Internet

Key Themes From a Volatile 3Q Internet Earnings Season and What We Like Most Now

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3Q was another challenging earnings season in the Internet sector, partly driven by company-specific dynamics, but also exacerbated by broader market volatility and tech/growth de-risking. **Since the October 16 close—the night NFLX kicked off 3Q Internet earnings—our coverage universe is -9% both on average and on a market-cap weighted basis, below the SPX at -3%.** Perhaps more telling, only 5 of the 28 stocks we cover show positive returns during this time. Overall sentiment on the group remains mixed, with growth and regulatory concerns weighing on the large-caps, and investors increasingly wary of smid-caps given a number of sharp earnings-driven declines. **In this note we discuss 8 key themes we saw across the group during 3Q earnings and we also update our top picks—Facebook, Amazon, & Twitter.**

Best Ideas. 1) FB: We acknowledge ongoing concerns around engagement & shifting social behavior, but we view the 2B+ user base as stickier than most believe. We also view revenue deceleration as manageable, particularly as FB continues to improve ad products & drive strong returns, & marketers do not have good alternatives to FB's scale & ROI. We have increasing confidence in 2020 GAAP EPS acceleration into at least the mid-teens, & FB shares are supported by strong GAAP profitability & FCF. FB shares currently trade at 16.8x 2020E GAAP EPS (including cash) w/20's%+ revenue growth in both 2019 & 2020. **2) AMZN:** We believe AMZN's core retail trends remain strong, w/a combination of tough comps, timing & accounting dynamics, & shift to 3P dragging on topline growth in 2H18. We look for accelerating growth in 1Q19 & we believe profitability will remain strong driven by AWS & advertising, even w/4Q offsets related to higher wages & free shipping in the US. **3) TWTR:** We believe TWTR's platform is strengthening as product improves, & heightened health work efforts will be positive for both users & advertisers over time. TWTR is becoming increasingly relevant to large advertisers, particularly through video which accounts for more than 1/2 of all ad revenue & is the fastest growing ad format. Importantly, we do not expect a material opex step-up in 2019, & TWTR should continue to move toward its 40-45% L-T EBITDA margin target.

Where are we getting the most questions post-earnings? AMZN, FB, TWTR, SPOT, BKNG.

<u>8 Key Themes From 3Q Internet Earnings:</u>

- **1) Large-Cap Growth Moderation.** Large-cap Internet growth remains at healthy levels overall, but bases are larger and penetration levels higher, and we are seeing some adjustment to moderating growth. **AMZN** stands out most here coming out of 3Q earnings. AMZN's top-line disappointed for the 2nd straight quarter, growing 29% vs. our 31% estimate, but the bigger factors are the 15% unit growth and 15% FXN Int'l growth in 3Q, along w/the 10-20% revenue guide for 4Q. AMZN will have fully lapped its WFM acquisition benefits in 4Q so we project FXN organic growth deceleration of only 265bps from 3Q levels, but it is exacerbated by typical 4Q revenue slowdown and Prime accounting changes (a $300M headwind in 4Q). The shift to 3P was also more pronounced in 3Q—going from 50% of units in 3Q17 to 53% in 3Q18—and we expect it to continue, further dragging on reported revenue as 3P is booked on a net basis. Still, we expect revenue to re-accelerate in early 2019, & we project 20% growth next year. **GOOGL** growth remains solid in the low 20's% range, showing remarkable stability off a large base. But 21.8% FXHN Y/Y was GOOGL's slowest growth in 3 years. We project 18% FXHN growth in 2019.

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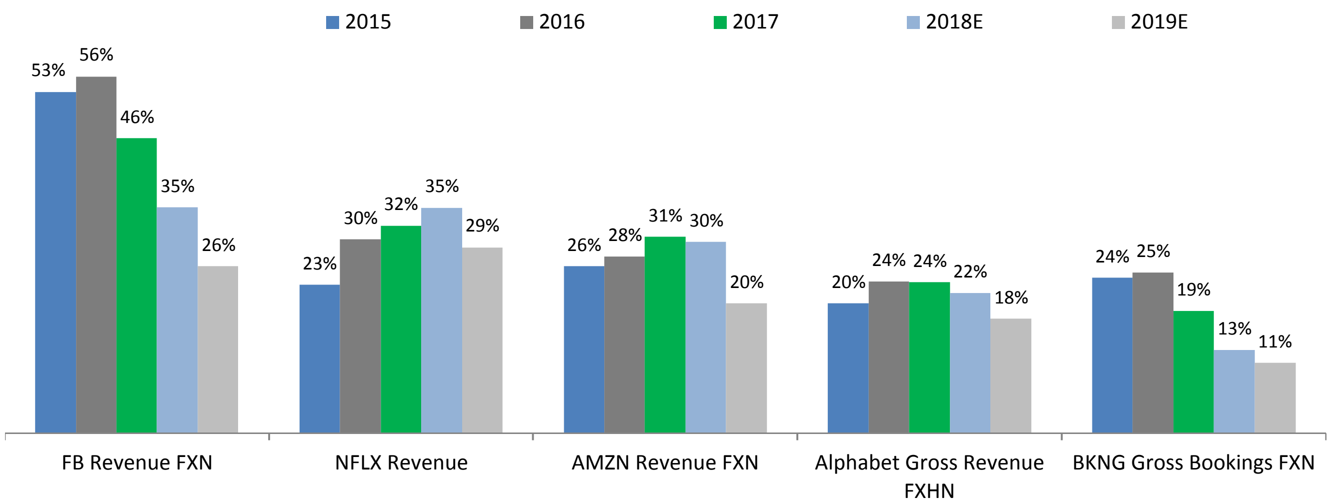
FB revenue growth remained strong at 34% FXN Y/Y in 3Q & mgmt's outlook for mid-high single-digit decel in 4Q was a bit better than expressed 3 months ago. Still, investors expect FB revenue growth in the 20-25% range in 2019—we're at 26%. **NFLX** focus is usually more on subs than revenue, but of course they are closely tied, and we project 35% revenue growth in 2018 going to 29% in 2019. **BKNG** was the only large-cap in our coverage to accelerate growth in 3Q, but that came off slower growth & some favorable comp dynamics tied to performance marketing pullback a year ago & European weather in 2Q18. Still, we believe BKNG room nights & bookings growth could accelerate modestly again in 4Q to 14% & 15%.

Figure 1: Large-Cap Internet Revenue Growth Trend

Y/Y Growth



Source: J.P. Morgan estimates, Company data. Note: We are using Gross Bookings for BKNG because of accounting changes & restatements affecting revenue.

- **2) Increasing Importance of Revenue Diversification.** Higher penetration levels combined w/large user bases and corporate technical/product expertise are pushing Internets (large-caps especially) to diversify their revenue streams. **AMZN** stands out here most as it is diversifying not just revenue, but also profits more significantly. In 3Q AWS grew almost 2x the rate of the overall business (46% FXN Y/Y vs. AMZN Net Sales ex-WFM growth of 24%) and AMZN's Other segment (Advertising being the vast majority) grew 123% FXN Y/Y. Importantly, we estimate AWS will account for 59% of AMZN's operating income this year and Advertising (assuming $8B in revenue & 40% margins) will account for 26%. Revenue diversification remains a key priority for **GOOGL**, and it has been successful there within advertising w/YouTube. Moving beyond advertising, however, has proved harder within GOOGL's large base where it takes a $10B+ business to move the needle. Cloud, Hardware, and Google Play all continue to show solid growth, but we are much more optimistic on Waymo's potential over the long-term. **FB**, we believe, is being largely viewed today as a 1-trick pony—advertising. As noted above, we think there is still room for strong advertising growth across core FB, Instagram, Messenger, & Whatsapp. But FB is clearly pushing harder into new areas such as AR/VR w/Oculus, dating, blockchain, & payments. FB is essentially trying to figure out how it can generate more value from its base of 2.6B users & their significant time spent across platforms. Beyond mega-caps there are other interesting examples of business diversification as well: **EBAY** w/payments & advertising; **SNAP** potentially w/gaming; **TRIP** w/experiences & restaurants; **CRTO** w/sponsored products, acquisition, & audience; and **TRUE** w/OEM incentives & trade.

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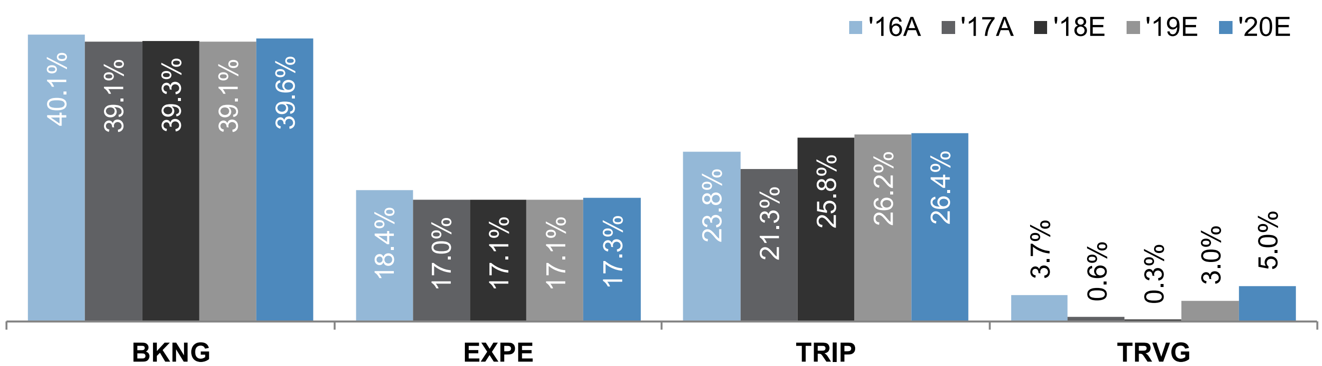
- **3) Increased Focus On Profit.** During 3Q earnings, there was a notable increase to us in companies finding the right balance between growth and profitability. While **AMZN** does not discuss the shift per se, AWS & advertising are driving strong profit growth—operating income +200% in 2018—while revenue is approaching 20% growth levels. Beyond those dual high margin revenue streams, AMZN is also showing increased efficiency in headcount growth (+13% YTD vs. +38% in 2017 ex-WFM), warehouse square footage growth (+15% in 2018 vs. +30%+ in 2016 & 2017), & data center efficiencies (capital leases +9% TTM Y/Y vs. +69% in 2017). **EBAY** highlighted the firm's strategic shift to focus on more profitable (but lower) growth & potentially returning more capital to shareholders, a strategy that we believe many investors would like to see beyond the next 12-15 months as management indicated. **BKNG** and **EXPE** are ahead of the curve here on the profitable growth trend as they are now lapping their performance marketing pullbacks from a year ago, & actually opportunistically leaning in more recently (BKNG). But their strategy shift has also forced more discipline on the metas, w/both **TRIP** & **TRVG** posting significant EBITDA upside in 3Q as they've raised ROI targets on their own spending. Whether to assuage the Street or ward off any potential activists, **YELP** is also emphasizing profitable growth, expecting 2019 revenue growth in the double-digits w/200-300bps of EBITDA margin expansion. **SNAP** has also outlined stretch goals of EBITDA breakeven in 4Q18 & positive FCF and EBITDA in 2019. Conversely, a number of companies remain focused on market share & are in investment mode, including **SPOT**, **FTCH**, & **EB**.

- **4) Online Travel (Mini) Resurgence**. The 4 online travel companies we cover (BKNG, EXPE, TRIP, TRVG) have outperformed the S&P 500 & our Internet coverage universe since online travel earnings began on 10/24. **BKNG** is up 3%, **EXPE** 4%, **TRIP** 29%, & **TRVG** 33% vs. the S&P 500 unchanged & our Internet coverage universe -1%. We think recent online travel outperformance has been driven mostly by low expectations & better than expected numbers. Heading into 3Q earnings, OTA sentiment was soft & expectations low given anticipated deceleration, weak 3rd party data, & lingering concerns related to hurricanes & European weather. BKNG and EXPE room nights both accelerated in 3Q—BKNG from 11.9% to 13.4% & EXPE from 12.1% to 12.6%. Both OTAs also benefited from easier comps related to their performance marketing pullbacks from a year ago. TRIP & TRVG's top-line results were more in-line with expectations, but both exceeded meaningfully on Adj. EBITDA. The online travel stocks have also benefited from rotation from other Internets as the large OTAs are nicely profitable w/strong FCF, and the metas had also been out of favor.

Figure 2: BKNG, EXPE, TRIP, & TRVG Adj. EBITDA Margin – 2016 to 2020E



Source: J.P. Morgan estimates, Company data. Note: BKNG's Adj. EBITDA includes

- **5) 3Q Smid-Cap Minefield.** Though 2Q may have had greater large-cap volatility (think FB & NFLX), the pendulum swung back to the smid-caps in a challenging 3Q earnings season. Within our coverage, we saw significant 1-day post earnings stock drops at: **1) YELP:** Down 27% on the 3Q miss & lower 4Q guide on a number of operational issues exacerbated by the transition to non-term contracts; **2) TRUE:** Down 18% on the 3Q miss & lower 4Q guide, and not re-affirming 20% growth expectations for 2019; **3) MTCH:** Down 17% on lighter Tinder net adds & a softer outlook, raising questions around Tinder's post-Gold "new normal" run rate; **4) GRPN:** Down 10% after missing 3Q revenue & EBITDA guidance due to the ongoing shift to North America Local. **EVER** (-43% 1-day move) & **CDLX** (-23%) also fall into this camp post 3Q earnings, as do a few outside of our coverage like **GRUB** (-12%) & **ZG** (-27%). One we don't cover that bucked the trend was **ETSY**, which was up 24% the day after earnings.

- **6) Google Algo Changes Weighing**. Google released a broad core algorithm update in August with varying levels of impact. The update negatively impacted **TRUE**, **GRPN**, & **YELP** in our coverage universe while seemingly helping **TRIP**, **CARG** (uncovered), & **CARS** (uncovered). CARS noted that the algorithm update prioritized websites with rich and valuable content (see Table 1 for comments from these companies on Google's algorithm change). While the affected companies highlighted that their traffic mix is diversifying away from Google SEO, we believe SEO will remain an important traffic channel. Google updating its algorithm isn't new and we expect ongoing changes, but the impacts of future updates are hard to forecast. And Google continues to push natural results further down its pages, stressing the importance of being less dependent on Google SEO.

- **7) Hiring and/or Employee Retention Challenges.** A number of smid-caps called out challenges around either hiring or retention in 3Q. **SPOT** noted that higher than expected 3Q margins were driven by hiring shortfalls and that R&D/Content investment would ramp and pressure margins for the foreseeable future. We view this more as a timing issue and note that the delayed hiring was more in product and technology than in sales. **YELP** called out lower than expected sales headcount as some more senior salespeople churned after not adapting well to non-term contracts. **TRUE** attributed lower guidance to fewer dealer net adds in 4Q due to slower hiring/increased attrition in its dealer service and sales teams. Lastly, **CRTO** noted in 3Q that it was still short of its net employee addition goals & that expansion of its product suite makes sales hiring more complicated.

- **8) Payments Intermediation.** We're seeing more companies take greater control over payments as they look to increase flexibility for buyers & sellers, & drive greater efficiency. We knew payment intermediation was a significant opportunity for **EBAY**, but **BKNG** also noted that it is building out and deploying a global payments platform at Booking.com. EBAY is still early in its payment intermediation rollout w/$36M of GMV intermediated thus far, but mgmt is encouraged by early results. EBAY reiterated its expectation for an incremental $2B+ revenue & $500M operating profit once fully deployed. For BKNG, the global payments platform migration has shown up in its Agency/Merchant bookings mix since 4Q17 w/TTM Merchant bookings growing 63% vs. 9% for TTM Agency bookings. Rationale for intermediating payment include: **1) More payment options for buyers.** Early on in the intermediation, 12% of addressable volume on EBAY has been transacted with Apple Pay. BKNG can also now accept Alipay; **2) Access to broader buyer base for BKNG suppliers & EBAY sellers**. We believe BKNG intermediating payments should be positive for suppliers w/limited payments capabilities, incl. those in the alternative accommodations category. EBAY sellers will also benefit from lower overall costs; and **3) Control over the payment flow.** Overall, payment intermediation, if executed well, should reduce friction and bode well for EBAY & BKNG top-lines. Separately, **EB** already processes payments on

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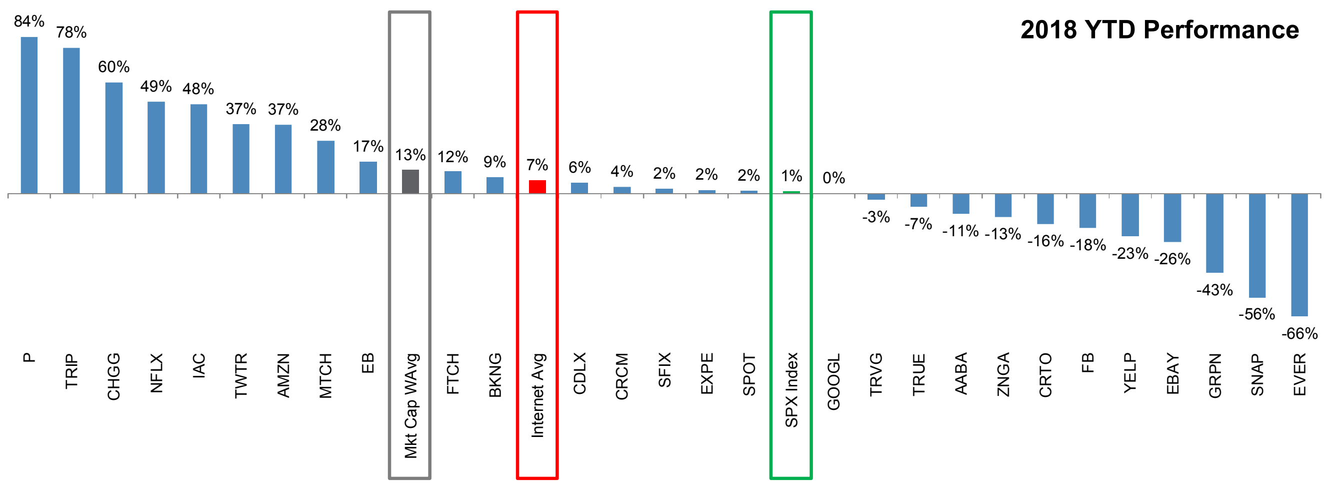
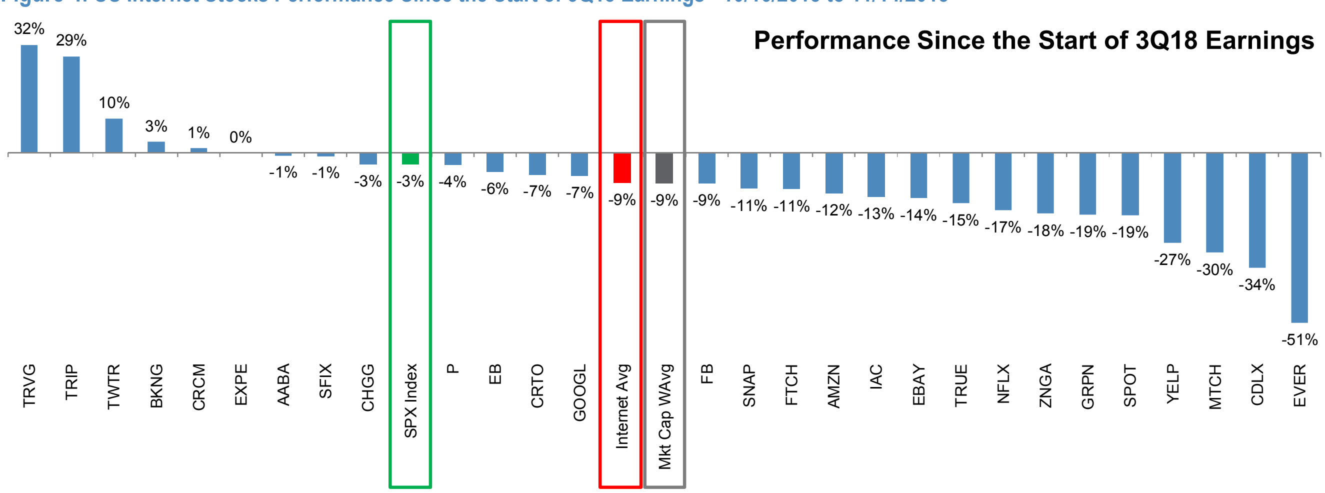
~90% of its volume, but Square will become its primary payment processor in 2019, reducing friction & lowering costs over time.

Figure 3: US Internet Stocks YTD Performance - 12/29/2017 to 11/14/2018



Source: Bloomberg & J.P. Morgan. Note: Internet average is straight. Market Cap is based on Bloomberg definition. Market cap weighted average is based on current market cap. *CDLX IPO @ $13 on 2/7/18, SPOT IPO @ $132 on 4/2/18, EVER IPO @ $18 on 6/27/18, EB IPO @ $23 on 9/19/18, FTCH IPO @ $20 on 9/20/18

Figure 4: US Internet Stocks Performance Since the Start of 3Q18 Earnings - 10/16/2018 to 11/14/2018



Source: Bloomberg & J.P. Morgan. Note: Internet average is straight. Market Cap is based on Bloomberg definition. Market cap weighted average is based on current market cap.

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Figure 5: J.P. Morgan US Internet Comp Sheet

	Mega Cap			Large Cap					OTAs				IAC Complex		Smid Cap													Invest Co
Company	Amazon	Alphabet	Facebook	Netflix	eBay	Twitter	Spotify	Snap	Booking	Expedia	TripAdvisor	trivago	IAC	Match	Farfetch	Zynga	Chegg	Yelp	Stitch Fix	Groupon	Pandora	Eventbrite	Criteo	TrueCar	Care.com	EverQuote	Cardlytics	Altaba
Symbol	AMZN	GOOGL	FB	NFLX	EBAY	TWTR	SPOT	SNAP	BKNG	EXPE	TRIP	TRVG	IAC	MTCH	FTCH	ZNGA	CHGG	YELP	SFIX	GRPN	P	EB	CRTO	TRUE	CRCM	EVER	CDLX	AABA
JP Morgan Rating	OW	OW	OW	OW	N	OW	OW	UW	N	N	N	UW	OW	N	OW	N	OW	N	N	N	N	N	N	UW	N	OW	OW	OW
Price as of 11/14/2018	$1,599.01	$1,054.58	$144.22	$286.73	$27.89	$32.91	$134.01	$6.48	$1,888.37	$121.93	$61.35	$6.62	$180.71	$40.17	$22.32	$3.50	$26.05	$32.33	$26.45	$2.93	$8.86	$26.92	$21.74	$10.40	$18.70	$6.15	$13.73	$62.28
% vs. Price Target	31%	28%	35%	57%	18%	37%	49%	-7%	12%	10%	-4%	-	23%	5%	21%	-	15%	11%	36%	-	2%	15%	20%	-13%	-4%	209%	82%	28%
Market Value	$801,104	$742,276	$420,113	$129,579	$27,416	$25,538	$25,210	$9,718	$90,172	$18,912	$8,650	$2,353	$16,625	$11,973	$7,148	$3,105	$3,305	$2,868	$2,719	$1,824	$2,780	$2,065	$1,492	$1,100	$727	$190	$359	$41,049
Current Enterprise Value	$796,023	$627,173	$378,907	$134,848	$27,509	$22,508	$21,244	$8,304	$82,630	$18,438	$7,987	$2,184	$21,756	$12,826	$6,030	$2,685	$3,106	$2,031	$2,408	$1,357	$2,648	$1,876	$1,058	$909	$607	$151	$338	$22,487
EARNINGS PER SHARE (GAAP EPS)																												**Pre-tax NAV**
EPS 2018	$19.29	$42.60	$7.43	$2.61	$2.66	$1.40	($3.44)	($1.02)	$88.31	$3.01	$0.87	($0.10)	$5.48	$1.59	($0.65)	$0.02	($0.13)	$0.35	$0.28	$0.00	($1.38)	($1.73)	$1.31	($0.30)	$0.11	($3.04)	($2.61)	$46,938
EPS 2019	$25.20	$49.92	$7.64	$4.09	$1.90	$0.55	($0.57)	($0.67)	$96.28	$5.24	$1.13	($0.01)	$4.73	$1.61	($0.46)	$0.08	$0.01	$0.44	$0.20	$0.08	($1.03)	($0.10)	$1.62	($0.31)	$0.49	($0.41)	($1.75)	
EPS 2020	$37.22	$58.77	$8.63	$6.35	$2.26	$0.75	$0.51	($0.39)	$111.61	$6.80	$1.34	$0.04	$6.04	$1.80	($0.24)	$0.13	$0.17	$0.73	$0.42	$0.10	($0.76)	$0.02	$1.93	($0.36)	$0.59	($0.32)	$0.03	**Discount**
2018 - 2020 EPS CAGR	39%	17%	8%	56%	-8%	-27%	NA	NA	12%	50%	24%	NA	5%	6%	NA	189%	NA	44%	24%	383%	NA	NA	21%	NA	134%	NA	NA	**(23%)**
P/E 2018	82.9x	24.8x	19.4x	109.8x	10.5x	23.6x	NM	NM	21.4x	40.5x	70.3x	NM	33.0x	25.2x	NM	231.7x	NM	92.2x	95.4x	664.6x	NM	NM	16.5x	NM	172.8x	NM	NM	NAV
P/E 2019	63.4x	21.1x	18.9x	70.0x	14.7x	60.1x	NM	NM	19.6x	23.3x	54.1x	NM	38.2x	24.9x	NM	45.0x	NM	73.2x	134.8x	36.0x	NM	NM	13.4x	NM	38.3x	NM	NM	$38,166
P/E 2020	**43.0x**	**17.9x**	**16.7x**	**45.2x**	**12.4x**	**43.8x**	**265.1x**	**NM**	**16.9x**	**17.9x**	**45.8x**	**172.8x**	**29.9x**	**22.3x**	**NM**	**27.7x**	**152.1x**	**44.2x**	**62.4x**	**28.4x**	**NM**	**NM**	**11.2x**	**NM**	**31.4x**	**NM**	**427.6x**	
P/E-to-Growth	1.1x	1.0x	2.1x	0.8x	NM	NM	NA	NA	1.4x	0.4x	1.9x	NA	6.0x	3.5x	NA	0.1x	NA	1.0x	2.6x	0.1x	NA	NA	0.5x	NA	0.2x	NA	NA	**JPMe Value**
EARNINGS PER SHARE (Non-GAAP EPS) [1]																												$36,763
EPS 2018	$30.81	$56.78	$8.41	$3.33	$2.30	$0.75	($2.60)	($0.51)	$90.16	$5.75	$1.74	($0.03)	$9.51	$1.42	($0.43)	NA	$0.52	$1.65	$0.32	$0.34	($0.49)	($0.22)	$2.41	$0.13	$0.71	($2.70)	($0.95)	
EPS 2019	$38.77	$63.22	$9.13	$4.92	$2.60	$0.82	$0.09	($0.28)	$99.90	$7.22	$2.00	$0.04	$8.20	$1.62	($0.38)	NA	$0.66	$1.61	$0.20	$0.34	($0.25)	$0.08	$2.69	$0.23	$0.77	($0.10)	($1.03)	
EPS 2020	$52.82	$74.93	$10.60	$7.29	$3.03	$1.02	$1.15	($0.01)	$114.99	$8.65	$2.23	$0.10	$9.72	$1.91	($0.15)	NA	$0.86	$1.97	$0.42	$0.36	($0.06)	$0.21	$3.01	$0.29	$0.89	$0.02	$0.30	
2018 - 2020 EPS CAGR	31%	15%	12%	48%	15%	17%	NA	NA	13%	23%	13%	NA	1%	16%	NA	NA	28%	9%	15%	3%	NA	NA	12%	51%	12%	NA	NA	
P/E 2018	51.9x	18.6x	17.2x	86.2x	12.1x	43.9x	NM	NM	20.9x	21.2x	35.3x	NM	19.0x	28.3x	NM	NA	49.8x	19.6x	82.5x	8.7x	NM	NM	9.0x	82.7x	26.2x	NM	NM	
P/E 2019	41.2x	16.7x	15.8x	58.2x	10.7x	40.0x	1563.9x	NM	18.9x	16.9x	30.7x	155.3x	22.0x	24.8x	NM	NA	39.7x	20.1x	134.8x	8.7x	NM	329.4x	8.1x	44.9x	24.2x	NM	NM	
P/E 2020	**30.3x**	**14.1x**	**13.6x**	**39.3x**	**9.2x**	**32.3x**	**116.7x**	**NM**	**16.4x**	**14.1x**	**27.6x**	**69.0x**	**18.6x**	**21.0x**	**NM**	**NA**	**30.4x**	**16.4x**	**62.4x**	**8.1x**	**NM**	**127.3x**	**7.2x**	**36.5x**	**21.0x**	**256.2x**	**46.1x**	
P/E-to-Growth	1.0x	0.9x	1.1x	0.8x	0.6x	1.9x	NA	NA	1.3x	0.6x	2.1x	NA	17.2x	1.3x	NA	NA	1.1x	1.8x	4.2x	2.4x	NA	NA	0.6x	0.7x	1.8x	NA	NA	
FREE CASH FLOW																												
FCF 2018	$17,229	$23,423	$15,816	($3,046)	$1,952	$819	$174	($727)	$5,060	$1,115	$297	($34)	$788	$494	($103)	$103	$38	$143	$52	$185	($49)	$44	$131	$8	$28	($11)	($19)	
FCF 2019	$27,941	$28,073	$17,100	($3,006)	$2,404	$1,056	($42)	($564)	$5,456	$973	$321	$8	$877	$568	($54)	$177	$59	$201	$59	$194	($68)	$77	$160	$25	$38	($4)	($17)	
FCF 2020	$38,241	$35,356	$23,427	($1,716)	$3,017	$1,227	$265	($192)	$6,142	$1,546	$345	$30	$1,085	$666	$33	$233	$90	$233	$92	$225	$17	$104	$182	$35	$42	($0)	($0)	
2018-2020 FCF CAGR	49%	23%	22%	NA	24%	22%	23%	NA	10%	18%	8%	NA	17%	16%	NA	50%	54%	28%	33%	10%	NA	54%	18%	105%	22%	NA	NA	
EV/FCF 2018	45.7x	26.7x	24.1x	NM	14.2x	27.4x	120.4x	NM	16.7x	17.6x	27.1x	NM	27.5x	27.0x	NM	25.8x	81.1x	13.7x	47.6x	5.6x	NM	43.0x	7.7x	108.2x	21.4x	NM	NM	
EV/FCF 2019	28.1x	21.7x	21.6x	NM	10.8x	20.5x	NM	NM	14.6x	20.3x	24.5x	269.4x	24.7x	23.3x	NM	14.3x	52.9x	9.3x	43.2x	4.5x	NM	30.7x	5.1x	36.0x	15.4x	NM	NM	
EV/FCF 2020	**20.2x**	**16.7x**	**15.2x**	**NM**	**7.8x**	**16.9x**	**105.3x**	**NM**	**12.1x**	**12.3x**	**22.2x**	**75.7x**	**19.8x**	**19.5x**	**207.3x**	**10.0x**	**35.0x**	**7.4x**	**28.4x**	**3.0x**	**159.4x**	**23.2x**	**3.7x**	**25.8x**	**13.3x**	**NM**	**NM**	
FCF Yield 2018	2.2%	3.8%	4.2%	NM	7.0%	3.7%	0.8%	NM	6.0%	5.7%	3.7%	NM	3.6%	3.7%	NM	3.9%	1.2%	7.3%	2.1%	17.8%	NM	2.3%	13.0%	0.9%	4.7%	NM	NM	
FCF Yield 2019	3.6%	4.6%	4.6%	NM	9.2%	4.9%	NM	NM	6.9%	4.9%	4.1%	0.4%	4.0%	4.3%	NM	7.0%	1.9%	10.7%	2.3%	22.3%	NM	3.3%	19.5%	2.8%	6.5%	NM	NM	
FCF Yield 2020	4.9%	6.0%	6.6%	NM	12.8%	5.9%	0.9%	NM	8.3%	8.1%	4.5%	1.3%	5.0%	5.1%	0.5%	10.0%	2.9%	13.4%	3.5%	33.1%	0.6%	4.3%	27.1%	3.9%	7.5%	NM	NM	
EBITDA																												
EBITDA 2018	$32,958	$51,781	$33,776	$1,997	$3,547	$1,149	($9)	($622)	$5,717	$1,912	$416	$1	$978	$648	($95)	$182	$82	$180	$47	$285	($105)	$29	$308	$33	$32	($7)	($9)	
EBITDA 2019	$42,622	$61,378	$39,341	$3,149	$3,729	$1,371	$3	($393)	$6,160	$2,096	$463	$34	$1,166	$756	($85)	$201	$115	$227	$52	$309	($50)	$40	$332	$50	$38	($1)	($5)	
EBITDA 2020	$54,889	$71,903	$48,201	$4,549	$4,123	$1,657	$290	($13)	$6,890	$2,346	$508	$65	$1,428	$872	($6)	$247	$148	$278	$90	$334	$13	$53	$372	$61	$44	$2	$29	
2018-2020 EBITDA CAGR	29%	18%	19%	51%	8%	20%	NA	NA	10%	11%	11%	732%	21%	16%	NA	16%	34%	24%	39%	8%	NA	36%	10%	35%	18%	NA	NA	
EV/EBITDA 2018	23.9x	12.1x	11.3x	68.3x	7.8x	19.5x	NM	NM	14.7x	10.3x	19.4x	2320.6x	22.1x	20.6x	NM	14.6x	37.4x	10.9x	53.3x	3.6x	NM	65.0x	3.3x	26.8x	19.1x	NM	NM	
EV/EBITDA 2019	18.4x	9.9x	9.4x	44.7x	7.0x	15.8x	8395.0x	NM	12.9x	9.4x	17.0x	65.1x	18.6x	17.5x	NM	12.6x	27.3x	8.3x	49.0x	2.8x	NM	59.4x	2.5x	18.0x	15.4x	NM	NM	
EV/EBITDA 2020	**14.1x**	**8.2x**	**7.4x**	**31.7x**	**5.7x**	**12.5x**	**96.3x**	**NM**	**10.8x**	**8.1x**	**15.1x**	**34.6x**	**15.1x**	**14.9x**	**NM**	**9.5x**	**21.3x**	**6.2x**	**29.2x**	**2.0x**	**202.2x**	**45.2x**	**1.8x**	**14.9x**	**12.5x**	**69.9x**	**12.3x**	
REVENUE																												
Revenue 2018	$232,583	$109,475	$55,428	$15,809	$10,743	$3,008	$6,217	$1,154	$14,561	$11,204	$1,613	$1,082	$4,229	$1,722	$476	$894	$317	$941	$1,339	$2,608	$1,554	$289	$955	$359	$192	$162	$146	
Revenue 2019	$279,755	$127,416	$69,865	$20,397	$11,204	$3,533	$7,644	$1,510	$15,750	$12,281	$1,766	$1,153	$4,839	$1,982	$626	$1,029	$389	$1,058	$1,631	$2,718	$1,684	$361	$1,034	$424	$221	$190	$210	
Revenue 2020	$332,639	$147,019	$84,371	$24,990	$12,494	$4,092	$9,590	$1,972	$17,411	$13,560	$1,926	$1,306	$5,493	$2,231	$799	$1,142	$456	$1,178	$2,001	$2,806	$1,764	$443	$1,130	$482	$247	$226	$323	
2018-2020 Revenue CAGR	20%	16%	23%	26%	8%	17%	24%	31%	9%	10%	9%	10%	14%	14%	30%	13%	20%	12%	22%	4%	7%	24%	9%	16%	13%	18%	48%	
EV/Revenue 2018	3.4x	5.7x	6.9x	8.6x	2.6x	7.5x	3.4x	7.4x	5.8x	1.8x	5.0x	2.0x	5.1x	7.8x	12.7x	3.0x	9.7x	2.1x	1.9x	0.4x	1.7x	6.5x	1.1x	2.5x	3.1x	0.9x	2.2x	
EV/Revenue 2019	**2.8x**	**4.8x**	**5.3x**	**6.9x**	**2.3x**	**6.1x**	**3.2x**	**6.2x**	**5.1x**	**1.6x**	**4.5x**	**1.9x**	**4.5x**	**6.7x**	**10.4x**	**2.5x**	**8.0x**	**1.8x**	**1.6x**	**0.3x**	**1.6x**	**6.5x**	**0.8x**	**2.1x**	**2.6x**	**0.8x**	**1.7x**	
EV/Revenue 2020	2.3x	4.0x	4.2x	5.8x	1.9x	5.1x	2.9x	5.1x	4.3x	1.4x	4.0x	1.7x	3.9x	5.8x	8.6x	2.0x	6.9x	1.5x	1.3x	0.2x	1.5x	5.4x	0.6x	1.9x	2.2x	0.7x	1.1x	

Source: Bloomberg, Company reports & J.P. Morgan estimates. Notes: $M except per share; Non-GAAP EPS & adj. EBITDA shown excludes the impact of stock based compensation, except BKNG & SFIX which includes SBC for non-GAAP EPS and adj. EBITDA. End date for all PTs is Dec'19

Appendix

Table 1: Comments on Google Algo Change from Recent Earnings

COMPANY	COMMENTS
NEGATIVE IMPACT	
TrueCar (TRUE US)	"…**we have encountered some challenges with Google's latest algorithm update, and so that's affected some of our direct traffic**. But we also have plans in place to next year address this kind of a challenge. As I mentioned, we have our research and discovery product in development. We have a strong offering with very appealing make/model pages that we believe will be attractive in a Google organic search world. So, we're addressing that issue."
Groupon (GRPN US)	"…if you go through and you take certain categories like, for example, **if you were to go and search for things to do in your local city, what you'll see is, is that we are showing up further down the page than we have historically**. So that's definitely one source of some of our traffic, some of our traffic headwinds. But the way I would think about that is, is we today generate traffic from a myriad of sources. And while we've had some traffic headwinds in the current period, historically, we've both added to our traffic sources and we think about how to get more value out of that traffic. And so that's something that, over time, we'll continue to be focused on. I mean, if you look at our overall traffic sources today, we have a large portion of customers that come direct to site. Obviously, in terms of SEM and SEO those are meaningful sources as is affiliate relationships in our mobile app and download. So, we receive traffic today from a myriad of sources. But to answer your question specifically, if you were to look at, and I'll throw that out as an example, the things to do category in particular in your local city you'll see that we show up further down than perhaps we used to."
Yelp (YELP US)	"…**the Google algorithmic adjustments that happened over the course of the quarter, we did see an impact particularly on desktop traffic and neither of their updates were favorable**. They were both negative impacts to our traffic levels. But the reality today is that so much of our engagement is on the mobile app. We didn't see real tectonic shifts or massive impacts. So we feel good about our overall audience metrics and engagement with users"
POSITIVE IMPACT	
CarGurus (CARG US) **Not Covered**	"…we have described to folks in the past that over the last couple of years, a few things have happened. One is that our traffic acquisition channels have become less dependent on organic search in particular and we increased quite a bit our direct traffic through our brand investment. And so, those are two macro trends that we're very pleased with. **We've also said that over the last 10 years, there have been – over the last 7 years, I think there have been 11 algo changes, and we've grown through them. And while we're not going to comment specifically on this one, I would tell you that our organic traffic and our organic traffic from Google was up in Q3 versus Q2 and it was up year-over-year**" "…our unique year-over-year in Q3 was 43%. So, I think I'll let that numbers speak for itself" "This one is no different. Our organic traffic was greater in Q3 than it was in Q2. Our Google organic traffic was greater in Q3 2018 than it was in Q3 2017. And so, yeah, these happen. **Google doesn't give a ton of guidance as to what exactly is underlying their changes other than to say they're trying to get consumers that have the best experience**." "And when you sort of parse through all the Google – all the comments that Google makes,

COMPANY	COMMENTS
	they say they want their consumers to be engaged with the destination they send them to. So yeah, they happen. **I know it affected some others. It was kind of front of the mill for us**." "…if you drill down specifically on Google organic, I believe quarter-on-quarter, our traffic was up. So, I'm not sure what our competitors were referring to when they were alluding to any of our traffic woes, because we don't have traffic woes." "…we have seen a significant increase in brand search over the last year and CarGurus is now the most searched for car shopping site in the U.S. according to Google"
Cars.com (CARS US) **Not Covered**	"Our momentum with consumer audience has continued. Traffic grew 12% in the third quarter, driven by growth in SEO, and supported by incremental product and marketing investments and the unrivaled strength of our brand. Organic traffic made up 80% of our total traffic in the third quarter." "Monthly unique visitors increased 10% year-over-year, and mobile traffic now makes up 68% of our total traffic. In October, these trends continued. We have now experienced 10 months of strong traffic and unique visitor growth, including seven months of accelerating growth in SEO." "**Google updated its algorithm in August, prioritizing websites with rich and valuable content, which further supported our SEO growth trajectory**. Certain competitors and competitor practices have been hurt with these recent algorithm updates. We believe that thin content, practices not compliant with Google search engine guidelines, and those competitors with an overreliance on these SEO activities will continue to suffer from the change."
TripAdvisor (TRIP US)	"…**the non-paid channels, including SEO, our performance has been very robust this quarter**."

Source: Company Reports, Bloomberg

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