnect, Network Effect, and Brand Name.

Consumer / Payer Disconnect

Google benefits from the disconnect between the individuals who use the company's services and the businesses that pay for advertising. Individuals all around the world are able to use Google's services for free and have no incentive to switch providers. This massive user base is valuable as Google is able to leverage these individuals search queries for profits. Businesses interested in advertising on this platform pay Google through an auction format for ad placements. This creates a natural disconnect between the consumers of the service

(individuals performing search) and the payers of the service (the businesses wanting to advertise). This disconnect makes it impossible for competitors, such as Yahoo! or Bing, to undercut Google on price.

Network Effect

Google benefits from a powerful network effect. Google is able to optimize search engine results based on the behavioral patterns of the user base. The more individuals that search using Google the more data Google has to improve search results. The more people that search, the better the results, the better the results, the more people that search.

In addition to this network effect Google also benefits from the massive global effort that businesses invest into building Google relevant websites. Companies all around the world strive to make their websites more relevant for Google searches. These businesses put tremendous time and energy into ensuring that their websites have the right content to target the right customers. As these companies labor for relevancy it improves the search results for individuals utilizing Google's search engine.

Brand Name

Google has the most powerful brand name in the world when it comes to search. Companies such as Yahoo! and Microsoft (Bing) have attempted to gain market share using widgets and gadgets that replace the default search engine on many web browsers. In general these attempts to steal market share have failed as individuals tend to disable these ad-ons and return to Google. People globally prefer Google as the search engine of choice. The company is well known for outstanding products that are offered for free and these free services have created intense loyalty among users all around the world.

Risks

Every investment faces risk, but we believe that Google is an extremely safe business with a wide economic moat. We have identified below some potential risks that are both short-term and long-term in nature.

Short-Term Risks

- Distribution partners, such as Apple or Mozilla, drop Google as the default browser. This would decrease Paid Clicks and reduce revenue in the short-term. Losing Apple as a distribution partner for Safari would cost Google approximately \$500 million in lost revenue (after the revenue share). It would take approximately 3 months to regain this lost volume at current growth rates in search.
- Cyber Attacks. Google is subject to large and intentional cyber-attacks on a daily basis. We believe that the company has one of the most comprehensive security programs in the world and in the event of an attack would recover quickly without damage to brand reputation or market share.

Long-Term Risks

- Anti-Trust Litigation. Google constantly faces pressure from governments worldwide due to the company's powerful competitive position in the market place. In the event that various nations litigate against Google it could materially impact Google's business.
- Search Engine Traffic Decreases Materially. It is possible that the world of Apps would allow users to circumvent the internet for a portion of search. For example, an Amazon retail app would allow users to make e-commerce purchases without initiating a search through an engine like Google. While we believe this phenomenon will occur on a small scale we do not anticipate a major secular shift.
- Poor Capital Allocation Decisions. Google has never paid out a dividend or repurchased shares. Since the inception of the firm the profits have largely built up as cash and not been deployed into any major projects

or initiatives. It is possible that Google may make a poor decision with regards to how the \$62 billion in cash is deployed.

- **Tight Corporate Governance.** Larry Page, Sergey Brin, and Eric Schmidt effectively control 61.7% of the voting shares of the company. The corporate governance of the company is largely dictated by these three individuals.

Conclusion

In conclusion Google has been able to grow revenue and owner earnings in excess of 20% for the last 10 years through increased search traffic and additional paid clicks. The company has a wide economic moat due to a strong network effect, a disconnect between consumers and payers, and a powerful brand name. Companies such as Apple, Microsoft, and Yahoo! have been unable to steal market share for over a decade despite substantial investment into the sector. We believe that secular trends, such as increased internet penetration in emerging markets and increased paid search per capita, will allow Google to effortlessly continue to grow for the foreseeable future. Our purchase price of 19x forward looking earnings compares favorably with 18x forward looking earnings of the average S&P 500 constituent given the outstanding quality of Google's business and pristine balance sheet.

Works Cited

- 1) *GOOG Annual Report - SEC Filing 10-K*. EDGAR, 2013.

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