



ALPHABET SOUP: MOSTLY GOOGLE, BUT LOTS OF BETS!

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Facebook Effects

- The Market Turns: In my last two posts, I looked first at the turn in the market against the FANG stocks, largely precipitated by the Facebook user data fiasco and then at the effect of the blowback on Facebook's value.
- Change is coming: I argued that changes are coming from both outside (regulators and legislation) and inside (to protect data better), and these changes are unlikely to be just directed at Facebook.
- But is the write down justified? It is this perception that has probably led the market to mark down other companies that have built business models around user/subscriber data and in these next posts, I would like to look at the rest of the stocks in the FANG bundle and the consequences for their valuations, starting with Google in this one.

The One Number

- In a typical intrinsic valuation, there are dozens of inputs that drive value but there is one variable, that more than any other, drives value and it is critical to identify that variable early in the valuation process for two reasons:
 1. Information Focus: Knowing the key value driver allows you to focus your information collection around that variable, rather than get distracted by the other inputs into value.
 2. Management Questions: If you have the opportunity to question management, your questions can then also be directed at the key variable and what management is doing to deliver on that variable.
 3. Disclosure Tracking: Having a focus allows you to zero in on the parts of the earnings report that are most relevant to value.

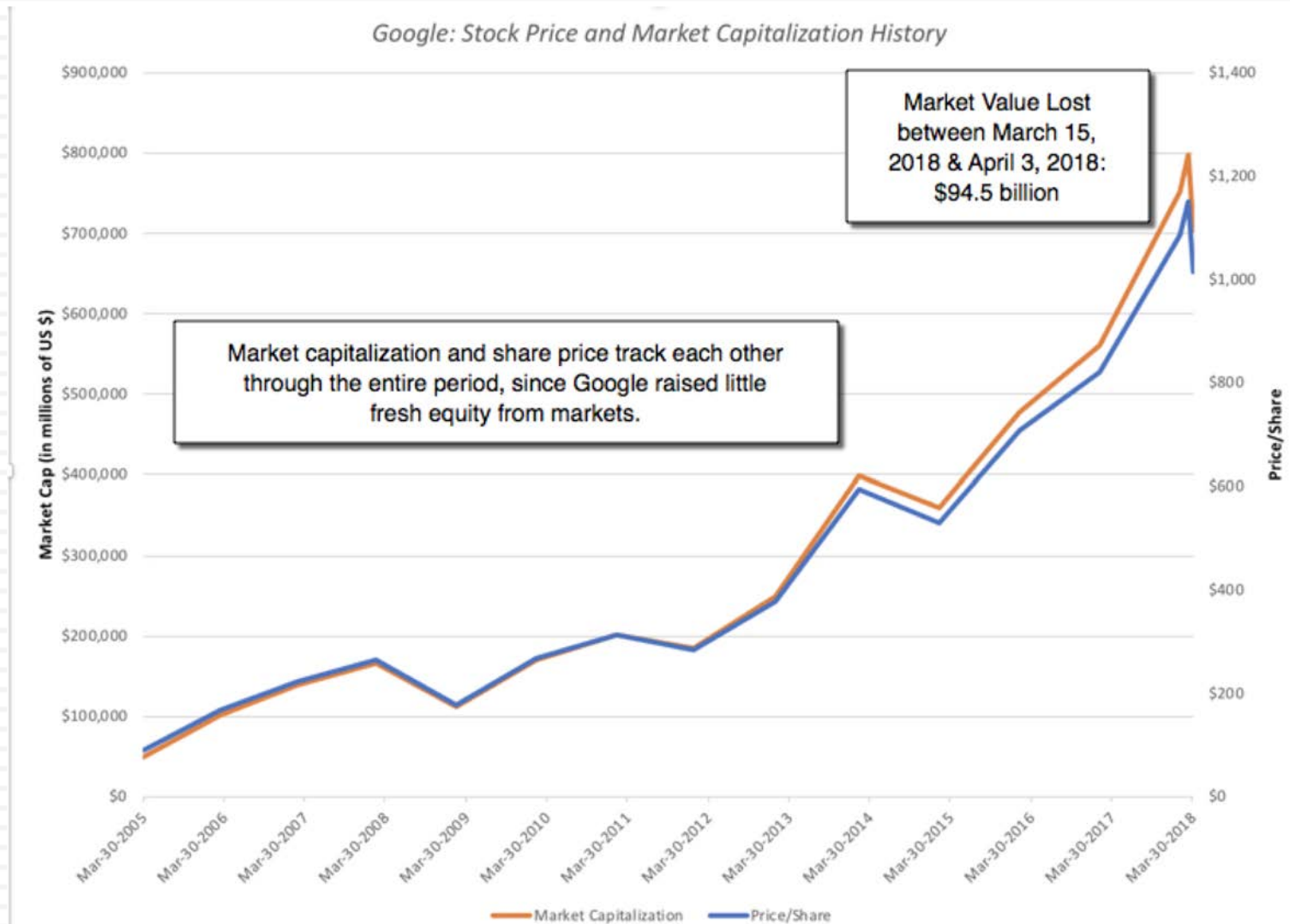
Finding the Value Driver: Key Characteristics

- Big Value Effects: Changing your key driver variable should have large effects on the value that you estimate for a business. One of the benefits of asking what-if questions about the inputs into a valuation is that it can allow you to gauge this effect.
- Uncertainty about Input: If an input has large effects on value, but you feel confident about it, it is not a driver variable. Conversely, if you have made an estimate of input and are uncertain about that number, because it can change either due to management decisions or because of external forces, it is more likely to be a driver input.

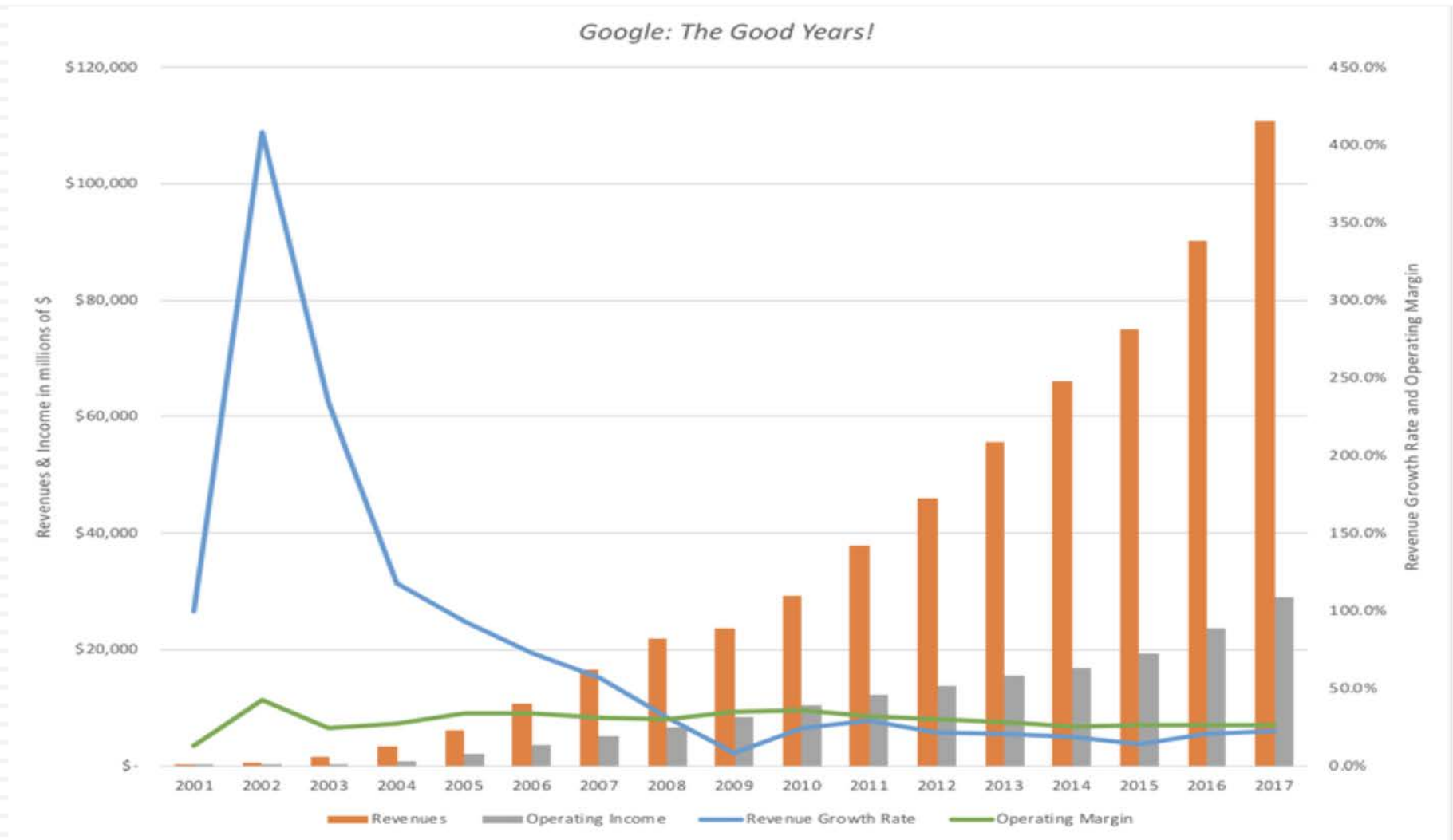
Implications

- Different across companies: The first is that the key value driver can and will be different for different companies; a mechanistic focus on the same input variable with every company that you value will lead you astray.
- Investor Judgment: The second is that there is a subjective component to your choice, and the key value driver that I identify for a company can be different from the one you choose for the same company, reflecting perhaps the different stories that we may be telling in our valuations.

Google's Market History



Google's Operating History



The State of Play

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1. Advertising Duopoly? Google and Facebook are converting online advertising and perhaps all of advertising into a duopoly. Each plays to different strengths and at least so far, they are getting revenues from other players, rather than each other.
2. Google is everywhere. It's core business is its search engine, but that is supplemented with other products and services.
3. Alphabet is still mostly advertising, very little other businesses.

1. A Duopoly in Advertising

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- Digital Advertising is becoming a larger slice of the advertising business: In 2017, the total spent on advertising globally was \$584 billion, with digital advertising accounting for \$228.4 billion.
- GOOG and FB dominate: Google's market share in 2017 was 42.2%, and Facebook's market share was 20.9%.
- And are getting more dominant: Even more ominously for the rest of their competitors, they got bigger during the year, accounting for almost 84% of the increase in digital advertising during the course of the year, not counting China.

2. The Google Suite is expansive

- Not just a search engine: Google's hold on the game starts with its search engine, but has been enriched by its other products, Gmail, with more than a billion users, YouTube, which dominates the online video space and Android, the dominant smart phone operating system.
- Broad reach: If you add to this Google shared documents and Google Home, the company is everywhere that you are, and is harvesting information about you at each step.
- If you think Facebook knows a lot about you, you should find out what Google does: During the last week, a New York Times reporter downloaded the data that Facebook had on him and while what he found disturbed him, both in terms of magnitude and type, he found that Google had far more data on him than Facebook did.

3. Mostly Alpha, Very Little Bets

	2015		2016		2017	
Advertising - Search	\$ 52,357	69.82%	\$ 63,875	70.69%	\$ 77,788	70.17%
Advertising - Other Google	\$ 15,033	20.05%	\$ 15,598	17.26%	\$ 17,587	15.86%
Advertising - Total	\$ 67,390	89.87%	\$ 79,473	87.95%	\$ 95,375	86.04%
Apps, Cloud and Hardware	\$ 7,154	9.54%	\$ 10,080	11.16%	\$ 14,277	12.88%
Google Revenues	\$ 74,544	99.41%	\$ 89,553	99.10%	\$ 109,652	98.91%
Other Bets Revenues	\$ 445	0.59%	\$ 809	0.90%	\$ 1,203	1.09%
Alphabet Revenues	\$ 74,989	100.00%	\$ 90,362	100.00%	\$ 110,855	100.00%

The Bottom Line

- Google has changed the advertising business and it dominates it, with Facebook representing its only serious competition.
 - ▣ It's large market share should act as a check on its growth, but Google has been able to still show growth by growing the digital portion of the advertising business and claiming the lion's share of that growth, again with Facebook.
 - ▣ The wild card is whether the data privacy restrictions and regulations that are coming will crimp one or both companies in their pursuit of ad revenues.
 - ▣ As digital advertising starts to level off, Google will have to look to its other businesses to provide it a boost.

The Google Story

- In valuing Google, I will assume that it will continue to grow, but I set the revenue growth rate at 12% for the next five years, below the 15% growth rate registered in the last five, for two reasons.
 - ▣ The first is that digital advertising's rise has started to slow, simply because it is now such a large part of the overall advertising market.
 - ▣ The second is that data privacy restrictions, if restrictive, will take away one of Google's network benefits.
- I do think that the profitability of Google's businesses will stay intact over time, with operating margins staying at the 27.87% recorded in 2017.

Alphabet

The Story

Alphabet will continue to increase its market share of the advertising business and build revenues, with little help in the near future from its other businesses. Its margins will stay high and the company's suite of products (Gmail, Android, Search) will allow it to retain a competitive edge, and the company will also be able to use YouTube's strong user base to not only add to its advertising revenues but build a subscription model to compete with streaming companies. Over time, one or more of its bets (Nest, Waymo, Verily) will pay off, allowing for a growth boost.

The Assumptions

	Base year	Years 1-5	Years 6-10		After year 10	Link to story
Revenues (a)	\$ 110,855	12.00% → 2.75%			2.75%	Digital ad market growth slows and data privacy laws dull Google's edge.
Operating margin (b)	27.87%	27.87% → 27.87%			27.87%	Business stays a low cost, high margin one.
Tax rate	24.30%	24.30% → 25.00%			25.00%	Increases slightly to global average.
Reinvestment (c)		Sales to capital ratio 2.03		RIR =	22.92%	Reinvestment will be in technology and in occasional acquisitions.
Return on capital	25.36%	Marginal ROIC =	56.59%		12.00%	Strong competitive advantages.
Cost of capital (d)		8.26% → 8.00%			8.00%	Ad business is sensitive to economy.

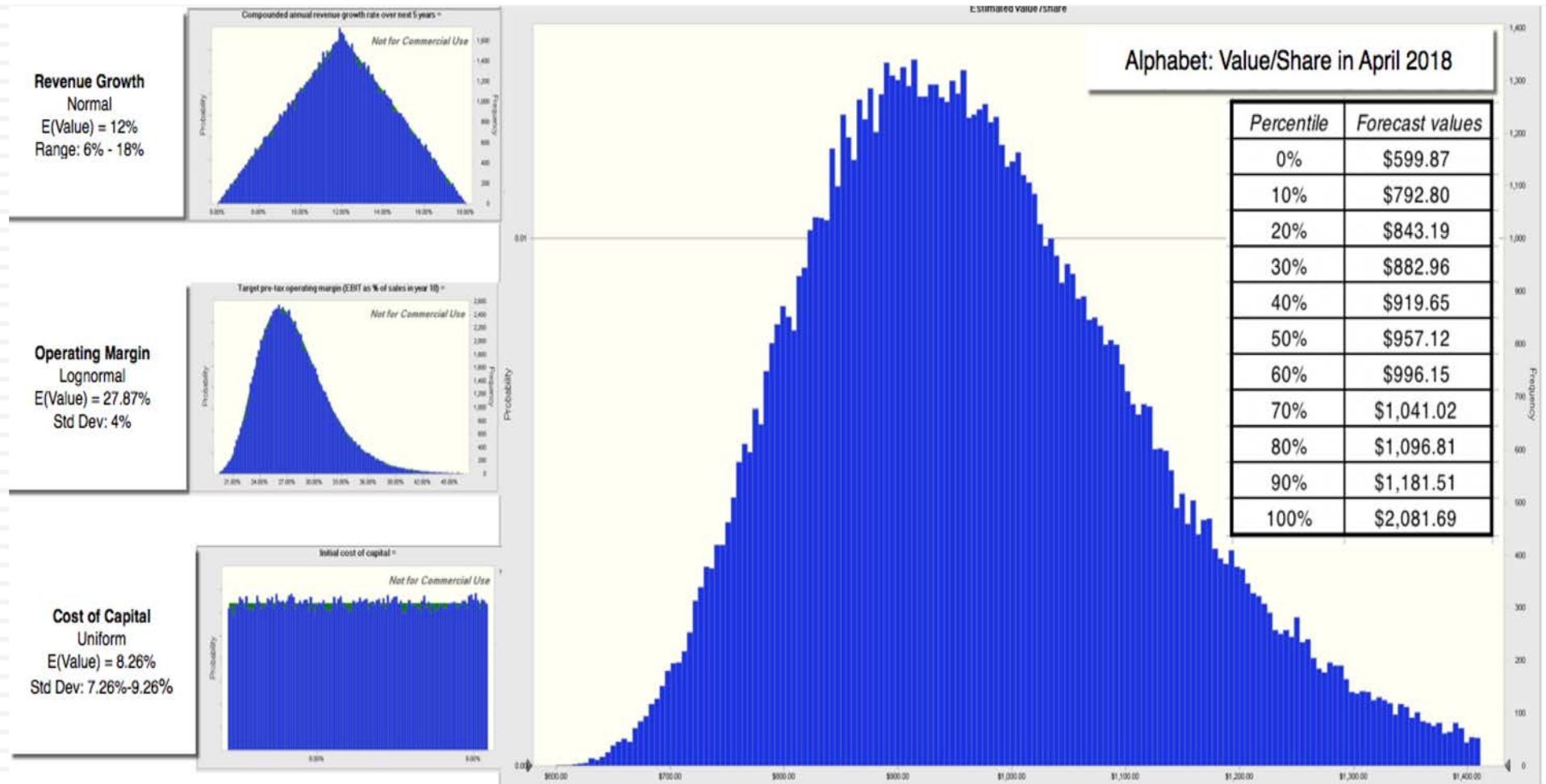
The Cash Flows

	Revenues	Operating Margin	EBIT	EBIT (1-t)	Reinvestment	FCFF
1	\$ 124,158	27.87%	\$ 34,606	\$ 26,196	\$ 6,552	\$ 19,644
2	\$ 139,057	27.87%	\$ 38,758	\$ 29,340	\$ 7,338	\$ 22,002
3	\$ 155,743	27.87%	\$ 43,409	\$ 32,861	\$ 8,219	\$ 24,642
4	\$ 174,432	27.87%	\$ 48,618	\$ 36,804	\$ 9,205	\$ 27,599
5	\$ 195,364	27.87%	\$ 54,452	\$ 41,220	\$ 10,310	\$ 30,911
6	\$ 215,194	27.87%	\$ 59,979	\$ 45,320	\$ 9,767	\$ 35,554
7	\$ 233,055	27.87%	\$ 64,958	\$ 48,991	\$ 8,797	\$ 40,194
8	\$ 248,087	27.87%	\$ 69,147	\$ 52,054	\$ 7,404	\$ 44,650
9	\$ 259,499	27.87%	\$ 72,328	\$ 54,347	\$ 5,621	\$ 48,727
10	\$ 266,635	27.87%	\$ 74,317	\$ 55,738	\$ 3,515	\$ 52,223
Terminal year	\$ 273,968	27.87%	\$ 76,361	\$ 57,271	\$ 13,125	\$ 44,146

The Value

Terminal value	\$ 840,879		
PV(Terminal value)	\$ 382,994		
PV(CF over next 10 years)	\$ 213,894		
Value of operating assets =	\$ 596,889		
Adjustment for distress	\$ -	Probability of failure =	0.00%
- Debt & Minority Interests	\$ 11,590		
+ Cash & Other Non-operating assets	\$ 95,871	Reduced by \$ 9 billion for untrapping cash; Google set aside \$9.9 billion in 4Q, 2017	
Value of equity	\$ 681,170		
- Value of equity options	\$ -		
Number of shares	703.00		
Value per share	\$ 968.95	Stock was trading at = \$1,030.00	

Uncertainty Incorporated...



My Investment Judgment

- The median value is about \$957 and at a stock price of \$1,030, there is a 65% chance that the stock is over valued.
- As with Facebook, there is a positive skew in the outcomes, and that skew will get only more positive, if you build in a bigger payoff from one of the bets.
- I have never been a Google shareholder, and that has cost me over time, but this is as close as I have ever been to owning the stock. I have a limit buy at \$950.

Google's Value Driver

		CAGR in Revenues (next 5 years)				
		4%	8%	12%	16%	20%
Pre-tax Operating Margin	20%	\$ 557.53	\$ 646.39	\$ 755.61	\$ 889.27	\$ 1,052.10
	25%	\$ 640.09	\$ 752.51	\$ 891.10	\$ 1,061.11	\$ 1,268.68
	30%	\$ 722.66	\$ 858.64	\$ 1,026.58	\$ 1,232.94	\$ 1,485.28
	35%	\$ 805.22	\$ 964.76	\$ 1,162.08	\$ 1,404.78	\$ 1,701.83
	40%	\$ 887.78	\$ 1,070.89	\$ 1,297.55	\$ 1,576.61	\$ 1,918.41

My Judgment

- In my judgment, **Alphabet's bigger challenge is revenue growth**, not margins, and it is that input that will cause its valuation to rise or fall.
 - ▣ The downside: If the data privacy restrictions handicap Facebook and Google so badly that they lose a big part of what has allowed them to dominate digital advertising for the next five years, Google's revenue growth and value will drop dramatically.
 - ▣ The upside: However, Google is just starting to tap the potential in YouTube, and if it is able to position it as a competitor to Spotify, in music streaming, and Netflix, in video streaming, it could discover a new source of revenue growth, with strong operating margins.