

November, 18, 2017

Zillow Group, Inc.: ZG
 Ryan Rosmarin

Sector: Information Technology
Industry: Internet Based Services – Real Estate
Current Price: \$39.20
Target Price: \$51.47

Company Description: Zillow Group, Inc. is the leading real estate and home information mobile and web platform in the United States. With a database of over 110 million homes, Zillow’s platform of products allow consumers to find dynamic information on real estate listings and connects them with local professionals to satisfy their buying, renting, selling, and financing needs. To maximize opportunities and connect consumers, Zillow works with tens of thousands of real estate agents, lenders, and rental professionals to meet the needs of their growing market share. Zillow’s platform also includes the brands Trulia, StreetEasy, HotPads, Naked Apartments, and Realestate.com.

BUY

Current Price:	\$39.20
Target Price:	\$51.47
Market Cap:	7.19B
52 Week Range:	\$32.63-\$50.91
Average Volume:	450,000
D/E Ratio:	0.15
Sales Growth:	29.65%
EBITDA Growth:	156.32%
ROIC:	7.9%
WACC:	13.4%
12M Total Return:	13.56%

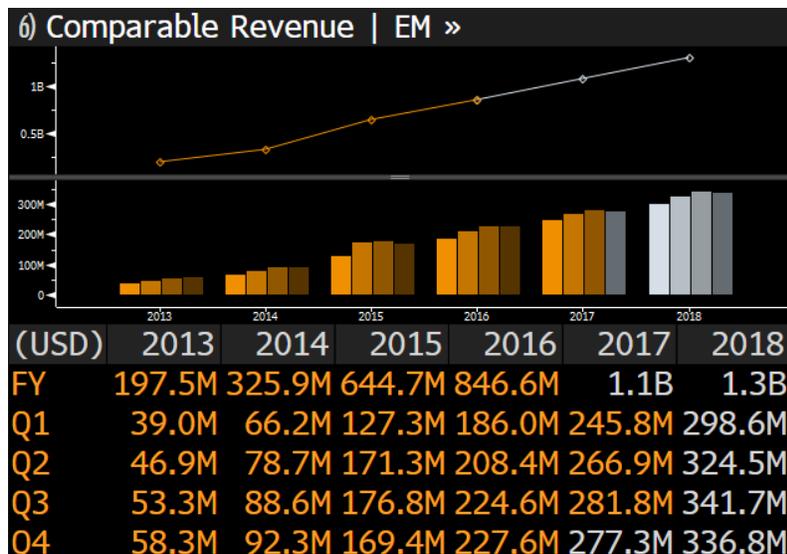
Catalysts:

- **Short-Term** (within the year): Quarterly earnings report est. release in February 2018. New additions to platform and increasing user activity.
- **Mid-Term** (1-2 years): Forecasted growth outlook within the Information Technology sector and economic optimism under Trump administration.
- **Long-Term** (3+years): Continual growth of the expected \$50tn+ internet based services market by 2026 as the population increasingly becomes more reliant on technology.



Thesis:

Zillow Group, Inc. is the leading force in the United States online Real Estate advertising market and will continue to drive demand within the growing internet based services industry. Currently valued near its 52-week low of \$32.63, Zillow is underpriced and presents a great buying opportunity for stock appreciation. In a real estate environment of rising prices and low supply, Zillow continues to expand its platform, increase its web users, and significantly grow its revenue and margins. With a 5-year sales CAGR of 21% and an accelerating online services industry, Zillow Group is an attractive investment with high growth potential for both short and long-term investment strategies.



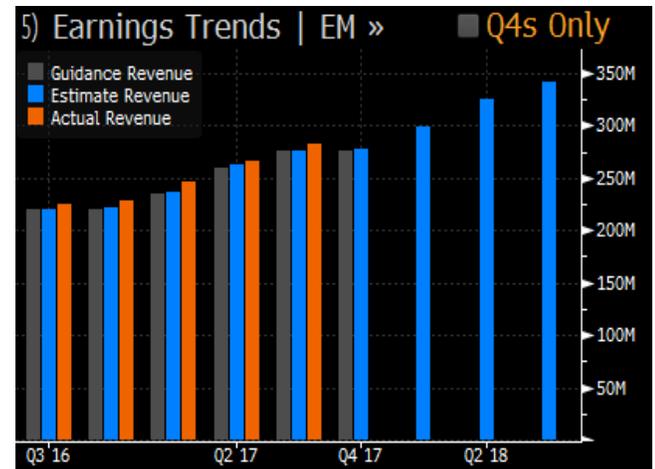
Business Overview:

Zillow Group, Inc. is the leading provider of online real estate advertising and information in the United States. Connecting both consumers and professionals, Zillow continually adds products to its service platform and database of over 110 million U.S. homes. As consumer trends continue to lean toward online real estate information services vs. traditional methods, Zillow continues to increase its network of real estate, rental, and mortgage professionals on its platform. Zillow generates revenue from the sale of its advertising services and suite of tools to businesses, professionals, and brand advertisers within the real estate, rental, and mortgage industry. Zillow operates its trusted and transparent marketplace with two business segments, Marketplace revenue and Display revenue. Zillow's Marketplace segment mainly consists of revenue from its Premier Agent program, which offers a package of marketing and business technology products and services to allow professional agents to achieve their advertising needs and grow their personal brand. This segment also consists of other real estate revenue, primarily including sales generated by Zillow Group Rentals and advertising sold to mortgage lenders. Mortgage revenues are also generated by Mortech, which Zillow uses to provide subscription-based mortgage software solutions, such as their pricing engine and lead management platform. Zillow's Display segment consists of its graphical mobile and web advertising sold on a cost-per-click basis to advertisers promoting their brands on the Zillow mobile applications and websites, as well as its partner websites. On the consumer side of real estate, Zillow provides home profiles that include detailed information on pricing, property facts, listing details, purchase, and sales data, as well as a wide variety of photos. Zillow applications also includes millions of reviews for consumers on real estate, rental and mortgage professionals within the area. Zillow Group also includes the acquired advertising brands Trulia, StreetEasy, HotPads, Naked Apartments, and Realestate.com. In addition, Zillow offers services related to home financing and home equity loans, as residential real estate is one of the largest sectors in the U.S. economy and serves a variety of professionals. In 2016, real estate agents and brokers spent an estimated \$5.9bn on advertising, and have continued to increase their expenditure throughout 2017.



Quarter 3 Earnings Performance:

In Q3 2017, Zillow Group beat high-end estimates by \$4.0mn and reported revenue of \$281.8mn, an increase of 25.5% year-over-year. EBITDA margins were 25.2% (\$71.0mn) due to strong market growth across all marketplaces and cost savings. Quarter 3 net income was \$9mn, totaling more than 3% of revenue as Zillow's profit margins continue to improve. Customer engagement increased 19% year-over-year to around 1.7 billion as Zillow's services continued to increase in popularity. Revenue per 1,000 platform visits grew 6% yoy and the group of advertisers spending more than \$5,000/month increased 88% on a total dollar basis. In addition, aggregated unique visitors across Zillow Group properties reached 175.2 million, an increase of 6.5% yoy. From a segmented standpoint, Marketplace revenue increased 27% yoy to \$263mn driven by 29% growth in real estate revenue and 6% growth in mortgage revenue. Premier Agent revenue grew 24% yoy to \$197.1mn, generating 5% yoy increase in Premier Agent revenue per visit and the largest amount of sales in the Marketplace segment. Other real estate grew 55% yoy to \$44.8mn and mortgage revenue reached \$20.9mn. Zillow's Display revenue segment grew 8% yoy to \$19.1mn due to stronger brand sales and growth in user traffic. Revenues from current advertising customers increased 45% yoy with new sales contributing 52% of total bookings. User activity in disaster areas slightly declined in September in response to hurricane and wildfires, but are fully expected to return to normal, if not increasing levels. Total operating expenses for Q3 were \$267.1mn consisting of 38% marketing, 30% technology and development, 19% SG&A, 8% COGS, and 5% other.



Growth Strategy & FY17 Outlook:

Zillow Group intends to rewire the real estate industry with their four-step strategy of entering, searching, connecting, and closing, adding value for both consumers and professionals. Zillow plans to continually take advantage of the incremental increases in online real estate through its long-term strategic priorities of increasing audience size and customer engagement, growing Premier Agent, growing emerging marketplaces, and attracting/retaining top talent within the industry. With customer engagement reaching an all-time high in Q3, Zillow plans to drive growth through amplified advertisement via television, outdoor advertisements, and the web. With 2/3 of Zillow's usage occurring on mobile devices, Zillow is significantly benefiting from the shift of desktop to mobile devices. Having access to more than 23,000 zip codes and 95% coverage of all active listings in the US, Zillow also finds it crucial to grow Premier Agent, which generates 71% of its sales. Premier Agent growth is driven with the expansion of new services such as the Premier Broker program and team account service. These products allow agents and brokerage firms to purchase advertising in new ways that lead to improved consumer experiences and increased efficiency. New products also include Premier Agent Direct, My Agent, Home Capture, Instant Offers, and the creation of a single-source communications platform that allows agents to email and text clients directly from the app, moving client communications all in one place. Agent Direct allows agents to advertise listings on sites such as Trulia and Facebook, and My Agent creates a contact box that shows the consumers chosen agent, rather the traditional method of moving them to another internal system to share listings. The Zillow Group Home Capture App will allow consumers to experience a 3D home tour on mobile and web devices, letting them narrow down searches

before visiting in person. Currently in its pilot markets of Orlando and Las Vegas, Zillow Instant Offers enables sellers to easily submit home information, receive a comparative market analysis, listing presentation from a Premier Agent, and actual offers from investors. If the seller chooses an offer, they will receive control and certainty on the sale of their asset in a predictable period. Growth in emerging marketplaces will be driven by the connection of mortgages with Zillow’s real estate sites and by consumers seeking purchase loans in the current environment of low interest rates and strong housing demand. After a 56% yoy revenue growth in rentals, Zillow expects to drive further growth with the launch of Rental Inform, a cloud-based data dashboard with exclusive real-time rental market and aggregated consumer insights. This strategy will drive engagement through personalization and machine learning as it will efficiently align the right properties for the right renters. Significant growth in the New York City market is expected as well, due to the extended multi-year agreement for Realty, Corcoran Group, Citi Habitats, and Sotheby to keep their listings displayed on Zillow’s StreetEasy platform. New York City is a crucial market for Zillow as it attracted near 13 million visits during Q3 and contributes large amounts in rental sales. Lastly, Zillow continues to invest and expand in the new construction marketplace. In Q3 Zillow acquired New Home Feed, which allows builders to input, manage, and syndicate their listings across the web.

Industry Analysis:



The overall forecast for the Information Technology sector on the NASDAQ index continues to look promising, as its Internet index has outperformed the NASDAQ Index by 9.74% YTD. The NASDAQ Internet index (QNET) has returned 39.57% YTD as R&D continues to pour into technological innovation, driving growth for the industry as a whole. High levels of product elasticity and substitutes spur competition within the index putting upward pressure on the profit margins of companies who can successfully adapt. In a more narrowed aspect, the online payment sub-segment is currently estimated at volume of \$28tn and is forecasted to almost double to \$50tn by 2026. The current housing environment of rising prices and low

inventories within the real estate industry will increase demand for Zillow’s services for both real estate professionals and consumers. Increased demand with low supply will drive the need for advertising among agents and information for consumers as they look for fair deals. This is a positive growth environment for Zillow who will continue to be the leading provider in the real estate advertisement industry. Another driver of the industry is the economic optimism under the Trump Administration. Markets continue to act bullish despite geopolitical concerns and a projected increasing rate environment. Trump’s pro-growth strategy, tax-cuts, and deregulation should have a positive influence on e-commerce, as companies will have an easier time gaining access to new markets and expanding their business.

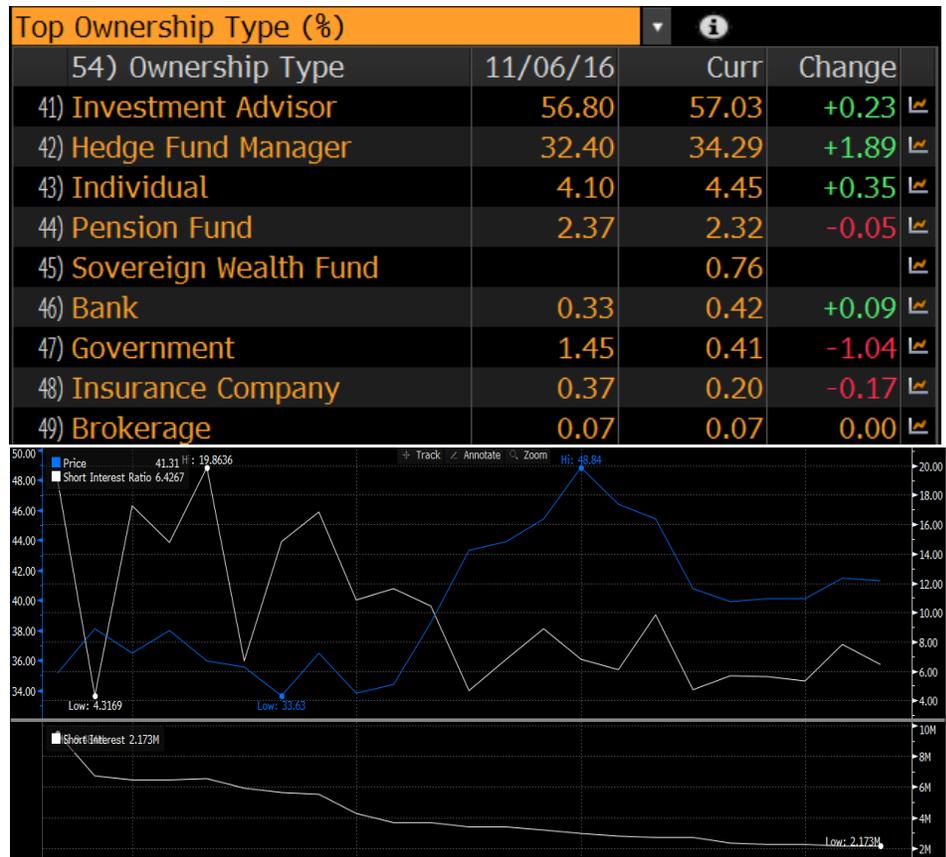
Peer Analysis:

Zillow Group is the leading force in online real estate advertisement and does not have significant competition among other publicly traded companies. Most of Zillow’s competition comes from the threat of participants using traditional methods of real estate advertisement, and bypassing Zillow’s service. Zillow continues to beat traditional advertising and drive organic growth as they have consistently increased premier agent subscribers and website hits, growing 19% in Q3 and 17% in Q2. Compared to other companies within the internet based services industry, Zillow is accelerating growth at a pace well above its peers. EBITDA has grown 156.32% ttm and has an expected 5 year CAGR of 36%, significantly beating the industry average of 27%. Although EBITDA margins are currently below the median of its comparable at 11.22%, they are expected to nearly double to 22% through year-end. EBITDA margins are expected to increase to 25.5%, 27.0%, and 28.7% from 2018-2020 respectively. Operating Income margins are relatively small compared to others due to large amount of depreciation and amortization expense associated with technological and software development. Net Profit margins are currently low compared to its peers, but will increase as Zillow becomes profitable in 2018. Net Profit margins are expected to increase 5.85%, 10.15%, and 14.09% in 2018-2020 respectively.

Name	Curr Adj Mkt Cap	Sales Growth (%)	EBITDA Growth (%)	EBITDA Margin	Operating Income Margin	Net Profit Margin
Median	5.47B	22.52%	24.42%	13.17%	7.87%	2.58%
100) ZILLOW GROUP INC - A	7.39B	29.65%	156.32%	11.22%	0.72%	-1.32%
101) NEWS CORP - CLASS A	8.95B	-0.13%	21.91%	13.05%	7.87%	2.58%
102) GODADDY INC - CLASS A	8.11B	18.36%	32.02%	13.17%	4.40%	2.33%
103) MATCH GROUP INC	8.03B	16.56%	9.80%	30.40%	26.87%	33.05%
104) GRUBHUB INC	5.47B	35.02%	24.42%	22.33%	15.34%	10.24%
105) TRIPADVISOR INC	4.17B	5.30%	0.87%	15.02%	8.06%	4.34%
106) YELP INC	3.81B	22.52%	332.19%	7.46%	2.49%	2.04%
107) STAMPS.COM INC	3.06B	34.68%	49.23%	39.10%	34.28%	22.29%
108) TRIVAGO NV - ADR	2.52B	52.95%	-77.23%	-3.38%	-5.89%	-6.72%

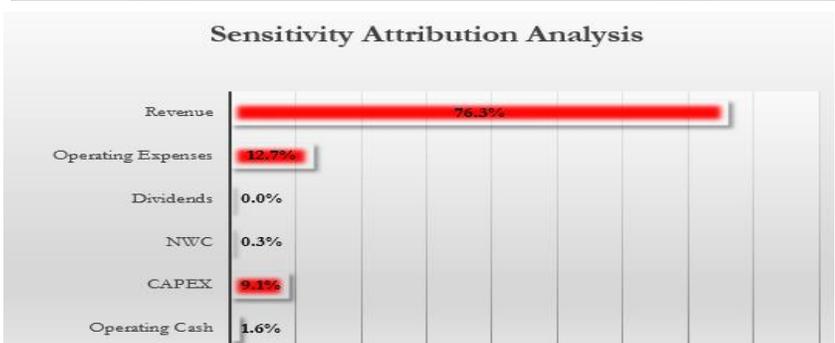
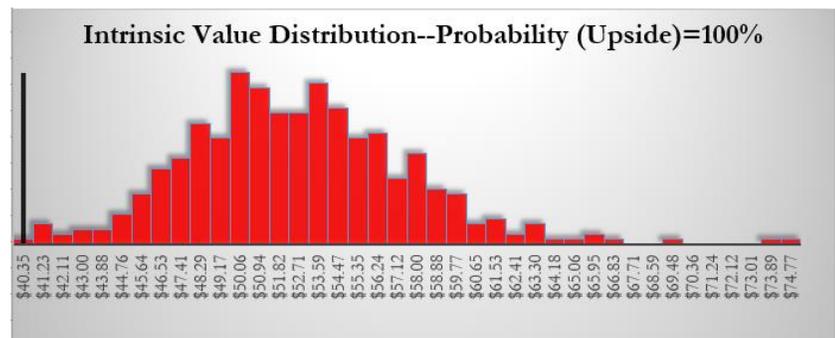
Ownership Summary:

Zillow Group is primarily held by investment advisory firms (57.03%) and hedge fund managers (34.29%). Over the past year, there has been minimal changes to the proportion of ownership levels in Zillow as investment advisors and hedge funds have only increased 0.23% and 1.89% respectively. Top investment advisory holders are T Rowe Price Associates, Vanguard Group, and Wellington Management Group with positions of \$5.7mn, \$4.3mn, and \$3.2mn, respectively. Many large investment firms are increasing their positions in Zillow such as Blackrock, Goldman Sachs, Credit Suisse, and Charles Schwab. Shares are primarily held in the United States, followed by Australia and the United Kingdom with ownership levels of 62.49%, 24.31%, and 5.92% respectively. Zillow has 98.78% of its shares outstanding as freely floated with 4% in short interest. Short interest has decreased significantly from a high of 19.8 days in March to 6.4 days in November since Zillow has been outperforming analyst expectations.



Forecast:

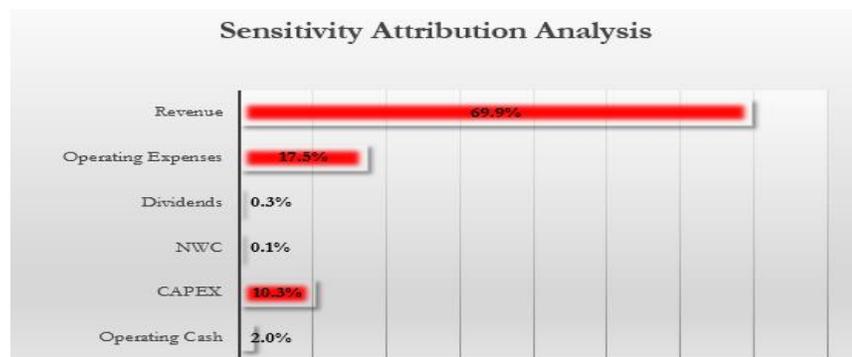
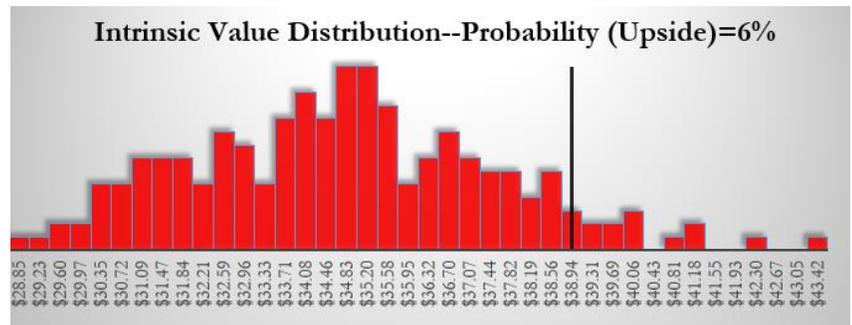
Zillow Group's price is very sensitive to revenue as it heavily relies on its ability to increase its real estate advertisement subscribers and consumers looking to buy/sell homes in the market. Operating costs are low since Zillow operates an online service and therefore do not have a large effect on the value of Zillow's stock price. In the current bull market environment, Zillow has the potential to increase its stock price to \$51.47, appreciating 31.29% from its current price level. This assumes that Zillow is able to maintain their steady sales growth with a constant growth rate of 5.5%. Costs will also



continue to decrease towards 70% of sales and eventually to 62% of sales in the long-term.

Downside Risk:

Zillow’s downside risk is a stock price depreciation of 13.27% to \$34.00 per share with a probably upside of only 6%. This forecast assumes that Zillow achieves its low earnings estimates and is only able to grow at a constant growth rate of 3%. Operating expenses have a bigger effect as they would only decrease to 70% of sales, as Zillow would likely have to increase their marketing expenditure. This scenario is unlikely, but possible if the real estate industry takes a downward turn. Housing demands could potentially decline if interest rates rise and the stock market loses stamina and begins to fall, leading the economy into distress. New competition in the real estate advertising industry could be a potential threat to stock appreciation as well.



Conclusion:

Growth forecasts within the Information Technology and internet based services industry provide a positive outlook for Zillow Group Inc., the leading provider in online real estate advertising. With demand in the housing industry continually increasing, Zillow holds a strong position to attract new advertisement subscribers due to increased competition in the real estate environment. Organic growth will also continue to accelerate as consumers seek information and professional help with the high prices and low supply of current housing markets. Zillow continues to add new software and services to its platform, providing them with a competitive advantage as the world shifts online. Zillow will appreciate 31.29% within the next year and provides a strong buying opportunity for both short and long-term investment strategies.

Zillow Group, Inc. (ZG)

CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by RYAN BOSMARIN
11/14/2017

Current Price:
Dividend Yield:

\$39.20
0.0%

Intrinsic Value
Target Price:

\$43.67
\$51.47

Target 1 year Return: 31.29%
Probability of Price Increase: 10



Description
Zillow Group, Inc. operator real estate and home-related information marketplace on mobile and the Web in the United States.

General Information
Sector: Information Technology
Industry: Internet Software and Services
Last Guidance: November 3, 2015
Next earnings date: February 7, 2018
Estimated Country Risk Premium: 6.27%
Effective Tax rate: 20%
Effective Operating Tax rate: 20%

Market Data

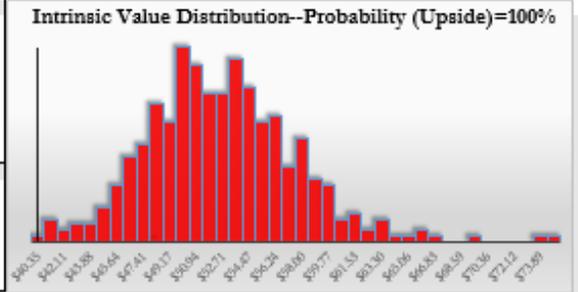
Market Capitalization	\$7,195.58
Daily volume (mil)	0.45
Shares outstanding (mil)	183.81
Diluted shares outstanding (mil)	184.55
% Shares held by institutions	116%
% Shares held by Investment Manager	38%
% Shares held by hedge funds	34%
% Shares held by insiders	13.03%
Short interest	1.18%
Days to cover short interest	5.14
52-week high	\$50.91
52-week low	\$32.63
Volatility	44.51%

Quarter ending

Quarter ending	Revenue	EBITDA
9/30/2016	1.65%	-63.16%
12/31/2016	2.38%	-61.22%
3/31/2017	4.17%	-54.92%
6/30/2017	2.24%	-82.33%
9/30/2017	1.90%	-56.40%
Mean	2.47%	-63.61%
Standard error	0.4%	4.9%

Peer

Yelp Inc.
GrubHub Inc.
Pandora Media, Inc.
trivago N.V.
i2 Global, Inc.
Match Group, Inc.
GoDaddy Inc.
Twitter, Inc.



Management

Management	Position	Total compensation qtr	Total return to shareholders
Barton, Richard	Co-Founder and Executive Cha	NM	0% per annum over 5y
Rarcaff, Spencer	CEO & Director	97.14% per annum over 5y	NM
Frink, Lloyd	Co-Founder, Vice Chairman &	NM	0% per annum over 5y
Phillip, Kathleen	CFO, CLO, Treasurer & Secret	115.44% per annum over 4y	15.12% per annum over 4y
Samuelson, Eral	Chief Industry Development O	-89.1% per annum over 1y	-26.23% per annum over 1y
Papo, Douglas	Co-Founder & GM - Hotpdr	NM	NM

Profitability

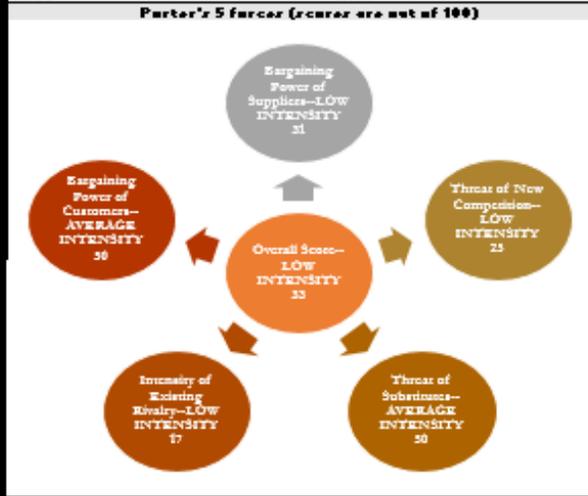
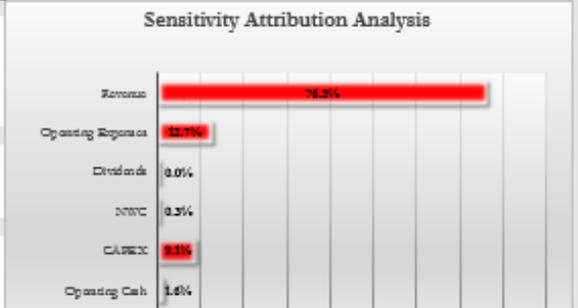
Profitability	ZG (LTM)	ZG (5 year historical av)	Peerz' Median (LTM)
Return on Capital (GAAP)	11.5%	2.05%	8.52%
Operating Margin	27%	14.63%	9.73%
Revenue/Capital (GAAP)	0.43	0.14	0.88
ROE (GAAP)		0.2%	18.9%
Net margin		3.5%	12.2%
Revenue/Book Value (GAAP)	5 VALUE!	0.05	1.55

Inverted Funds

Inverted Funds	ZG (LTM)	ZG (5 year historical av)	Peerz' Median (LTM)
Cash/Capital	20.3%	14.8%	27.0%
NWC/Capital	0.5%	-2.0%	-5.0%
Operating Assets/Capital	25.5%	75.7%	34.1%
Goodwill/Capital	53.8%	11.5%	44.0%

Capital Structure

Capital Structure	ZG (LTM)	ZG (5 year historical av)	Peerz' Median (LTM)
Total Debt/Market Capitalization	0.12	0.02	0.34
Cost of Existing Debt	7.6%	3.3%	5.1%
CGFS Rating (F+score, Z+score, and default Prob	BB	BB	A
WACC	13.4%	8.9%	9.8%



Period

Period	Revenue Growth Forecast	Valuation
Base Year	30%	25.7%
9/30/2018	24%	8.0%
9/30/2019	22%	12.5%
9/30/2020	20%	16.7%
9/30/2021	11%	20.8%
9/30/2022	14%	24.8%
9/30/2023	4%	39.7%
9/30/2024	4%	38.9%
9/30/2025	4%	38.6%
9/30/2026	5%	38.8%
9/30/2027	5%	39.1%
Continuing Period	6%	39.4%

Period

Period	Return on Capital Forecast	WACC Forecast	Price per share Forecast
Base Year	7.9%	13.4%	\$43.39
9/30/2018	2.7%	11.7%	\$51.27
9/30/2019	4.5%	11.7%	\$56.97
9/30/2020	6.9%	11.7%	\$63.58
9/30/2021	8.7%	11.6%	\$70.57
9/30/2022	10.7%	11.6%	\$78.09
9/30/2023	15.7%	11.6%	\$86.05
9/30/2024	13.5%	11.5%	\$94.21
9/30/2025	12.2%	11.5%	\$102.67
9/30/2026	11.4%	11.6%	\$111.55
9/30/2027	10.7%	11.5%	\$120.87
Continuing Period	10.3%	11.5%	

Revenue to Capital Forecast

Period	Revenue to Capital Forecast
Base Year	0.31
9/30/2018	0.34
9/30/2019	0.36
9/30/2020	0.41
9/30/2021	0.42
9/30/2022	0.43
9/30/2023	0.39
9/30/2024	0.35
9/30/2025	0.32
9/30/2026	0.29
9/30/2027	0.27
Continuing Period	0.26