The Revolution Will Not Be Televised

Understanding How Technology, Data and Millennials are Transforming Digital Commerce

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Please Read: Important disclosures and analyst's certification appear in Appendix

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Industry Report

The Revolution Will Not Be Televised

Understanding How Technology, Data and Millennials Are Transforming Digital Commerce

News flash: e-commerce is a long-run secular trend. It's also a powerful one given how central "commerce" is to our everyday lives. The nature of how we buy, sell and pay for goods and services is changing. The internet and our phones have turned us into "everywhere consumers," constantly opening marketing emails tailored to our search histories, meticulously researching product reviews or comparison shopping while already in the checkout aisle. Despite the noise, U.S. retail e-commerce penetration is still just <10% of a multi-*trillion*-dollar market. And while it's important to understand the broad macro trends that characterize the digital commerce revolution, the truth is that these are just byproducts of a wide range of technological and demographic factors. This report takes you inside these issues, and sheds light on how technology, data and Millennials are permanently altering the digital commerce landscape.

- **The linear marketing funnel is dead. Long live the customer journey.** The fragmentation of attention, consumption and customer choice has shifted the world from synchronous to asynchronous. When and where consumers spend their attention and money is now firmly on their terms, thanks largely to the internet. As such, the static marketing formula of awareness, consideration and conversion is giving way to the customer journey – a winding path through both digital and physical touch points.

- **Millennials are the coveted customer at the heart of the journey.** They've officially passed Baby Boomers as the largest generation in U.S. history, and will soon wield greater purchasing power. In total, they are expected to spend $200bn annually starting in 2017, and $10 trillion in their entire lifetimes. Still, they face severe demographic challenges, having graduated into (or in the wake of) the Great Recession.

- **Marketers and sellers need help navigating the journey.** The holy grail is tracking the digital footsteps of the customer from awareness through conversion, then engaging them in loyalty and advocacy. Software solutions that enable this, and leverage data along the way, will be the long-term winners in the space.

- **Initiating coverage.** We are initiating coverage of Shopify (SHOP, $55 PT) and Bazaarvoice (BV, $8 PT) with Buy ratings and Adobe (ADBE) and ChannelAdvisor (ECOM) with Neutral ratings. We also transfer coverage of HubSpot (HUBS) and maintain our Neutral rating.

Please Read: Important disclosures and analyst's certification appear in Appendix

Key Points / Portfolio Manager's Summary

Key Takeaways:

- **This report provides a framework for understanding and investing in the future of digital commerce and marketing.** The big secular trends don't tell the full story. There is a complex set of factors coalescing to drive growth in e-commerce and digital marketing spending, and we are still in the early stages of a prolonged transformation of how we transact for goods and services. We go into the demographic, technological and software-specific forces driving this change, and provide investors with a guide for capitalizing on this opportunity.

- **Despite the noise, e-commerce penetration is still in single digits.** The Amazon (AMZN, Not Rated) effect on commerce has been well publicized, and much has also been made of the existential crisis facing brick-and-mortar retailers. However, the $340bn in e-commerce spending in 2015 still only amounts to 7% of retail sales. We expect this number to reach ~$535bn (10% penetration) by 2019, and see $2 trillion in spending (25% penetration) by 2033. It's clear we are still in the early phases of a multi-decade opportunity.

- **Marketing is undergoing a similar transformation. U.S. digital media ad spending is expected to eclipse $100bn by 2020.** Marketing dollars have always flowed to where people concentrate their attention. The rise of MoSoLo (mobile, social and local) will route future advertising budgets to digital channels at the expense of print, radio and television. This translates to a U.S. digital media spending CAGR of 12% through 2020, compared to just 3% for the ad market overall. Historically, digital media's projected five-year CAGR is greater than *any* five-year period for TV ad spending going back to 1985.

- **Technological evolution is driving the convergence of marketing and commerce.** The legacy model of "siloed" marketing and buying behavior (i.e., watching TV or looking through a magazine, then going to the store) is being disrupted by the smartphone era and the ubiquity of the internet. We are now "everywhere consumers" who can view personalized marketing offers on our phones, and with just a few taps order goods that can be delivered to our door a few hours later. Brick-and-mortar is not dead, but it's been relegated from the primary consumer touch point to just another selling channel.

- **This disruption of consumption is creating new digital-first brands and business models.** Legacy brands and retailers are at risk of disintermediation from new, digital-first businesses that leverage technology to form direct relationships with consumers. Television advertising was once the most effective way to broadcast brand messaging to prospective customers, but attention is increasingly shifting away from live television in favor of digital channels, including social media, streaming services and Google (GOOGL, Not Rated) searches. Digital-first brands leverage these cost-effective channels

(mere pennies on the dollar compared to TV commercials) to connect *directly with consumers* and build brand affinity. They then take advantage of the convergence of marketing and commerce to bypass retailers altogether; their sites and apps directly drive conversion, and they ship products straight to a consumer's doorstep.

- **These trends are combining to destroy the linear marketing funnel.** The static marketing formula of awareness (TV ads), consideration (newspaper ads and coupons) and conversion (in-store promotions and prominent shelf placement) is giving way to the customer journey, a winding path through both digital and physical touch points that encompasses a host of different awareness, consideration and conversion channels. Technology gives marketers and sellers the ability to track every step along the journey, and is expanding the scope of consumer interaction to include advocacy and loyalty — two traditionally offline, unquantifiable activities.

- **Millennials are the coveted demographic in the customer journey, but engaging them comes with its own challenges.** Millennials have officially passed Baby Boomers as the largest generation in U.S. history, and are still in their formative years as consumers. In total, Generation Y is expected to spend $200bn annually starting in 2017, and $10 trillion in their entire lifetimes. Still, the generation faces severe demographic challenges, having graduated into (or in the wake of) the Great Recession. They come burdened with college debt, higher average unemployment and lower earnings (inflation adjusted) than prior generations. Therefore, digital marketing and commerce strategies need to be highly targeted and efficient to be successful.

- **Marketers and sellers need help navigating the journey to develop a "unified view" of the customer.** The holy grail in digital marketing and commerce is tracking the digital footsteps of the customer from awareness through initial conversion, then engaging them in loyalty and advocacy. Software solutions that enable this – but also leverage the data gleaned from these consumer interactions to fuel product innovation or deliver key business insights – will be the long-term winners in the space.

- **Investment recommendations.** In conjunction with this report, we initiate coverage on a basket of software stocks central to the customer journey. Shopify (SHOP, Buy, $55 PT) and Bazaarvoice (BV, Buy, $8 PT) are data-centric companies that can leverage their unique positioning within the customer journey to drive customer success and internal product innovation. Adobe (ADBE, Neutral) and HubSpot (HUBS, Neutral) are leaders in their respective categories, but we think upside is largely priced into both investment opportunities, especially considering the latter's unfavorable unit economics. We are watching ChannelAdvisor (ECOM, Neutral) for further evidence that its up-market transition is sustainable before becoming more positive on the investment story.

The Short Guide to Investing in the Sector

The large, thematic trends are well known to investors, but they are largely dependent variables. Instead, the aforementioned key themes (and their implications) are the foundation of the new era of digital commerce and marketing. This landscape is characterized by a wholesale upending of the traditional linear marketing funnel; Americans still spend ~35% of their time watching TV, but attention is increasingly fragmented as mobile garners an increasing share of attention. And within mobile itself, there are several channels (streaming services, social media, blogs) that dominate our daily lives, all of which are fighting for our finite amount of time amidst this widespread democratization of information.

Similarly, it's easier than ever to be a consumer. We can shop from the comfort of our couches, make purchasing decisions in store using the recommendations of strangers or shop for better prices at competing retailers while already in the checkout aisle. We as consumers have been liberated from staid, rigid consumption patterns that required us to get in our cars, fight for parking spots at the store, hope that the product we want is in stock and then brave long lines to finally make a purchase (I'll take Cyber Monday over Black Friday any year).

This fragmentation of attention and disruption of consumption are the new normal, and marketers and sellers need help in navigating the complex, winding customer journey. They need software solutions that allow for engagement across every possible touch point, enable fast, secure conversion and maximize loyalty and advocacy. Beyond this, they need solutions that leverage the data from these interactions to unlock critical business insights, including adjusting their marketing and selling strategies on the fly. Agility is of the utmost importance; as consumers follow their own unique paths throughout the customer journey, so too should marketers and sellers be able to meet them at every touch point, with a constantly improving knowledge of each consumer's desires.

All of the companies on which we initiate coverage today have been shaped by these trends, and are now familiar players in the customer journey:

- **Shopify** sits at the nexus of all of these factors, not just enabling SMBs to quickly and effectively manage inventory and sell across multiple channels (desktop, mobile, Amazon, Facebook (FB, Neutral; Analyst: Richard Greenfield), etc.), but also by providing a constant stream of data to improve basic marketing competencies (social media posts, product codes/ discounts) via its Kit CRM add-on.

- **Bazaarvoice** was primarily a bridge between loyalty/advocacy and consideration via its ratings and reviews point solution. However, the company recently pivoted its entire strategy on the premise of helping brands and retailers leverage data from its network of 150 million addressable shoppers. New solutions are focused on earlier points in the customer journey, including audience/cohort segmentation to run targeted awareness campaigns, or product spotlights within intent-based Google searches to drive consideration into conversion.

- **Adobe** pivoted from an offline creative suite into a dynamic hub of digital content creation, collaboration and marketing. Its current

product portfolio gives enterprises and individual creative workers the ability to produce digital content that can be consumed across any medium, while also giving CMOs a broad tool kit to understand and capitalize on how targeted audiences interact with that content. The data gleaned from campaigns perpetuates a feedback loop that can be analyzed and applied into new content creation/marketing efforts.

- **ChannelAdvisor** is, just as its name implies, a solution that helps sellers manage their inventory and selling strategies across a host of channels, including both first-party direct to consumer and third-party marketplace selling initiatives. This tool has become particularly important as Amazon shifts more towards third-party selling, and in light of the global growth of marketplaces.

- **HubSpot** is a response to the explosion of content and customer touch points in the smartphone/internet era. For SMBs with limited marketing budgets (or prowess), it's the equivalent of a jungle – how do they make their products/brands stand out in the noise generated by the internet? Instead, their inbound marketing approach focuses on helping SMBs create content (blogs, whitepapers, etc.), then optimizing it so that it stands out in intent-based Google searches. Not only does this help product awareness, but inbound traffic from the internet wilderness also serves as an effective lead generation tool.

The headlines around digital commerce are positive, but the rising tide won't lift all boats. Only those that can piece together a unified view of the customer or enable a seamless conversion experience will materially benefit from the coming wave of customer journey-related software spending (~14% five-year CAGR through 2020 per Gartner, the fastest among all major buckets of enterprise application software). Of the above five companies then, we favor those that satisfy three "big picture" criteria, before delving further into the "micro," company specific issues later in this report. Shopify and Bazaarvoice satisfy all three of these qualitative conditions, and – not surprisingly – the ability to leverage data is the chief differentiator.

- **Portals** – these companies are "portals" for their customers, either in terms of digital marketing or commerce. They are integral to how their customers operate in the age of the customer journey.

- **Data** – by virtue of their portal status these companies collect an extraordinary amount of data. They either leverage this to fuel their own product innovation, or play a key role in unlocking critical business insights for their customers. They go beyond simple dashboards and ROI measurement, and instead use data to enable end-user business agility. Their status as portals and data owners are the competitive differentiators that prevent displacement.

- **Ecosystems** – they are not closed systems, but rather can integrate with a host of other software providers/tools across the customer journey to ensure relevancy at every potential consumer touch point.

At current levels, we believe Shopify offers the most compelling investment opportunity in the digital commerce segment. The company acts as the de facto gateway to the internet for >325,000 SMBs, and is an expert in understanding

the powerful impact of feedback loops on their product; it uses a relatively inexpensive monthly subscription fee to entice users, then leverages the data generated by the vast amount of gross merchandise value (GMV) processed on their platform to add new features, including payments, shipping, cash advances and social media selling options. These innovations create greater competitive differentiation in the platform, attract more subscribers, lead to more GMV processed and drive further product innovation. This constant iteration augments the value proposition of the Shopify platform, and should lead to meaningful stock appreciation over the long term.

We are also bullish on Bazaarvoice's opportunity. The company has emerged from a messy, government-mandated divestiture with one of world's largest networks of addressable shoppers (150 million and counting). The company is building the "non-Amazon Amazon," with a rich, data-imbued product set that will help retailers drive stronger conversions and brands develop informed shopper advertising campaigns. There's still heavy lifting to be done, but we view Bazaarvoice as one of the few companies that can actually track a consumer's digital footsteps across the multiple stops on the customer journey.

Fundamentally, we like Adobe's positioning, led by its leadership in both digital content creation and digital marketing (through its Creative and Marketing Clouds). The product set offers an end-to-end customer journey management platform that enables customers to build digital experiences, then implement and measure the success of those campaigns through advanced analytics. The financial model is also compelling, and the company has remarkably transitioned its largely license-driven product model into a majority-subscription business with strong momentum. Still, despite the product strength, valuation looks stretched at current levels (7x EV/FY17 Revenues, 27x FY17 EPS), even considering the most optimistic scenarios around annual recurring revenue (ARR) and earnings growth. We'd look for a pullback in shares before buying into the stock.

On the other hand, we are more constructive on both HubSpot and ChannelAdvisor. HubSpot pioneered the concept of "Inbound Marketing," and growth has been impressive since the company went public (+51% top-line CAGR since FY12). However, churn remains high and unit economics remain inefficient, suggesting that it may be some time before the business reaches critical mass and sustained profitability. In short, we see limited upside when trying to reconcile the expected revenue and customer growth required to overcome the high level of customer churn. This doesn't imply that customers don't find value in the HubSpot platform, but rather that the current pace of adoption isn't sufficient to justify current trading levels (regardless of how optimistic you are on the company's ultimate market opportunity).

Likewise, ChannelAdvisor seems to be making strong progress on its transition away from SMB customers and towards a value-add channel management partner for larger brands and retailers. Secular trends are favorable as large marketplaces like Amazon become increasingly third-party (rather than first-party platforms that sell their own goods). However, while ChannelAdvisor can claim impressive insight into selling trends across these different marketplaces, its product scope is relatively limited in helping customers act on those insights (i.e., data reporting vs. actionable intelligence). Furthermore, we don't see much product differentiation beyond the core marketplace integration product;

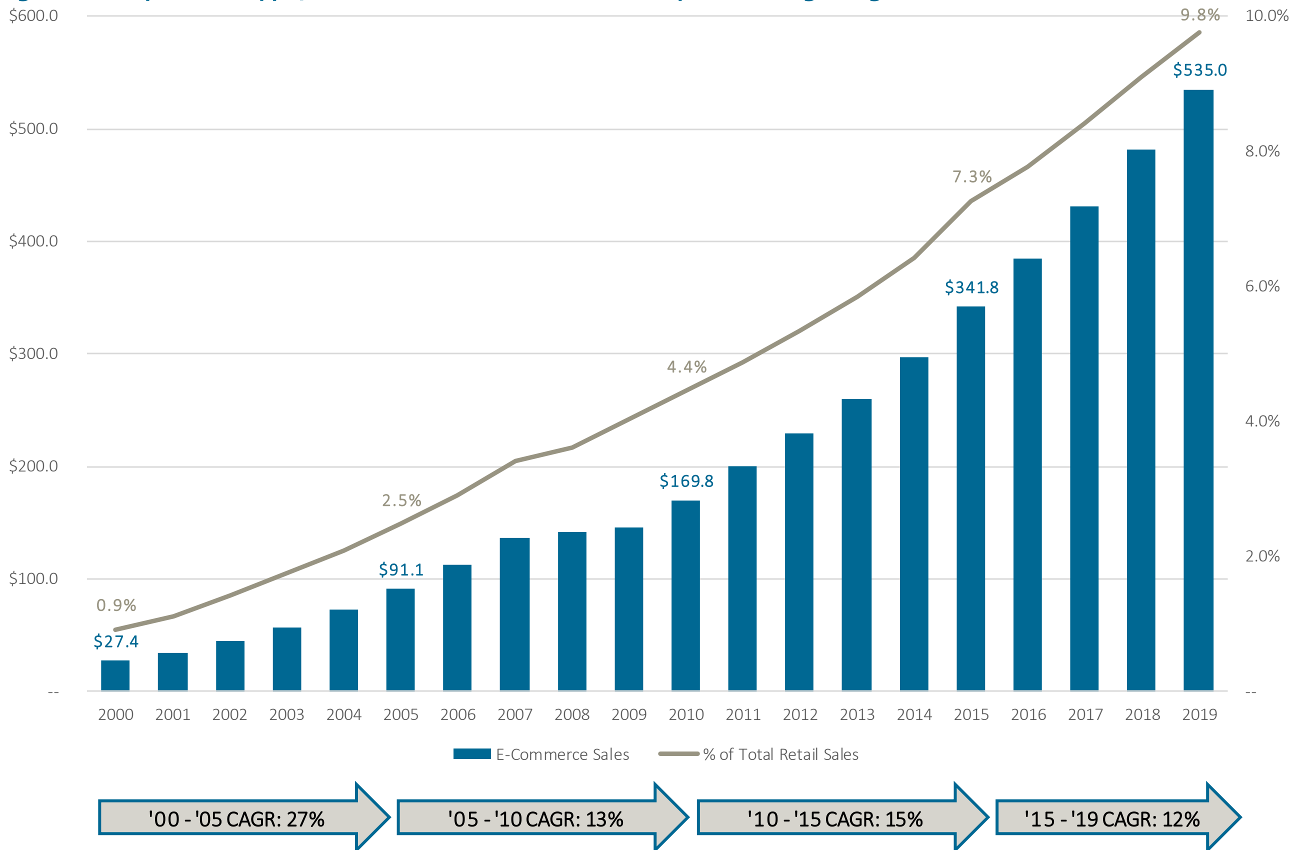
we don't think another company can replicate the *number* of global integrations achieved by ChannelAdvisor, but do think there's risk of a competitor eventually developing a few key integrations that could limit the company's share of GMV.

The Big Picture View of the Digital Commerce Landscape

Secular Trends Don't Tell the Whole Story

News flash: e-commerce is a long-run secular trend. It's also a powerful one given how central "commerce" is to our everyday lives. The nature of how we buy, sell and pay for goods and services is changing. The internet and our phones have turned us into "everywhere consumers," constantly opening marketing emails tailored to our search histories, meticulously researching product reviews or comparison shopping while already in the checkout aisle. Moreover, despite the ubiquity of Amazon, and the feeling that much has changed since the company launched its Prime membership in February 2005, vast opportunity still remains:

Figure 1: Despite the Hype, E-Commerce Penetration Is Only in the Single Digits ($ in billions)



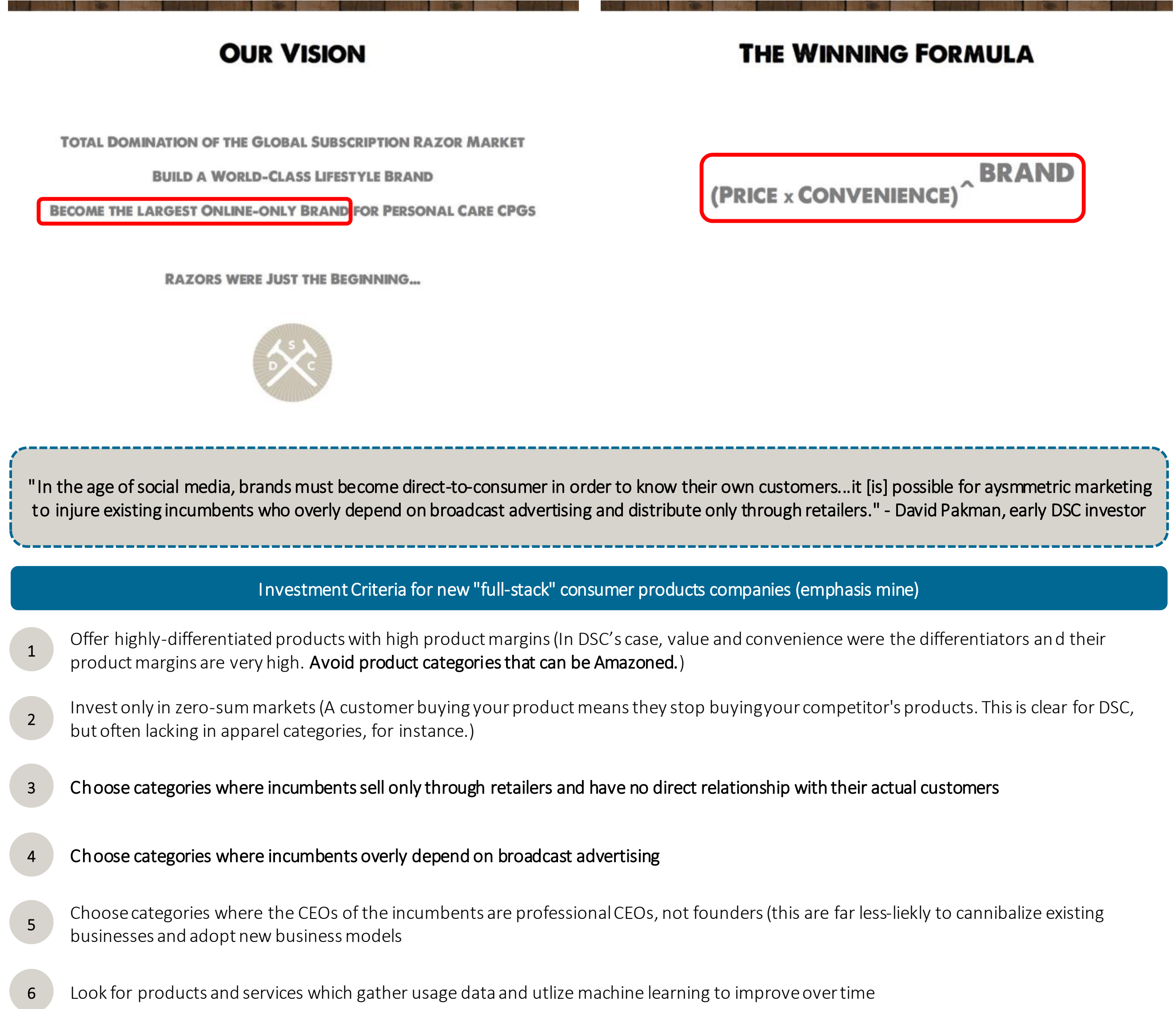
Source: BTIG, US Census Bureau, eMarketer.

E-commerce still represents only 7% of the U.S.'s $4.7 trillion in retail sales, and will only reach double-digits by 2019. But the scope of the transition – and the value of what's at stake – suggests that we are in the midst of a multi-decade growth opportunity. The story told by these headline numbers seems relatively

straightforward: a new internet-based economy is displacing the ecosystem that catered to the old way of marketing, buying and selling. However, these facts only scratch the surface of what should be a period of extended disruption in major facets of legacy commerce.

Incumbent brands and retailers face very real operational and competitive threats. From a business standpoint, they must adapt decades of investment in marketing, R&D and product distribution predicated on the traditional brick-and-mortar model for a digital-first world. On the competitive front, the internet has eroded traditional barriers to entry (i.e., the need to carry large inventory or secure physical shelf space); it's easier than ever to market and sell directly to consumers, and several smaller, niche competitors are seeking to "unbundle" blue chip companies.

Figure 2: Dollar Shave Club's Series A Slide Deck Charts the Path to Legacy CPG Brand Disintermediation



Source: BTIG, "Dollar Shave Club: How Michael Dubin Created a Massively Successful Company and Re-Defined CPG," by David Pakman.

This of course is in response to a changing consumer, for whom the internet is central for researching and purchasing products. And a digitally-focused consumer necessitates digitally-focused marketing initiatives that can cut through the noise of the internet. We'll leave the intricacies of the media ecosystem to our colleagues, but it's clear that the offline-to-online advertising shift has been underway for quite some time. Fundamentally, this makes sense; advertising has always been about staying in front of a captive audience (hence the cost of a Super Bowl commercial continues to rise despite risks to the traditional cable bundle). And while most observers seem to understand the transformation of the industry via the headline trends, there's much more at play here than the simple online ordering vs. brick-and-mortar dichotomy. Instead, the above chart in Figure 1 is a dependent variable, based on a host of other factors that are changing the very nature of the marketing, buying and selling of goods.

When Two Become One

The digital convergence of marketing and buying is the most crucial dynamic driving the space today. Traditional commerce was a relatively laborious process: consumers viewed advertising on television or in print, but still needed to get in their cars, drive to the store, purchase goods and bring them home. As a result, buying behavior was typically "clustered," as consumers established set habits (days, times, etc.) to maximize the efficiency of their trips.

On the other hand, digital commerce is characterized by immediacy, driven by the ubiquity of the internet. We can watch or open targeted advertising on our phones, then instantly switch apps to purchase the product with just a few taps. By extension, rather than leave the comfort of our homes (or make a detour to the store if we're already out), the product can be delivered to our doorstep just a few hours later.

The internet is the connective tissue between marketing and buying, but there is one major factor that fuels the feedback loop: data. It is the heart of today's digital commerce ecosystem, driving key business decisions around who to market to, how to market to them, how to drive conversions (i.e. sales) and – once a purchase has been made – how to best retain them, breed loyalty and even advocate on a seller's behalf. Companies actively leverage the data generated by our digital interactions to achieve a "unified view of the customer," and efficiently target us throughout our customer journey.

A complex software ecosystem underlies these dynamics, and the use of data is the foundational approach for each of these companies. This data-driven approach accentuates the aforementioned disintermediation of the legacy brick-and-mortar ecosystem. Because of their limited knowledge of their core customers, marketing teams at traditional brands and retailers were typically confined to large scale brand messaging campaigns and broad-based television advertising.

The lack of data also limited the ability to measure ROI, as there was no way to directly correlate marketing interactions/impressions with purchases. Similarly, sales teams confined their relationships to retailers, jockeyed for shelf space and hoped that "siloed" marketing teams generated sufficient brand awareness to convert foot traffic into product sales. Therefore, the lack of requisite

infrastructure (the internet) and context around customers (data) made the traditional marketing and selling of goods via retailers an inexact science.

Today though, brands can be natively digital, selling either direct to consumer or via online marketplaces. Resources traditionally allocated to costly television advertising or in-store promotions can instead be redeployed on targeted email campaigns or improving the customer experience, thereby feeding the customer conversion/retention cycle outlined earlier. This reconfiguration of spending priorities around commerce and marketing speaks to a broader – and much more crucial – differentiation between the new digital and traditional brick-and-mortar worlds: the linear marketing funnel (awareness > consideration > conversion) has evolved into the much more fragmented, dynamic and complex customer journey.

Awareness is now distributed across a host of channels (television, social media, streaming services), Google has wrested control over consideration from print advertising/classified ads and conversion now is largely a matter of having a superior mobile/online user experience, rather than just an in-store experience. And now – thanks to the internet, our phones and the data we generate as consumers – brands and retailers can actually have a firm grasp on customer service, retention/loyalty and advocacy. Brand health can be monitored in real time, and offers to entice repeat purchases or upsell customers can be informed by purchase history and preferences. This is a marked departure from the marketing funnel world, where customer advocacy and loyalty depended upon offline word-of-mouth.

We discuss some of these trends in greater detail in the pages that follow, in effect to build towards the software companies enabling the data-driven transformation of the industry. There are a host of approaches to solving the same problem (as you'll see later in our market map), and every company is jockeying for a piece of the fast-growing pie.

Digital commerce and marketing is a large space on the cusp of even greater change that what's already been achieved in the post-Amazon era. The customer journey has caused wide-scale fragmentation and disruption of the traditional modes of marketing and selling goods, and there are a host of public and private software providers aiming to navigate the new, complex reality. It's a cliché to say we remain selective with respect to picking stocks, but the truth is that investors need to go beyond the headline secular trends before making an investment decision. Of the utmost importance is recognizing that data is *the* competitive moat for any software solution.

As consumers, our consumption habits are shifting from synchronous to asynchronous. New business models are emerging that emphasize access to goods and services on-demand (at the cost of ownership), and the power dynamic in commerce has shifted from big brands and retailers into the hands of the consumer. The "freedom" of digital commerce relative to a strictly brick-and-mortar world feeds a psychological feedback loop where consumers believe their interests, habits, personalities and buying decisions are unique. The combination of this direct engagement model with greater preference for personalization leads to a simple, yet difficult to achieve conclusion: those few companies that can collect and leverage data to help marketers and sellers satisfy these beliefs will be the long-term winners.

The Customer at the Heart of the Journey

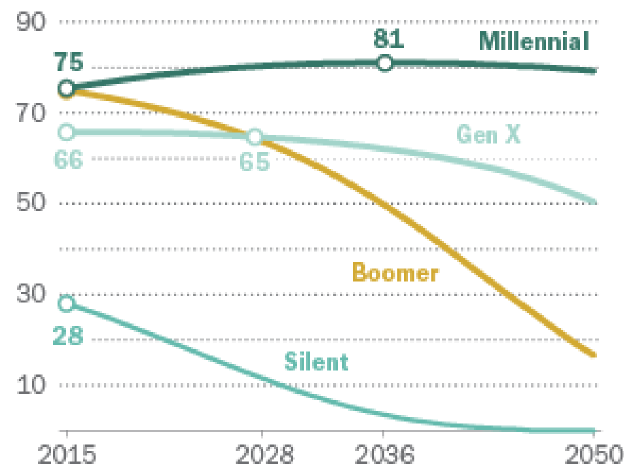
The Revolution Will Not Be Televised

If our phones have turned us into everywhere consumers, then marketers, brands and retailers need to be "everywhere" in order to reach us. But who exactly is the consumer they hope to reach? The answer (of course) is Millennials.

Figure 3: Millennials Are Now the Largest U.S. Generation

Projected population by generation

In millions



Source: Pew Research Center tabulations of U.S. Census Bureau population projections released December 2014 and 2015 population estimates.
Note: Millennials refers to the population ages 18 to 34 as of 2015.

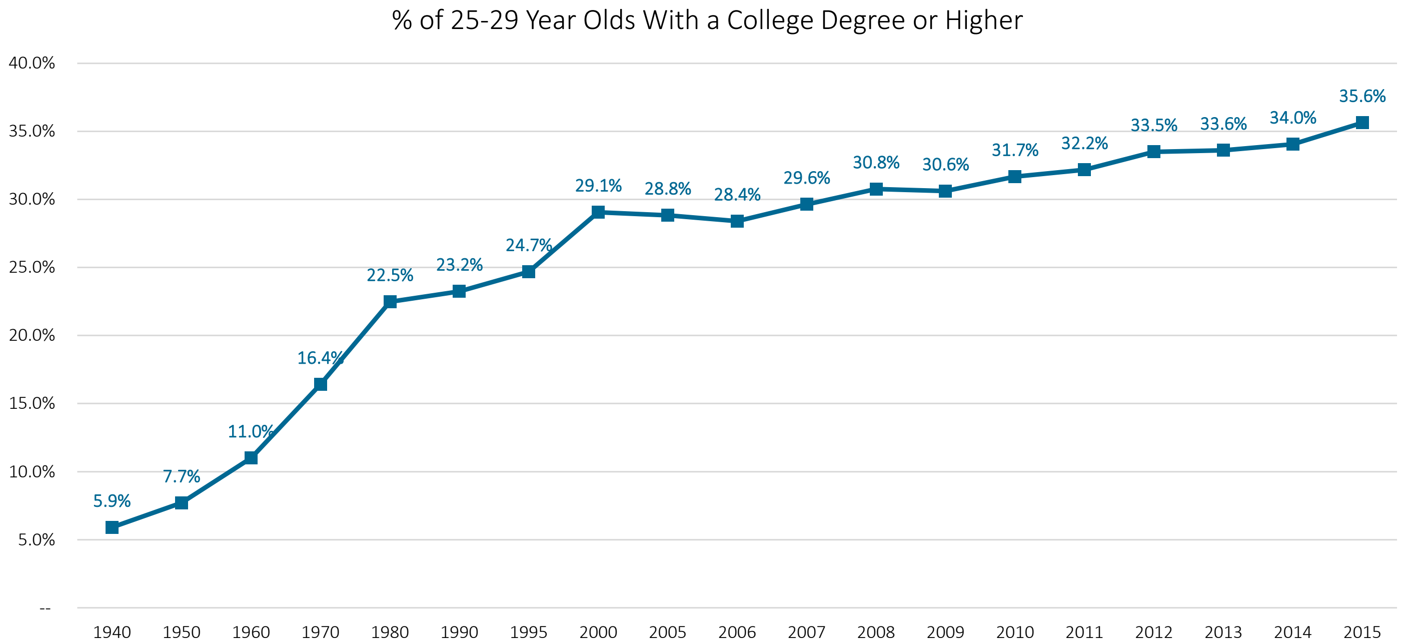
Having officially passed Baby Boomers earlier this year as the largest generation in American history, Millennials are also growing in importance in economic terms: the oldest are entering their peak earnings years, while the tail-end of the generation is just entering the work force. As they wrest the mantle of chief wielders of purchasing power from Baby Boomers, they will become the prime targets of the digital commerce and digital marketing revolution. In total, Generation Y is expected to spend >$200 billion annually starting in 2017, and $10 trillion in their total lifetimes, making them the largest consumer generation in history.

It's an understatement to say that their habits, societal attitudes and familiarity with technology will reshape most industries across the economy, as they mold the world in their own image. But what exactly is that image? To understand the impact, we think it's best to first understand the demographics.

School Spirit

The pursuit of higher education is a noble one, and Generation Y has the distinct honor of being the "most educated" in American history. More than a third of 25-29 year olds today have a four-year Bachelor's degree or higher, versus a quarter twenty years ago and only ~8% just half a decade after World War II.

Figure 4: Millennials Are the "Most Educated" Generation in U.S. History – College Enrollment Continues to Rise



Source: BTIG, U.S. Department of Commerce, Census Bureau.

In theory, this is a net-positive as the information economy in the United States undergoes rapid growth relative to other types of work; knowledge worker jobs increased by >7 million from 2010 to 2015, compared to an increase of ~2 million routine manual jobs (construction, transportation, production and repair occupations), 1 million non-routine manual jobs (service occupations related to assisting or caring for others) and just 400K routine cognitive jobs (sales and office occupations).

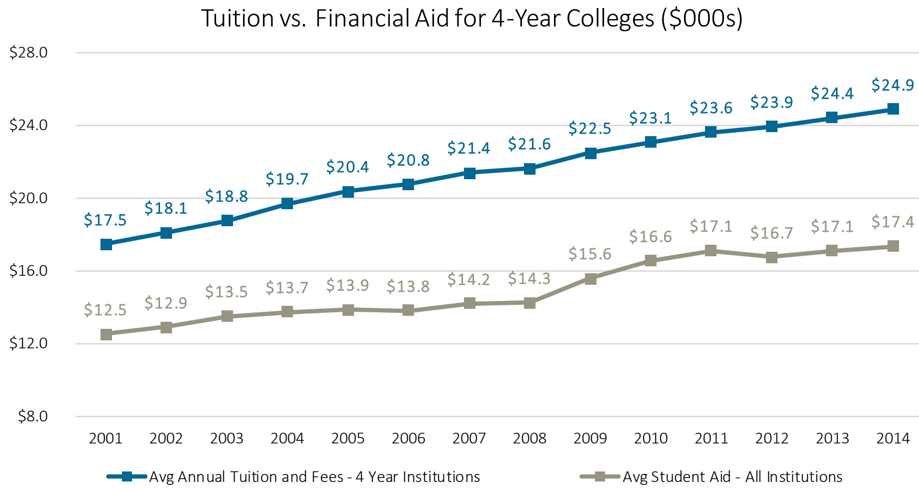
In practice though, higher education works in accordance with general market principles. Greater demand generally translates into higher prices, and tuition rates have duly followed. Overall, the annual cost of going to college (tuition, room, board and other fees) has grown at a ~3% CAGR since 2001. At the same time, real median household income (the best way to gauge a family's ability to pay for an increasingly expensive college education) is essentially flat.

As the gap between the cost of going to school and a family's ability to fund their child's education widens, the burden of payment naturally shifts to the students themselves. And given that (believe it or not) most college students don't have the cash on hand to pay upfront for their education, they turn to third-parties (in the form of grants or loans) for funding assistance. Grants of course are the preferred option, given the fact that it's a no-strings-attached arrangement, but the data reveals that these dollars have failed to keep pace with tuition increases (see Figure 5).

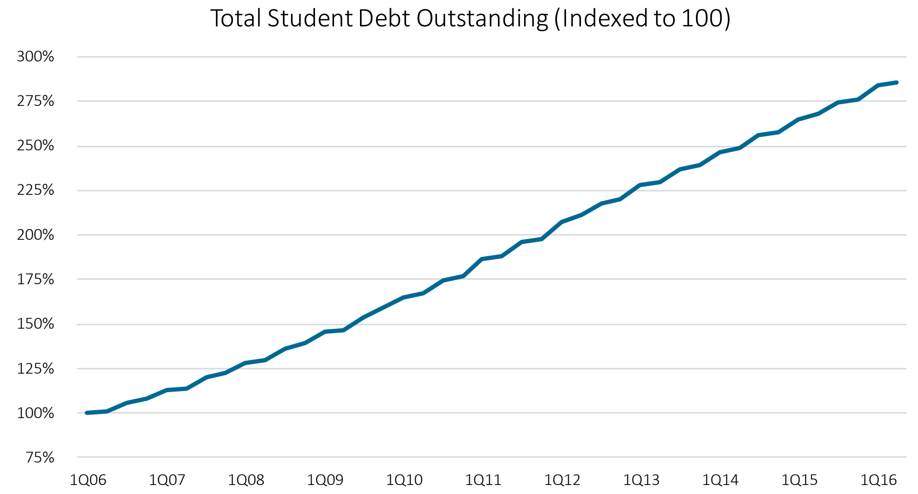
The widening of the net tuition funding gap leaves students with little choice but to leverage up their nascent balance sheets in the hope that their education will prove an asset that enables steady, sufficient paydown in the post-college years. But therein lies the rub – with relatively limited income growth over the past decade or so (and projected growth below the level of prior generations) – Millennials face a persistent debt burden that will likely adversely affect their long-term choices as consumers.

Figure 5: The BTIG State of Student Loans – Millennials Are Knowledge Rich But Cash Poor

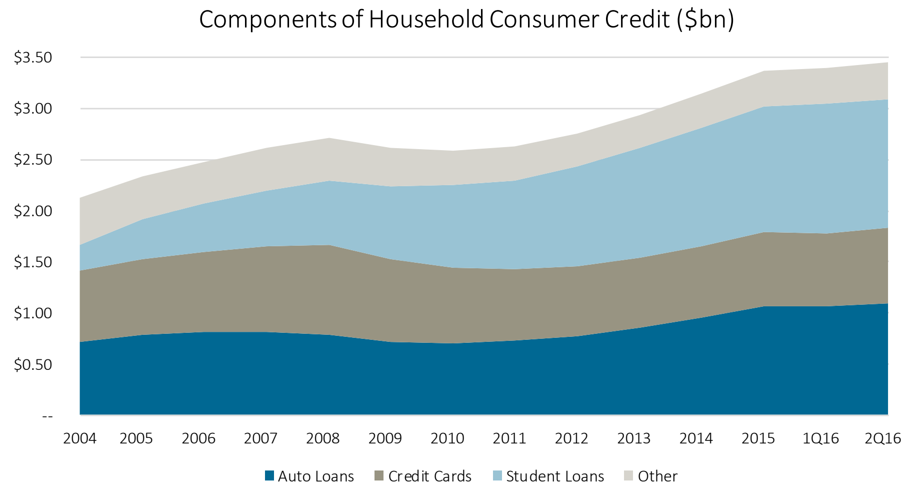
1 The gap between average annual tuition and fees and available student aid continues to widen…



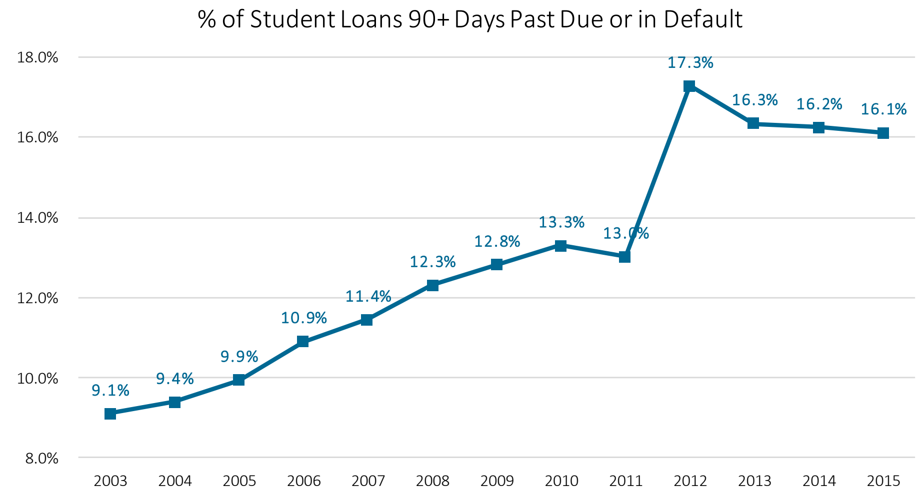
2 …Causing the amount of outstanding student debt to nearly triple over the past 10 years…



3 …And student loans are now the largest (and fastest growing) piece of household consumer debt…



4 …With skyrocketing defaults that are still near record levels today.



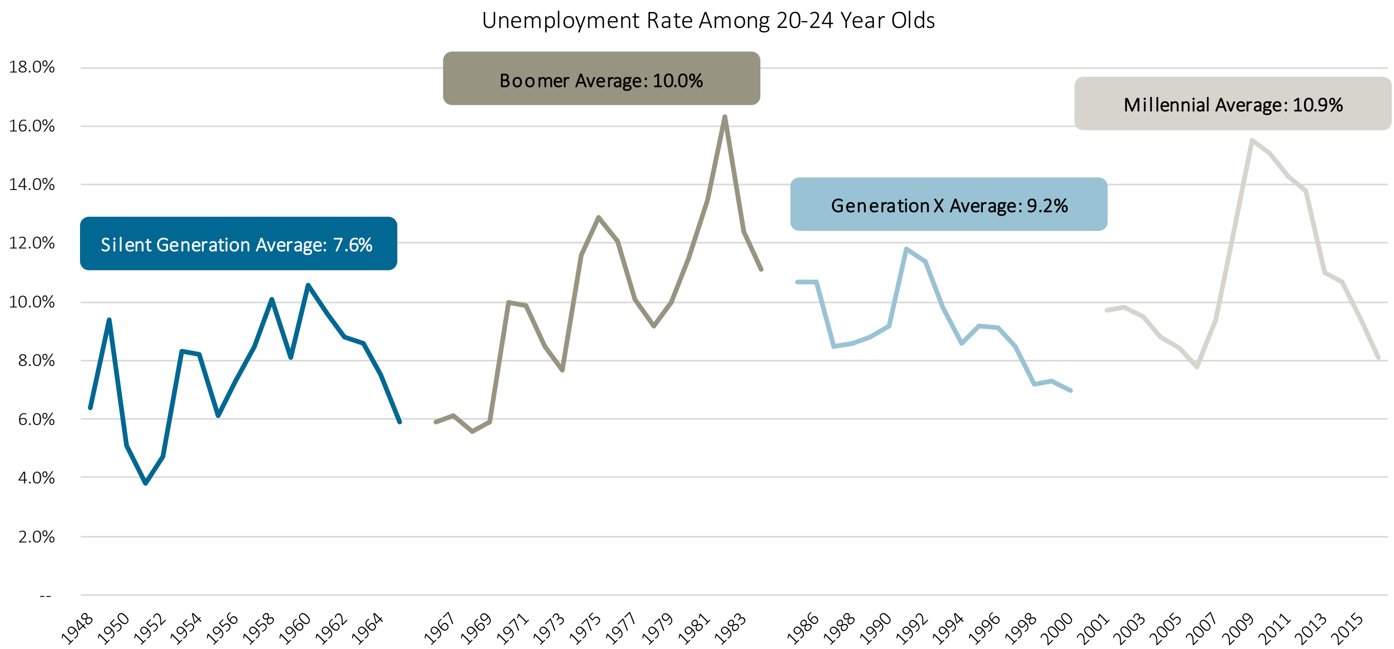
Source: BTIG, U.S. Department of Education, Board of Governors of the Federal Reserve Consumer Credit data, Federal Reserve Bank of New York Consumer Credit Panel / Equifax.

But still – despite a newfound debt load – as a Millennial leaving college, you're at the start of the rest of your life, and you're ready to make your mark on the world. You're on the cusp of independence, ready to get a job and move away from home for good. Right?

Gimme the Loot

Except, of course, you're graduating into (or in the wake of) the biggest recession since the Great Depression. And when it comes to finding a job, the prospects aren't as bright they were for previous generations:

Figure 6: The Unemployment Rate for Millennials Has Improved Dramatically, But Effects of the Great Recession Still Linger



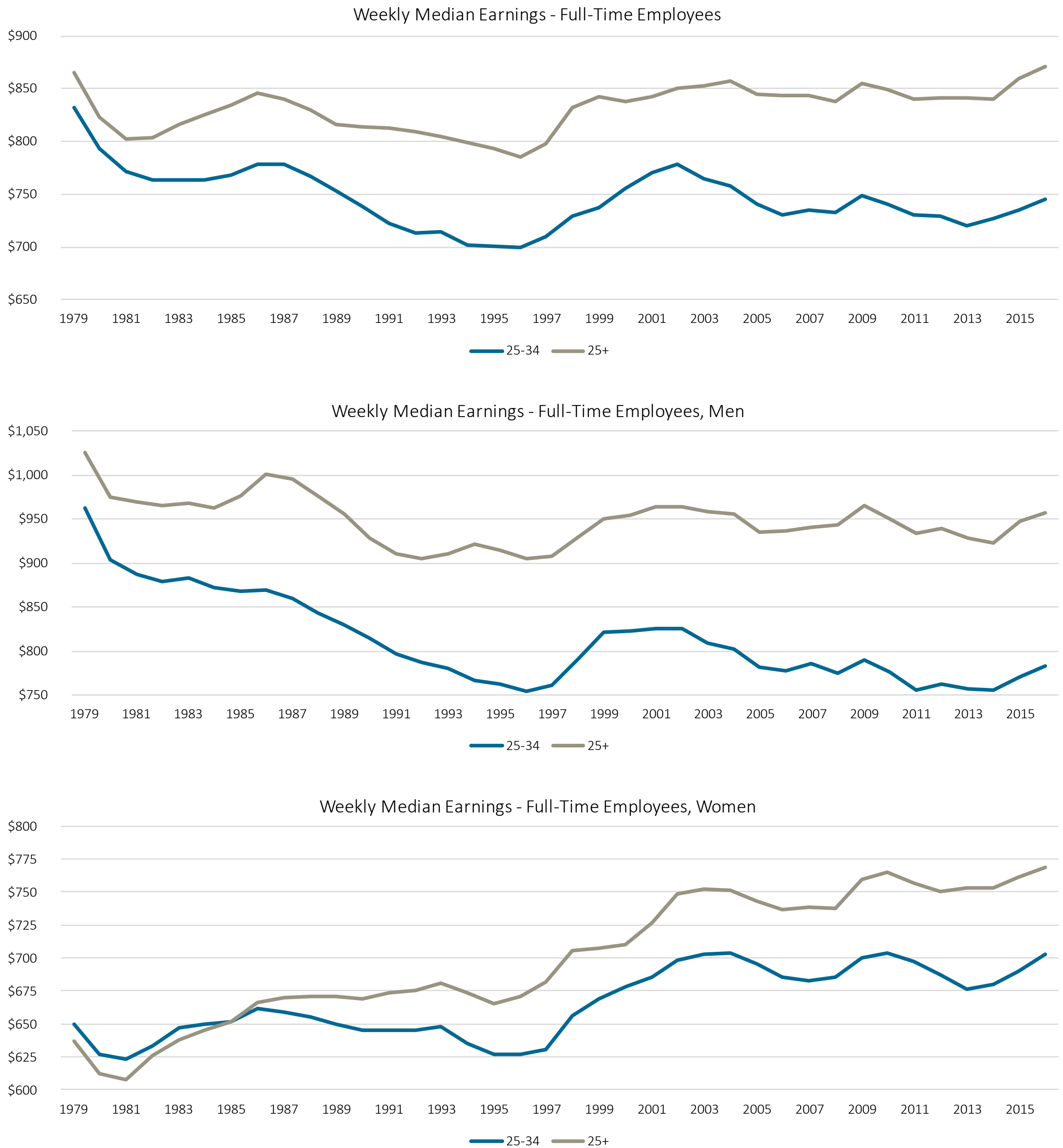
Source: BTIG, U.S. Bureau of Labor Statistics.

The hangover from the recession is clear, with more graduates fighting for fewer jobs, but still under obligation to pay back the money they borrowed for their college education. But finding a job in itself isn't sufficient for ensuring financial health. On this front, Millennials are again disadvantaged relative to prior generations, as 25-34 year olds today earn ~10% less on a weekly basis than in 1979 (vs. essentially flat weekly earnings for everyone 25 and older). The difference is even more pronounced by sex, as 25-34 year old men make only ~80% of what they did in 1979 (vs. 93% for all men 25 and older). On the other hand, women ages 25-34 make 8% more than in 1979, while all women 25 and older are making ~21% more over the same time frame.

Younger men have always earned less than their more experienced counterparts, but – from a Millennial perspective – the discrepancy has widened from ~86% in 2002 to 82% more recently (both of which are down from the peak in 1979 of 94%). This suggests that either Millennial men can look forward to a significant ramp in earnings later in their lives (the timing of which could suppress near-term consumption longer than usual), or – as they take on a greater share of the labor force – the overall dollar amount for those 25 and older may trend down.

For women, despite the overall improvement in weekly median earnings, the income disparity relative to male workers paints a different picture. Specifically, 25-34 year old women make 90 cents on the dollar relative to their male counterparts. But as both sexes mature in the labor force, that gap widens further to 80 cents on the dollar (albeit it has been steadily improving since 1979). This suggests that Millennial women are at risk of a "double whammy" with respect to their future earnings: not only will they be subject to the potential flattening/decline in overall median weekly earnings, but they'll suffer the added effect of still earning less than their male counterparts.

Figure 7: Adjusted for Inflation, Millennial Workers Today Earn Less Than Their Counterparts 35 Years Ago



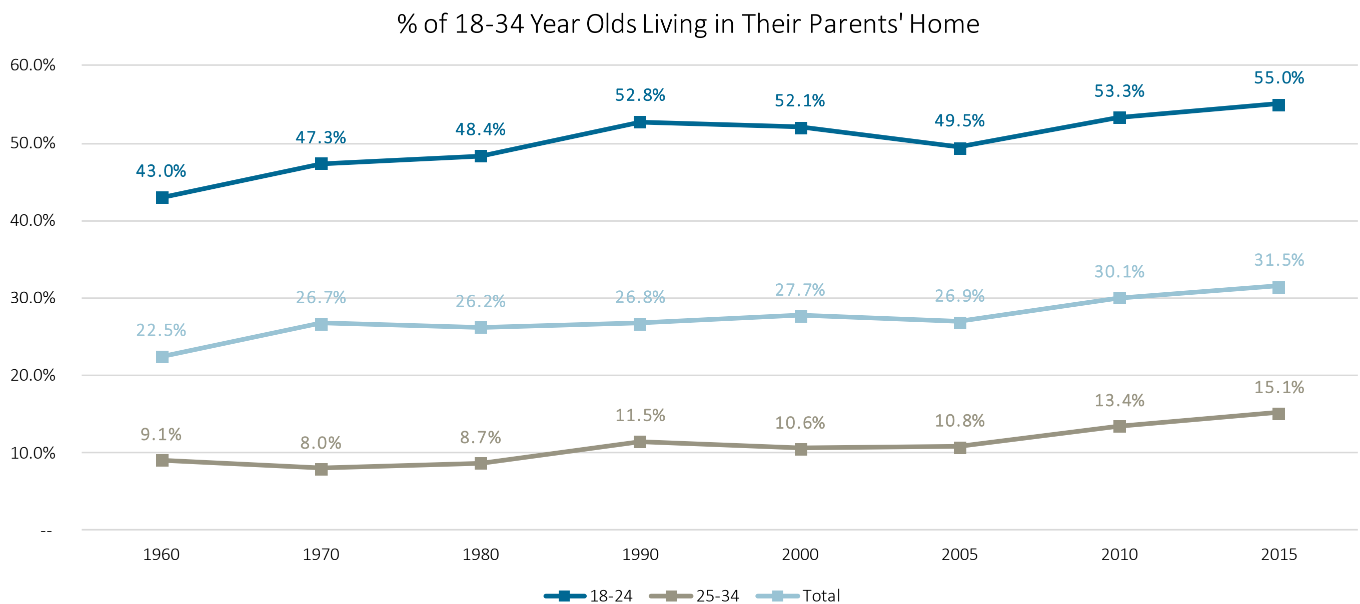
Source: BTIG, U.S. Bureau of Labor Statistics, Federal Reserve Bank of Minneapolis.

Studies indicate that graduates entering the labor market during economic downturns persistently suffer in terms of employment status and earnings, with an overall impact that can last for up to a decade. Regardless of the full impact, the fact remains that Millennials are earning less today than their counterparts from prior generations, and look set to earn less through their formative years as consumers. And with limited job prospects and spending power, it's natural that some will delay many of the other major life decisions that we typically associate with "adulthood."

Ain't No Love in the Heart of the City

Our current notions of adulthood are largely formed by Boomers, who typically moved out of their parents' house after either turning 18 or graduating from college. This afforded them the independence to live on their own, build their careers, and ultimately pursue the other "traditional" life milestones: buying a car, getting married, owning a house, starting a family, etc. But this dynamic has been steadily reversing since 2000, and the share of 18-34 year olds living with their parents now stands at the highest level since 1940. Welcome to the Boomerang Generation:

Figure 8: Empty Nests That Refuse to Stay Empty – Nearly One-Third of Millennials Live in Their Parents' Home



There have always been a high proprotion of 18-24 year olds living at home, but the number of 25-34 year olds (older Millennials) is at it's highest level since *prior to World War II*. Millennials are now also the *largest* U.S. generation, meaning that nominally there are more young adults in their parents' homes than prior generations. The number of 25-34 year olds has increased at a 4% CAGR for the past 10 years.

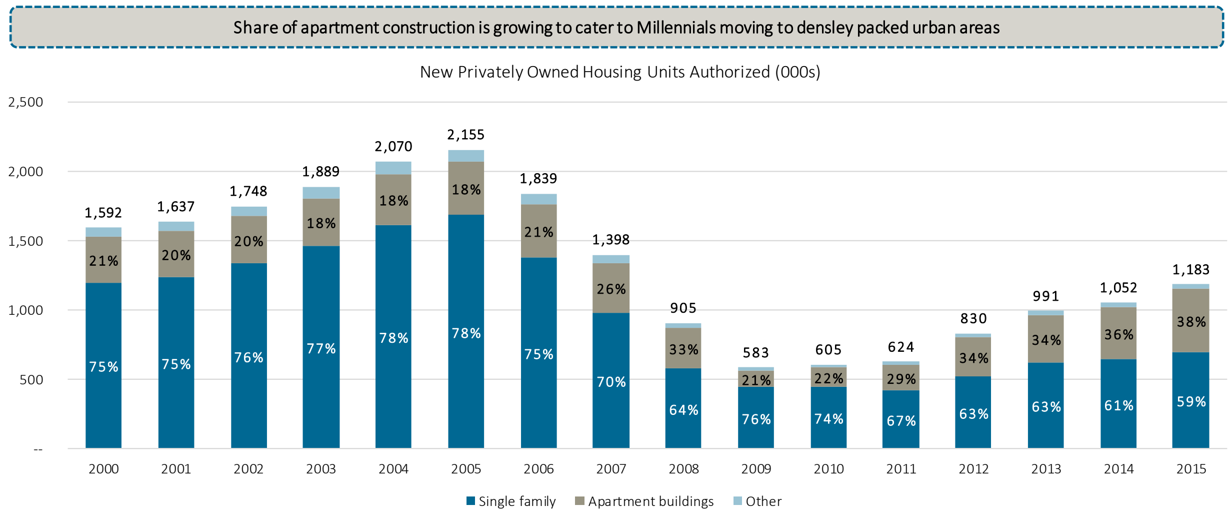
Source: BTIG, U.S. Census Bureau Current Population Survey.

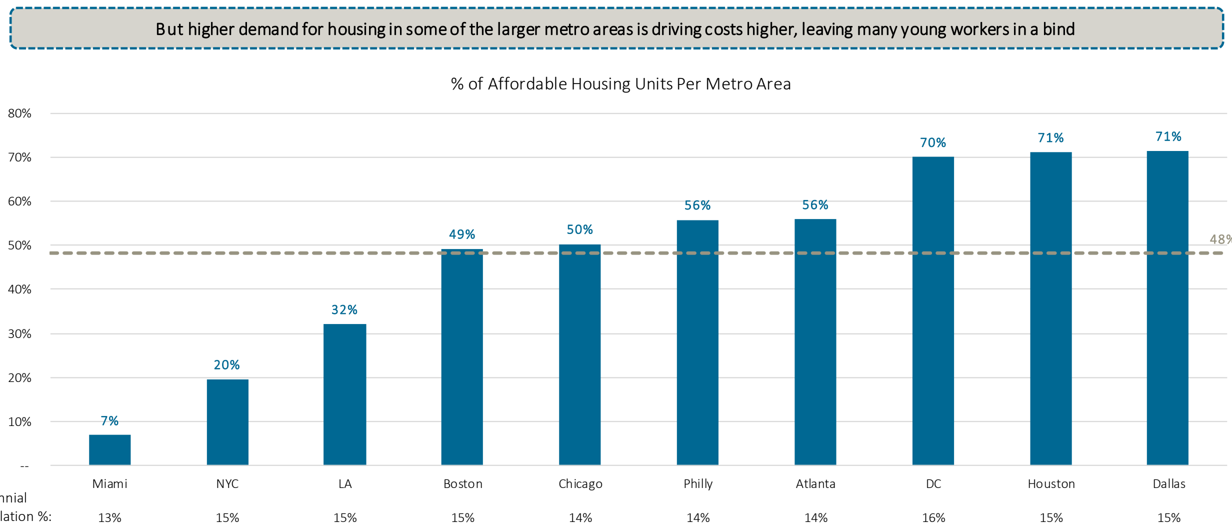
A rising portion of Millennials rely on parents as their safety net in the face of trying economic times. By living at home, they hope to either buy time while looking for a job, or save their earnings in hopes of eventually striking out on their own. On the other hand, their counterparts who were able to fly the nest flocked to cities at unprecedented rates, craving not just viable job opportunities, but also the amenities associated with high-density urban living (restaurants, bars, cultural institutions, shops, etc.). As a result, the demand for

urban housing has grown at the expense of more traditional, suburban single-family units. This growing supply is a natural response to the influx of younger workers, but unfortunately, new, large-scale construction takes time to develop; the lag then associated with building new units leads to a near-term supply squeeze in the market, causing rents to increase in light of greater demand. This in turn leads to the dynamic colloquially known as "the rent is too damn high."

And at the same time – despite Millennials' desire to eventually gain more space by settling in the suburbs – the economic constraints we outlined earlier (combined with proximity to paying jobs) often keep them confined to major metro areas longer than they'd typically like. Further compounding this effect is that the single-family home market is undergoing similar dynamics to the apartment/rental market: supply is constrained, demand is increasing as older Millennials mature in the labor force and pricing keeps marching higher. The net effect – again in conjunction with the debt and wage dynamics outlined earlier – is a steady decline in first-time homebuyer affordability.

Figure 9: Millennials Are Priced Out of Buying a Home, and At-Risk of Being Priced Out of City Living Too





Source: BTIG, U.S. Census Bureau, Trulia. Affordability determined by median household income.

The confluence of these structural challenges results in a generation that's delaying the "traditional" life milestones we mentioned earlier. They need at least a decade before they can afford a home, are waiting longer to buy cars, choosing to marry older (or not to marry altogether), putting off having children, and will most likely delay retirement as well given the debt burden associated with their college educations.

So this is the future consumer that everyone is fighting over: young, optimistic and growing into their role as the largest consumer base ever, but still economically challenged. And while there is growing evidence that Millennials' major consumption choices may not be too dissimilar from older generations' (despite >60% believing that their generation has a unique identity), the fact is that these choices are occurring later in life than prior generations. So the road is the same, but the path travelled is different. This poses a fundamental challenge to brands and retailers in reaching this new consumer, as current methods of selling and marketing are predicated on assumptions around the life trajectories of prior generations.

To hark back to our example from earlier in this piece, what good is a commerce model built around the car if people are putting off the decision to buy one? And even when they do own cars, if purchasing intent is already ascertained, why take the detour to stop in a store when everything can be delivered? And what happens when cars become a commodity? Admittedly, this latter scenario is likely in the distant future, and the broader shift to a majority e-commerce society has a very long tail.

But to reiterate the overall point, this introductory picture of Millennial financials highlights the importance of data in the new era of digital marketing and commerce. It follows that if consumers have less to spend (and it's looking like Millennials may be one of the most financially challenged generations in history, at least in their early years as consumers), they will naturally be more cautious and conscious about their spending choices. Therefore, having the data, the tools and even the business model to appeal directly to such a consumer is of the utmost importance. If brands and retailers can leverage data to deliver personalized marketing campaigns, tell intimate brand stories that connect with a consumer's beliefs and "unique" image of themselves, or even shift the emphasis of consumption from goods/ownership to services/access, they can win the minds (and wallets) of this emerging, spendthrift consumer.

Economic Realities (and the Internet) Creating New Business Models

The combination of Millennial economic pressures, internet ubiquity and greater smartphone adoption is hastening the broader shift to smartphone augmented consumption. New business models have emerged to cater to Millennial consumers, albeit with an emphasis on access over ownership. In a sense, this dynamic represents the "democratization" of commerce, allowing cash-strapped Millennials to partake in the benefits of their forbears despite not having the same level of resources.

Figure 10: The Emerging Digital Economy Signals a Broader Shift in Services (Access) Over Goods (Ownership)

Industry	Ownership / Employment (Goods)	Access (Services)	Comments
Cars	GM, Ford, HONDA	lyft, zipcar	Consumers pay on a per-mile basis rather than per-vehicle. Savings on gas, insurance, maintenance
Music	hmv, iTunes	Spotify, MUSIC	No need to own CDs or digital rights - instant access to a large catalogue for a monthly fee
Movies / television	BEST BUY, iTunes	NETFLIX, amazon instant video	No need to own DVDs or digital rights - instant access to movies or shows for a monthly fee
Fashion	CHANEL, HERMÈS PARIS, BURBERRY LONDON	BAG BORROW OR STEAL	Access to the same brands as more affluent consumers at a large discount - renting ensures variety over sunk costs
Office space	Regus, Boston Properties	wework	Global brand/community - work from any location, instead of restricted to an office specifically leased by your company
Housing	PulteGroup, Toll Brothers	airbnb	"Commoditization" of free space at home - consumers can stay anywhere with greater convenience and privacy (relative to hotels)
Garage / storage	SmartStop Self Storage, National Storage Affiliates, Public Storage	Clutter, MakeSpace YOUR CLOSET IN THE CLOUD	Still a rental model, but freed from "managing" your own space - ship your items to the company and they store it for you instead
Toys	LEGO, Hot Wheels, American Girl	pley, SPARKBOX	Parents can ensure a high volume/variety of toys without the cost and space constraints associated with ownership
Delivery staff	QuikrJobs	POSTMATES, UBER EATS	Vendors don't need to hire their own workers - leverage third party services/independent contractors to mitigate overhead
File storage	SanDisk, SAMSUNG	Dropbox	USBs become obsolete - access files from anywhere
Enterprise computing	DELL, CISCO, IBM	amazon web services, Microsoft Azure	Drastic reduction in equipment and headcount related to managing on-premise infrastructure

Source: BTIG.

The full extent to which each of these access/services companies is transforming their individual markets remains to be seen. However, what they share is their "break" from legacy business models; they operate around assumptions made regarding the new Millennial consumer, rather than older businesses that are predicated on the habits and aspirations of older generations. Thus, they can drive greater brand awareness and affinity with younger consumers, feeding the "disruption" connotation that each shares in its particular industry.

This doesn't imply that older brands are hopeless. Incumbents earned their positions after all as the winners of previous competitive cycles, and should have ample resources to adjust to new market realities. However, they are playing catch-up to a certain extent, as their business models (and profits) are aligned to older consumption patterns; in essence, they are forced into a balancing act between conserving profits from a legacy model while forging a new path that puts them onto the radar of younger consumers. Relative to new, digital-first businesses, incumbents face the unenviable task of modernizing their business models and preserving decades of investment in legacy infrastructure for a new generation of consumers with its own set of habits and assumptions around marketing and commerce.

A Quick Note on How B2B Factors Into This B2C Conversation

How these brands fight for our attention and spending power as consumers (including what type of experience we have when engaging with their marketing and selling apparatus) plays a critical role in our expectations as workers. We don't drop our assumptions at the door when we enter the workplace, and the habits we form as consumers follow us to our desks. There is a "spillover" effect from B2C applications into B2B expectations.

In truth, Amazon has set the bar high when it comes to the searching, buying, shipping and overall convenience associated with routine transactions. Across their work and home lives, consumers (not just Millennials) increasingly expect seamless access to their order histories, fast, reliable shipping options, one-click checkout, ratings and reviews from fellow purchasers, question and answer sections, live chat with representatives, and even predictive search and product recommendations. Therefore, per Gartner, the B2B digital commerce experience is less about simply "modernizing" archaic order management and entry processes, and more a leading tool for customer acquisition (or attrition if your processes are not up to scratch). If our buying patterns are shifting to digital channels, then it follows that a B2B business's first point of contact with a potential consumer will also occur over digital channels

On this front, again, Gartner stresses how critical it is for companies to "consumerize" their B2B digital commerce experiences; by 2018, companies fully investing in all types of online personalization will outsell companies that have not *by more than 30%*, while those that adequately transform their B2B digital commerce sites will gain market share and see revenue increase by up to 25%. A recent example of this practice is the Oracle (ORCL, Buy, $47 PT) accelerated buying experience. When done properly, simplifying how customers purchase can be a massive competitive advantage, potentially creating a virtuous cycle in the go-to-market organization: shorter time-to-purchase drives faster go-lives/onboarding, creating more reference customers. These references can then be used to grow sales pipelines and foster stronger close rates, thereby restarting the process again.

This move towards simplification can largely be seen in the same light as Amazon's one-click ordering for Prime customers. Although the emphasis is different (B2C vs. B2B), the ultimate goal is the same: more agility in selling products through simplicity. We expect this convergence to continue, particularly as Millennials take on greater share of the overall labor force. This dynamic should bring to bear many of the aforementioned trends and characteristics that we've outlined on this generation, as they bring their preconceived notions and habits as consumers into the workplace.

It's clear that the customer at the heart of these interactions is changing, but the marketing and selling framework is still very much the same (more or less). The trusty marketing funnel is still the de facto standard for mapping customer interactions, albeit the proliferation of internet-connected devices has turned this into a more fluid "journey." There are multiple potential touch points for brands and retailers to generate awareness, stay relevant during product consideration, enhance the overall buying experience at time of purchase and ultimately delight and retain customers to drive repeat purchases.

A complex software ecosystem underpins this entire process, enabling digital marketers, brand strategists, Chief Marketing Officers (CMOs), sales managers and chief commercial officers (CCOs) to measure and attribute every facet of the journey. And at the heart of it all, what truly fuels the cycle (and marks the evolution of the customer funnel into the customer journey) is data; the ability to capture, measure and act upon it serves as the bedrock for all of today's digital marketing and commerce interactions.

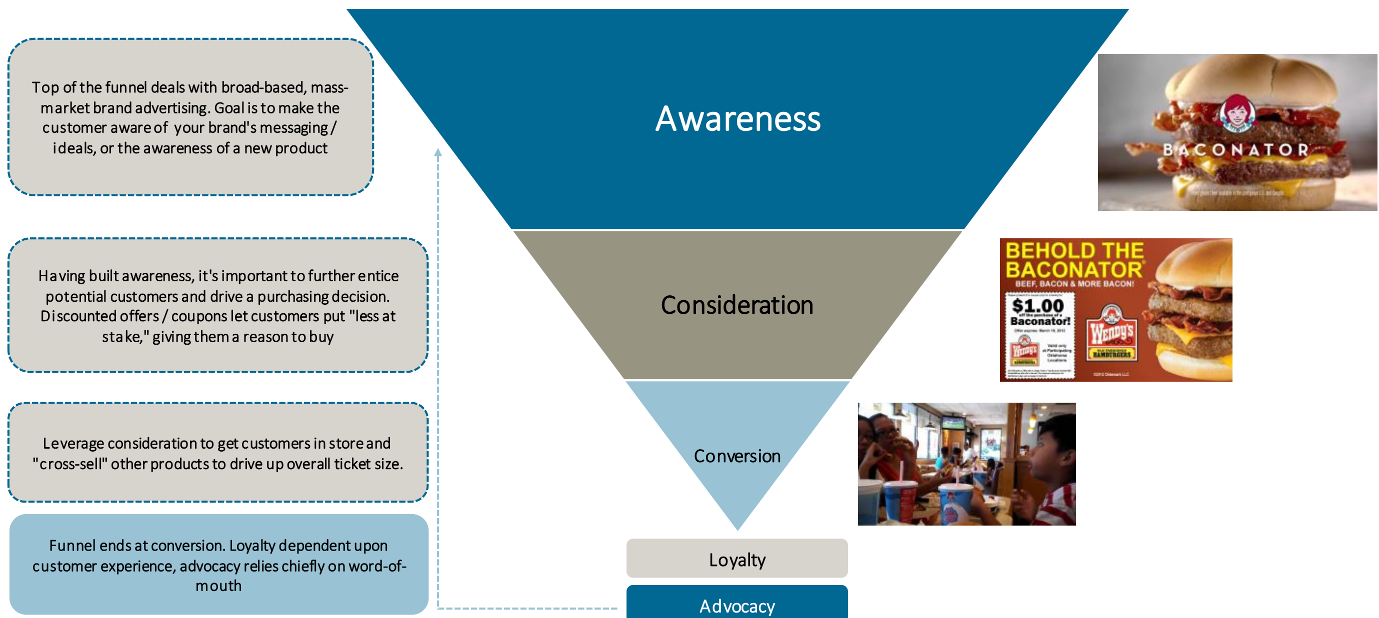
And It All Falls Down

The Long and Winding Road

Marketing has typically followed three distinct phases: awareness, consideration and conversion. Each of these corresponds to a different aspect of the marketing funnel, both because of their scope/breadth and their representation of a customer's "time to purchase;" the further down the funnel you move as a customer, the closer you are getting to a purchasing decision (conversion). Before the advent of the everywhere consumer (i.e., before the smartphone era), the funnel was a readily identifiable path marked by distinct events and approaches to advertising.

These phases of the funnel corresponded to the relatively laborious processes associated with traditional commerce. We saw an advertisement, went to the store, browsed the shelves, made our purchases, went home, consumed the products, and went back to the store when we needed to restock. Awareness in this age constituted mass-media advertisements via television or radio (hence the activities with the broadest reach marking the top-end of the funnel). Consideration marketing reached us as we got closer to our time to purchase, primarily through ads in the newspaper, coupons, or even locking in eye-level shelf space while we browsed. Finally, conversion was limited to our in-store activities, through aisle promotions or special offers at checkout.

Figure 11: The Traditional Linear Marketing: A Methodical Approach to Conversion, But Limited Influence on Advocacy



Source: BTIG, "The Reality of Missing Out" on Stratechery by Ben Thompson.

Not coincidentally these funnel categories line up with Procter & Gamble's (PG, Not Rated) (historically the largest advertiser in the world and pioneer of traditional brand marketing) internal conception of the funnel – the "Moments of Truth." Zero is awareness/brand advertising, One is consideration via the appropriate shelf space and Two is conversion/loyalty by making sure the product justifies the consumer's expectations and purchase. To supplement its nominal leadership position at Zero, the company secured prime retail shelf space (First), while investing heavily in market research and product development to both delight customers and create affinity (Second).

It's important to recognize that under this framework, the brand/advertiser has limited control over loyalty, other than hoping that the product measures up enough to warrant a repeat purchase. Despite the efforts to drive awareness, or time spent building retailer relationships to ensure prominent shelf space over rivals, any customer loyalty/brand affinity relied largely on the merits of the product itself.

Figure 12: "Moments of Truth" Pioneered the Marketing Funnel, But Is Designed Strictly for Brick and Mortar

Source: BTIG, Procter & Gamble Company Filings.

In part, the limited ability to measure customer retention/loyalty had to do with the lack of sufficient tools. Consumer surveys could tell part of the story, but these were relatively inefficient from a go-to-market perspective. There is a natural lag associated with offline surveys (it takes time to gather and tabulate statistically significant results), and by the time the results are in, it could be too late; your product will already have been in the market longer than it needed to be, thereby prolonging the damage to the overall brand.

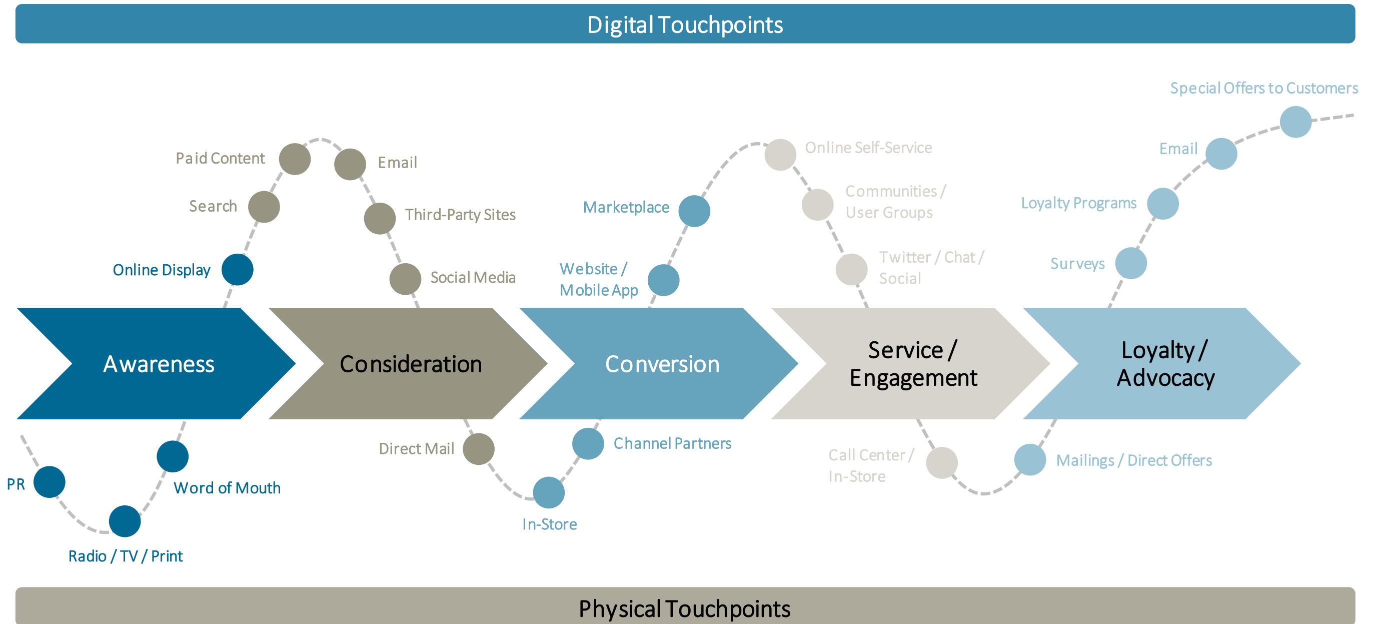
But this aspect of the marketing funnel has been transformed thanks to the evolution of technology. Our phones obviously keep us connected to the world at-large, including to marketers and sellers trying to win our business. But this communication is not one-sided, as we too can directly reach out to these parties to voice our delight or displeasure with their products and services. This technological change therefore demands the same of the traditional marketing funnel, where consumer loyalty and advocacy are also under the umbrella of customer engagement; the task of retaining customers and generating loyalty has outgrown its reliance on slow-moving product surveys and offline word-of-mouth reviews.

In fact, the entire landscape today – of attention, consumer touch points and marketing overall – is similarly fragmented. Our attention is split across television, streaming services, social media, product review sites, blogs, etc., so the *scope* of the awareness end of the funnel has broadened. Gone are the days when advertisers can consistently rely on multitudes of people huddling around the television to all watch the same show at the same time. Similarly, our smartphones act as gateways to a world of information at our fingertips. As a result, we spend an increasing amount of time researching products before we buy them (this can partly be attributed to Millennials scrutinizing their purchases more given their economic constraints). Furthermore, the convenience associated with digital commerce today (i.e., the comfort of shopping from home rather than investing time in a trip to the store) eases the pressure to purchase, leading to higher checkout attrition rates.

These trends necessitate the evolution of the entire linear marketing funnel into a process that appropriately describes the multifaceted view of the customer. One that encompasses attention's spread across multiple channels, consideration as a winding path across the digital landscape and conversion regardless of where it happens, either in store or online. Furthermore, because we're always connected through our phones and the internet, this new framework needs to capture a marketer's/seller's ability to "manage" customers post-purchase, either via new offers to entice them further, or via customer loyalty/referral programs.

Welcome to the customer journey:

Figure 13: The Customer Journey Is Far More Complex Than the Marketing Funnel – and Anything But Linear

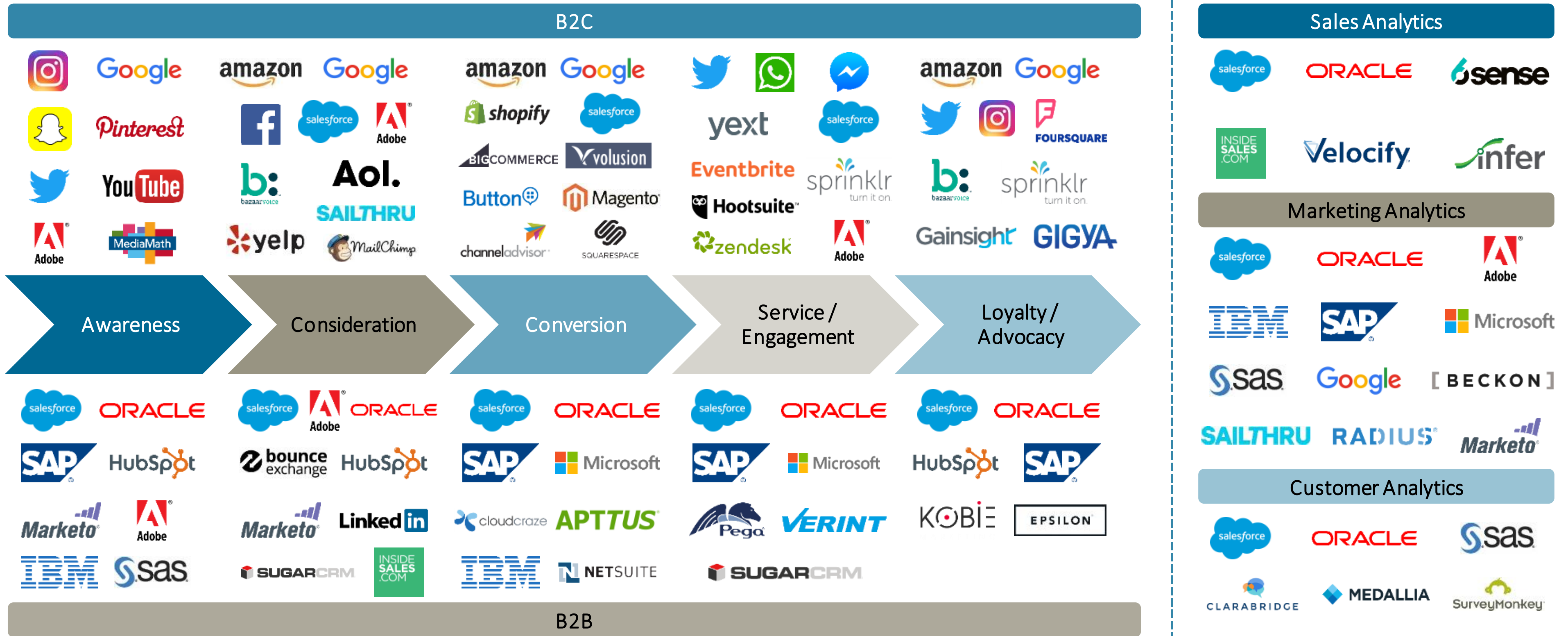


Source: BTIG, "Does Marketing Really Own The Customer Experience?" by Jim Howard.

In a way, the customer journey has become commerce's version of chaos theory: while the path overall is defined and understood, different customers can have different starting points, and different starting points can yield different trajectories and outcomes. Again, this fragmentation is rooted in the democratization of information and choice, driven chiefly by our smartphones and the internet.

Customers oscillate between these physical and digital touch points, sometimes engaging with both simultaneously (such as browsing product reviews while in a retail store). However, from a marketer's/seller's perspective, the objective remains the same: win the zero-sum game over a consumer's attention and wallet. But just like the consumers they are targeting, they too are now trapped in the chaos and complexity of being relevant at every phase of the journey. The direction is still the same – awareness to conversion (with service and loyalty added on) – but the complexity of the new system creates potential vulnerabilities across the map. Luckily, a diverse (and competitive) software ecosystem has emerged to address these myriad pain points.

Figure 14: The BTIG Guide to the Customer Journey Software / Media Ecosystem



B2C Commentary	The B2C customer journey is a very fragmented landscape, while even competitors within the same aspect of the journey maintain different approaches to achieve the same ends. For example, Mailchimp (Private) and Yelp (YELP, Not Rated) both target consideration, but the former focuses on personalized emails while the latter requires users to show intent by browsing reviews/ratings for a specific search query. Many B2C software companies *need* integration with Facebook (FB, Neutral; Analyst: Rich Greenfield) and Google (GOOGL, Not Rated) to appropriately serve their retail and brand customers. They are "unified" in a battle against Amazon, who typically defines consumer expectations around user experience, personalization and (increasingly) logistics. Conversion infrastructure will be of increasing importance. Most larger brands and retailers have not properly defined their online/mobile conversion strategies. Much of the focus remains on marketing technology.
B2B Commentary	Salesforce (CRM, Buy, $100 PT) and Oracle (ORCL, Buy, $47 PT) have end-to-end solutions catering to the entire customer journey, and have both recently announced artificial intelligence integrations to make their applications "smarter." From a competitive standpoint, there remain a number of leading smaller public and private companies that have carved out market share, despite Salesforce's leading position across each of these markets. There will be spillover from B2C into B2B. B2C companies own the customer touchpoints. These define consumer habits and expectations, so technologies that replicate and modify these approaches for B2B will have the most succes (i.e. customized landing pages and personalization/recommednation engines.

Source: BTIG.

Despite the plethora of logos in the above diagram, this is by no means an exhaustive list. Given the sheer *scope* of the market (we are talking about the future of how people will buy stuff after all!), there are numerous competitors jockeying for position across every step of the customer journey. Furthermore, there are already a few sizeable, well-funded competitors across both the B2C and B2B verticals. These juggernauts, by virtue of their status as the new incumbents, have the ability/resources to expand their platforms into adjacent segments of the journey as it suits them.

A notable example on the B2C side is Facebook's acquisition and product history. The company already has a lock on most facets of our digital identities (we volunteer information on everything from our age, sexual preference, marital status, place of employment, to events in which we participate, etc.) via their core product, effectively making it the largest consumer CRM platform in the world. If we click a Like button on a business's page, our personal and contact details are quickly routed to their marketing team so they can engage us in a personalized marketing campaign. Beyond this though, Facebook astutely moved into awareness *and* loyalty/advocacy with its acquisition of Instagram, while moving into service/engagement via its purchase of WhatsApp and the development of its Messenger app. If the company [finally figures out how to enable its users to transact]() within any of its apps, it will effectively play in every facet of customer journey, with hundreds of millions of users (i.e., potential consumers) for each unique offering.

And – if you haven't guessed yet – data is at the heart of each of these interactions. Our Instagram feeds (and subsequent likes) provide marketers with demonstrable evidence of their awareness campaigns at work, or brand strength/loyalty/affinity. Our core Facebook data lets brands segment and hyper-target us based on the aforementioned characteristics, while our product advocacy on the platform can prompt personalized engagement via exclusive product offers, all of which can be facilitated through Messenger and WhatsApp. Ultimately, the data cuts through the noise and inexactitude of the marketing funnel, and lets prospective marketers and sellers remain engaged with us throughout our customer journey.

The importance of data in driving key business decisions also contributes to the rise of an adjacent analytics field focused on dissecting of every aspect of the customer journey. Sales analytics can score leads and predict which have the highest probability to close, marketing analytics can measure campaign effectiveness and shift spending to higher ROI categories and customer analytics can track changes in customer sentiment on social media. In this vein, Salesforce (CRM, Buy, $100 PT) and Oracle (ORCL, Buy, $47 PT) have made headlines lately with their own artificial intelligence/predictive analytics tools across sales, marketing and customer engagement. However, there are several private competitors competing for share in these markets, including those that act as open platforms linking the various tools to measure the customer journey itself.

The emergence of the customer journey therefore worked hand-in-hand with that of the smartphone, internet and the everywhere (Millennial) consumer. These trends also paved the way for all of the software companies outlined in the above customer journey diagram, including the five now under our purview:

- **Shopify** sits at the nexus of all of these factors, not just enabling SMBs to quickly and effectively manage inventory and sell across multiple channels (desktop, mobile, Amazon, Facebook, etc.), but also by providing a constant stream of data to improve basic marketing competencies (social media posts, product codes/ discounts) via its Kit CRM add-on.

- **Bazaarvoice** has been primarily a bridge between loyalty/advocacy and consideration via its ratings and reviews point solution. However, the company recently pivoted its entire strategy on the premise of helping brands and retailers leverage data from its network of 150 million addressable shoppers. New solutions are focused on earlier points in the customer journey, including audience/cohort segmentation to run targeted awareness campaigns, or product spotlights within intent-based Google searches to drive consideration into conversion.

- **Adobe** pivoted from an offline creative suite into a dynamic hub of digital content creation, collaboration and marketing. Its current product portfolio gives enterprises and individual creative workers the ability to produce digital content that can be consumed across any medium, while also giving CMOs a broad tool kit to understand and capitalize on how targeted audiences interact with that content. The data gleaned from campaigns perpetuates a feedback loop that can be analyzed and applied into new content creation/marketing efforts.

- **ChannelAdvisor** is, as its name implies, a solution that helps sellers manage their inventory and selling strategies across a host of channels, including both first-party direct to consumer and third-party marketplace selling initiatives. This tool has become particularly important as Amazon shifts more towards third-party selling, and in light of the global growth of marketplaces.

- **HubSpot** is a response to the explosion of content and customer touch points in the smartphone/internet era. For SMBs with limited marketing budget (or prowess), it's the equivalent of a jungle – how do they make their products/brands stand out in the noise generated by the internet? Instead, their inbound marketing approach focuses on helping SMBs create content (blogs, whitepapers, etc.), then optimizing it so that it stands out in intent-based Google searches. Not only does this help product awareness, but inbound traffic from the internet wilderness also serves as an effective lead generation tool.

We unpack these companies' investment merits later (and in today's separate reports), but for now rely on these descriptions to help illustrate their positioning within the broader customer journey. Moreover, each company's strategy relies on helping their own customers effectively track, manage and leverage data across multiple phases of the journey. This democratization of data is of paramount importance for each software solution; their value proposition lies in the ability to correlate marketing spending with sales (ROI).

The technological convergence of marketing and selling makes this attribution possible, but also has a knock-on effect on the structure (and buying patterns) within the enterprise. Specifically, Chief Marketing Officers are emerging as key

independent buyers of technology. Furthermore, given that the customer journey cuts across multiple facets of the organization (marketing, sales, service), the CMO (also called Chief Commercial or Chief Revenue Officer) is emerging as a central figure, tasked with understanding the 360 degree view of the customer. This centralized role – and the ability to actually track attribution via the software tools we outlined earlier – bestows these CMOs with P&L responsibility – an "incredibly powerful" position where CMOs "need to show the ROI of every [dollar] spent on marketing and how it delivers against the bottom line."

Under the old marketing funnel model, brand managers would typically focus on awareness-related advertising, while handing off the sales and service aspects to their colleagues. However, technology is driving greater convergence across all facets of commerce, empowering marketers (those who all along have been associated with understanding how the product/brand and customers interact) with the ability to determine both strategy and spending decisions. The CMO is essentially becoming the hub around which all other activities are based.

And while the aforementioned trends in digital marketing and commerce are not new phenomena, the sheer scale of what's at stake does lend itself to long-term growth from a market/spending perspective. This is eased by lower barriers of entry to a new, more flexible software buyer that needs to operate at greater agility than traditional IT managers amidst the fast changing landscape. On the flip side though, the figurative pot of gold that awaits at the end of the rainbow – along with those diminished barriers to entry – breeds an intensely competitive software landscape. There are a plethora of contenders (public and private across both B2B and B2C) aiming to ease a CMO's path through the customer journey.

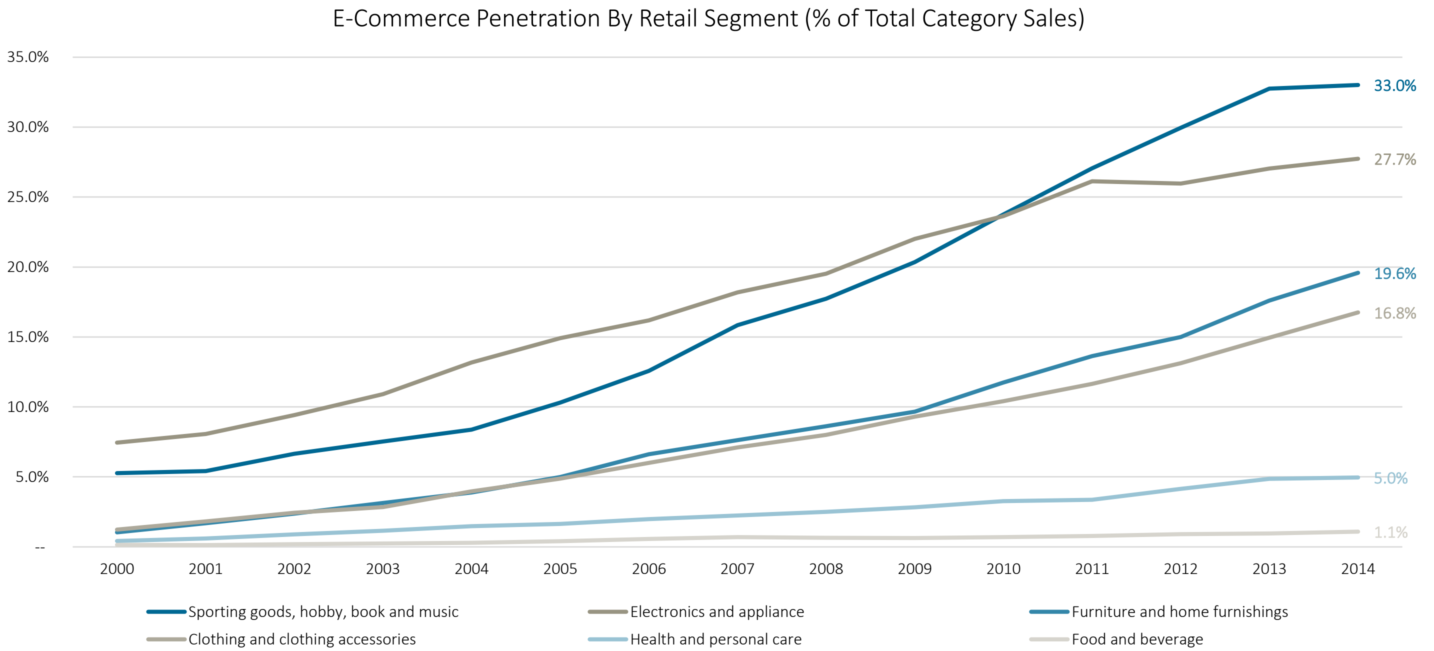
Therefore, we caution investors to look beyond these large secular forces shaping the industry. Instead, investors need to delve deeper before basing decisions on long-term changes and market sizes. It's a cliché to say we "remain selective," but the fact is that we see only two public software companies (Shopify and Bazaarvoice) using data as a strategic asset for growth. Every company in our coverage benefits from its attractive "macro" positioning, but only these two can claim sufficient "micro," company-specific drivers that can drive stock outperformance over the next twelve months.

Enough Theory, Let's Get to the Numbers

Sizing Up the Top-Down Opportunity

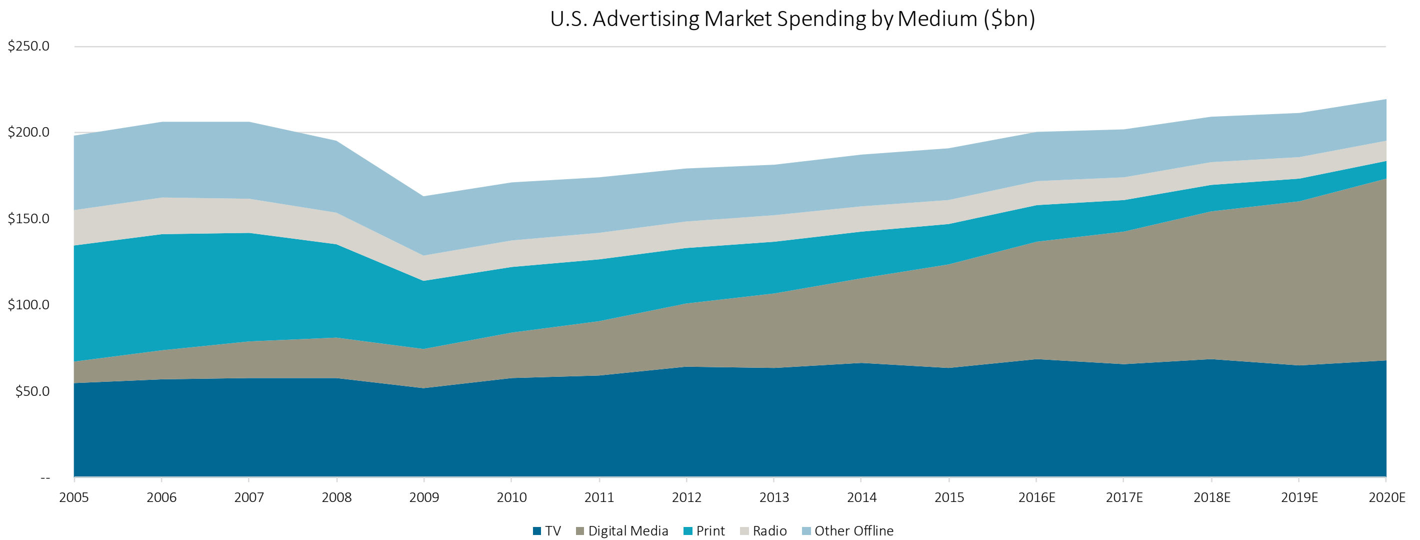
If you're already an interested investor, then you've likely seen the two biggest headlines related to the industry: digital advertising is killing print/radio/television, and e-commerce is *still* only ~7% of total retail sales. As we've discussed earlier, marketing and commerce are largely centered on attention, and in that regard all roads lead to a decidedly digital future. The foundation of the bull thesis therefore, can be easily summarized in the two following charts:

Figure 15: Despite the Headlines, E-Commerce Penetration Is Still Low Across Major Retail Segments



Source: BTIG, U.S. Census Bureau.

Figure 16: Digital Media Is On Track to Be the First $100+ Billion Advertising Medium



	Market Size ($bn)		Contribution			'15 - '20E
	2015	2020E	2015	2020E	Δ	CAGR
TV	$63.9	$68.1	33.5%	31.0%	(250) bps	1.3%
Digital Media	59.5	105.3	31.2	47.9	1,668	12.1
Print	23.3	9.9	12.2	4.5	(772)	(15.7)
Radio	14.4	12.1	7.6	5.5	(209)	(3.5)
Other Offline	29.5	24.4	15.5	11.1	(438)	(3.7)
Total	$190.7	$219.8	100.0%	100.0%		2.9%

1. Digital media advertising dollars are by far the primary driver of overall market growth. But rather than overall market inflation, it looks as though ad buyers are allocating net-new marketing dollars in favor of print and radio advertising (and keeping TV budgets flat).
2. From a long-term perspective, the digital media 5 year CAGR is higher than *any* 5 year period for TV ad spending, going all the way back to 1985

Source: BTIG, MAGNA U.S. Advertising Forecasts 2016.

Different segments of retail are at varying rates of e-commerce penetration, but a broad swath still remains to be conquered. Specifically, sporting goods, hobby, book and music spending (which shows the highest level of digital purchases at 33% of total retail sales) is actually the smallest market in the chart, at $132 billion; its current penetration rate still implies $88 *billion* in offline runway. On the other hand, clothing and clothing accessories (including footwear) still has >$250 billion of headroom, despite e-commerce accounting for nearly one in five purchases. Each of these categories imply a significant amount of gross merchandise volume (GMV) to be processed through a host of different platforms, including Amazon, Walmart/Jet.com (WMT, Not Rated) and Shopify.

The scope of the top-down digital media opportunity is no less exciting, as the market expands at a double-digit annual rate over the next five years. By comparison, TV dollars will stagnate, and other forms of offline media will contract (with print leading the charge by being cut in half). Furthermore (if it wasn't obvious that it will be the dominant medium of our time), the digital marketing ad market is on course to become the first advertising segment to eclipse $100 billion.

Of course, this number may seem skewed given the multitude of categories that comprise digital marketing (search, video, social, etc.), but if anything this is a testament to its underlying strength and diversity; the myriad channels in which marketers can reach us simply reinforces the opportunity (and complexity) of the customer journey. This trend speaks to the digital transformation at the heart of our everyday lives from which Adobe, Salesforce, Bazaarvoice, etc. hope to profit. Our immersion into every channel across the digital landscape – and having their customers follow us there – is the foundational assumption behind their varying software/product development strategies.

The numbers bear this out in a physical sense as well, as mobile digital advertising spending has grown at a 72% CAGR from 2012 to 2016 (vs. desktop at just 4%), and is expected to grow at a 26% CAGR through 2020 (vs. a 5% *decline* for desktop digital media spending). More importantly, any CMO – and by extension, marketing or commerce software solution – needs to either find a way to work *with* Google or Facebook (the two are will comprise ~80% of the US digital media market this year), or have an offering that enables it to be a dominant player in the remaining $13.5 billion of spending.

Figure 17: Facebook and Google Increasingly Dominate as the Market Grows, But the "Net" Opportunity Is Still Large ($bn)

	For the Year Ended				For the Year Projected Ended					CAGR / Δ		
US Digital Media Market	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	'08 - '12	'12 - '16E	'16E - '20E
Search - desktop	$16.9	$18.4	$19.0	$20.5	$21.4	$21.4	$21.1	$20.2	$18.8	12.6%	6.0%	(3.2%)
Search - mobile	2.4	4.5	5.9	8.7	12.0	16.1	20.6	25.7	31.4	133.2	49.7	27.1
Total search	19.3	22.9	24.9	29.2	33.4	37.5	41.7	45.9	50.2	16.4	14.7	10.7
Video - desktop	2.3	2.8	3.2	3.9	4.7	5.4	6.4	7.3	8.0	33.5	19.2	14.0
Video - mobile	0.1	0.2	0.9	1.5	2.5	3.7	5.6	8.1	11.3	72.7	123.7	45.8
Total video	2.4	3.0	4.1	5.5	7.2	9.1	12.0	15.4	19.3	34.4	31.2	27.9
Display - desktop	6.9	7.6	8.0	7.6	6.2	5.4	4.2	3.0	1.7	4.2	(2.5)	(27.8)
Display - mobile	0.7	0.3	0.6	0.9	1.1	1.5	1.7	1.7	1.3	70.1	12.3	4.6
Total display	7.6	7.8	8.5	8.5	7.3	6.8	5.8	4.7	3.0	6.4	(0.8)	(19.8)
Social - desktop	2.8	2.5	2.5	2.7	2.8	2.9	2.7	2.6	2.4	27.2	(0.1)	(4.0)
Social - mobile	0.1	2.0	4.5	8.3	13.0	16.7	20.5	24.3	28.5	na	245.0	21.6
Total social	2.9	4.5	7.0	11.0	15.8	19.5	23.2	26.9	30.8	28.2	52.8	18.2
Other - desktop	4.3	4.5	4.6	4.5	3.9	3.1	2.1	1.3	0.6	(5.2)	(2.5)	(36.3)
Other - mobile	0.1	0.1	0.5	0.8	0.9	1.0	1.1	1.2	1.3	12.7	88.2	9.0
Total other	4.3	4.6	5.1	5.3	4.8	4.1	3.2	2.5	1.9	(5.0)	2.5	(20.2)
Digital medial - desktop	$33.2	$35.7	$37.1	$39.2	$38.9	$38.1	$36.5	$34.4	$31.4	9.1%	4.1%	(5.2%)
Digital media - mobile	3.4	7.1	12.4	20.3	29.6	39.0	49.5	61.0	73.9	120.9	72.1	25.7
Total digital media	$36.6	$42.8	$49.6	$59.5	$68.5	$77.1	$86.0	$95.3	$105.3	11.6%	17.0%	11.3%
Memo:												
Desktop %	90.8%	83.4%	74.9%	65.8%	56.8%	49.5%	42.4%	36.0%	29.8%	(861) bps	(3,396) bps	(2,699) bps
Mobile %	9.2	16.6	25.1	34.2	43.2	50.5	57.6	64.0	70.2	861	3,396	2,699
Google revenues	$21.3	$24.8	$28.1	$34.8	$41.9					27.2%	18.4%	
Facebook revenues	2.5	3.7	5.9	8.9	13.1					69.7	50.9	
Total "Giant" revenues	$23.8	$28.5	$34.0	$43.7	$55.0					30.8%	23.3%	
Google market share	58.2%	57.9%	56.8%	58.5%	61.1%					2,374 bps	291 bps	
Facebook market share	6.9	8.6	11.8	15.0	19.2					692	1,225	
Total "Giant" market share	65.1%	66.6%	68.6%	73.5%	80.3%					3,066	1,516	
"Net" market size	$12.8	$14.3	$15.5	$15.8	$13.5					(4.7%)	1.5%	
"Net" market share	*34.9%*	*33.4%*	*31.4%*	*26.5%*	*19.7%*					*(3,066) bps*	*(1,516) bps*	

Mobile spending growth will far surpass desktop in three of the largest digital media markets…

…And mobile is expected to surpass desktop for the first time in 2017

…But Google and Facebook dominate the market, essentially propelling much of the overall growth…

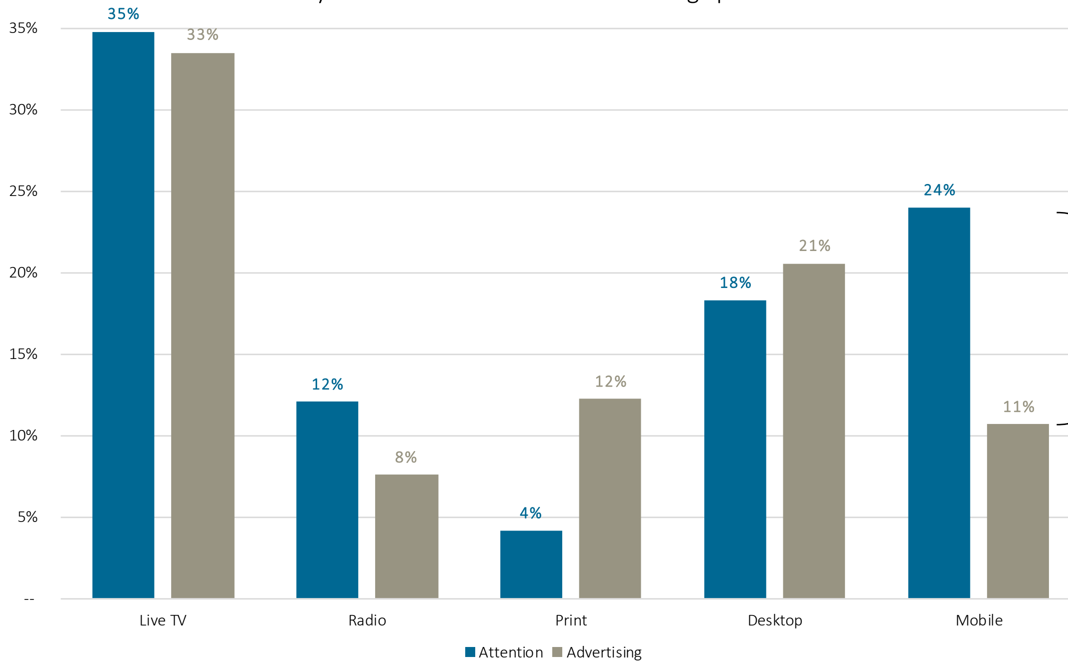
…With the "Net" market effectively flat over the past four years

Source: BTIG, MAGNA U.S. Advertising Forecasts 2016.

In light of these, we believe Shopify is best positioned on the commerce front, as it offers integrated selling through Facebook and other social channels, while its newly acquired subsidiary, Kit CRM, enables SMBs to run quick, cost-effective, AI-driven marketing campaigns through Facebook. On the marketing front, Bazaarvoice shows the most promise with its data-driven digital marketing platform with one of the largest reaches of addressable shoppers outside of Amazon (150 million and counting); this scope should enable it to be a formidable player in the $13.5bn "net" market. Similarly, the company also offers SaaS-based solutions that help retailer and brand customers drive higher conversions with respect to Google advertising.

The importance of these companies' solutions – and by extension those of Adobe's measurement and attribution capabilities via its Marketing Cloud and the strength of HubSpot's Inbound Marketing/SEO product – should only magnify over the next few years. Specifically, mobile is the only medium of advertising spending with a lack of parity relative to the amount of daily time spent consuming media. This differential speaks to the enormity of the opportunity in the industry, for both digital media companies and the software solutions tasked with helping marketers and sellers navigate this evolving landscape.

Figure 18: There Is a Wide Gap Between the Amount of Time People Spend on Mobile and the Level of Advertising Spend



The attention / advertising deficit speaks to the coming market "correction" over the next few years (note that it will be a rotation as overall ad spending grows modestly).

Given the growing prominence of the category, it also speaks to the importance of software solutions to help CMOs navigate the increasingly complex customer journey.

Source: BTIG, MAGNA U.S. Advertising Forecasts 2016, eMarketer, Mary Meeker's Internet Trends 2016 – Code Conference presentation.

Again, these are the large, structural changes affecting the industry, particularly the *customers* served by the companies under our software coverage. Assessing this larger backdrop – along with the customer journey – highlights the importance of having a good software partner, as advertising dollars increasingly flow towards areas where consumers primarily spend their time and attention.

Moreover, these trends all point towards what should be a strong upward trajectory in GMV processed through multiple platforms, and a dramatic ramp in digital media spending. As consumer, marketer and seller attention increasingly shifts towards digital channels, so too should the customer journey continue to evolve, giving further rise to net-new opportunities for software companies. Regardless of how this evolution ultimately unfolds, these trends work in conjunction with the democratization of data and emergence of CMO P&L responsibility to frame the more granular, software specific "demand" side of the equation.

Framing the Software-Specific Market

Unsurprisingly, all of our names fall in the CRM bucket of Gartner's market definitions – the fastest growing market within the broader enterprise application landscape. To delve a bit deeper, the two sub-segments we focus on in this report also happen to be the two fastest growing segments of the overall CRM market. These projections are effectively a reflection of the large structural themes that we highlighted in the previous section. They also highlight exactly what's at stake for every software vendor catering to the customer journey: plenty of long-term opportunity via digital transformation, but (similar to our Game of Clones thesis in the security industry) intensifying competition. Software – more so than other markets – shows relatively limited

barriers to entry. As demand grows within these sub-segments, so too should the number of vendors vying for a piece of the pie.

Figure 19: The CRM Space Is By Far the Fastest Growing Segment of the Enterprise Application Software Market... ($mm)

	Constant Currency Enterprise Software Revenues by Segment								
	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	'15-'20E CAGR
Customer Relationship Mgmt. (CRM)	$20,393	$23,694	$28,641	$33,101	$38,052	$43,662	$50,100	$57,271	14.9%
Business Intelligence and Analytics	14,944	15,908	17,603	19,047	20,543	22,138	23,849	25,686	7.9
Digital Content Creation	3,178	3,173	3,713	3,819	3,977	4,143	4,316	4,500	3.9
Enterprise Content Management	5,070	5,437	5,950	6,481	7,151	7,947	8,856	9,837	10.6
Enterprise Resource Planning	25,737	27,809	29,546	31,379	33,597	35,924	38,348	40,988	6.8
Office Suites	14,755	15,711	17,774	18,989	20,207	21,522	22,931	24,482	6.6
Other Application Software	30,120	32,672	35,747	38,339	40,997	43,747	46,468	49,242	6.6
Project and Portfolio Management	1,630	1,890	2,163	2,341	2,540	2,763	3,012	3,294	8.8
Supply Chain Management	8,925	10,010	11,118	12,329	13,642	14,884	16,285	17,760	9.8
Collaboration / Social Software Suites	3,516	3,961	4,593	5,081	5,630	6,227	6,879	7,593	10.6
Enterprise Application Software Total	$128,270	$140,266	$156,848	$170,906	$186,337	$202,959	$221,043	$240,654	8.9%

Source: BTIG, Gartner. In constant currency dollars.

Figure 20: ...With Digital Marketing and Commerce the Top Spending Priorities Through 2020 ($mm)

	Total CRM Market Size							
CRM Segment	2014	2015	2016E	2017E	2018E	2019E	2020E	'15 - '20E CAGR
Sales	$5,459	$5,992	$6,773	$7,625	$8,533	$9,541	$10,604	12.1%
Service	9,213	10,354	11,698	13,195	14,860	16,724	18,809	12.7
Marketing	4,996	5,691	6,748	8,105	9,687	11,572	13,685	19.2
E-Commerce	3,737	4,251	4,802	5,544	6,395	7,361	8,448	14.7
Total CRM Market	$23,404	$26,288	$30,021	$34,469	$39,476	$45,198	$51,545	14.4%

Source: BTIG, Gartner. In current dollars.

Still, despite the plethora of smaller public and private companies in the space, the at-large CRM market is largely dominated by four main competitors (which we dub "The Big Four"): Salesforce, SAP (Not Rated), Oracle and Microsoft . All of these companies already maintain a top 5 share across multiple sub-segments, and are actively seeking to defend/expand market share through consistent innovation or aggressive M&A (Salesforce and Microsoft in particular).

Moreover, although all of them straddle the multiple components of the market, only Salesforce and SAP can claim top position within a particular sub-segment (Salesforce in Sales and Service and SAP in E-Commerce). And while they do hold dominant shares in these respective markets – Salesforce has a 30 point advantage over its closest competitor in sales and an 8 point advantage in Service, SAP has a 12 point advantage in E-commerce – there is still some "heavy lifting" left to secure their position within the >$25 billion CRM sector overall.

But that is clearly the track The Big Four want to pursue, and is likely a strategic imperative as the market grows by a projected >$20 billion over the next four

years to become the largest component of the overall enterprise application software market. Furthermore, they are among the few that retain enough capital flexibility to build unified, cross-segment platforms. For example, Salesforce filled its noticeable gap in e-commerce with its $2.8 billion acquisition of Demandware. The company had been collecting consumer data thanks to its Service and Marketing clouds (the latter of which included its purchase of ExactTarget), but it lacked the ability to follow them into the conversion phase of the customer journey. Therefore, Demandware's value proposition consisted of much more than filling a product gap; instead, it was an opportunity to integrate it with its existing offerings and enhance the strength of the overall platform.

Similarly, one of Microsoft's historical strengths has been its Office/productivity suite. However, work is becoming increasingly social/collaborative with the growing adoption of file sharing tools like Box (BOX, Not Rated) and consumer-style chat applications like Slack (Private). And – to reference an earlier analogy – just as Facebook is the digital representation of our personal selves, LinkedIn (LNKD, Not Rated) can be viewed as the digital representation of our corporate/work selves. By layering in this corporate social system of record with its core productivity suite, the company materially accelerates the development of its own social/enterprise CRM.

Overall, we believe Salesforce retains an advantage over others through its specific focus on the CRM market, vs. the other three that are stretched across core productivity/collaboration solutions, the similar-sized ERP market or infrastructure as a service. From this standpoint, Salesforce has the relatively simple task of executing on a singular vision, and can avoid the same "sprawl" strategy (and multiple competitive battles) facing the other large application software vendors.

Furthermore, while each of the Big Four harbor platform ambitions, Salesforce has gone furthest in recognizing the innovative role that smaller point solutions play in driving the market. Through the company's Applications cloud – its platform as a service offering which has growth >40% y/y over the past four quarters – Salesforce enables smaller companies and customers to build custom applications to serve new use cases. This strategy offers two key competitive advantages. First, it acts as a deterrent against existing customers or new entrepreneurs looking outside of the core Salesforce offering when building their own CRM solutions. Second, it's a material benefit when considering potential M&A and the tricky product integration work that follows in software/technology deals. Not only can Salesforce use its App cloud to understand new trends in the CRM space (and assess exactly which ideas are gaining greater traction via its platform), but can also easily incorporate newly acquired solutions since they're already built on the company's architecture.

Figure 21: The Big Four All Have Grand Ambitions to Dominate the CRM Ecosystem ($mm)

Revenues	Overall CRM Market	$5,372	$2,684	$2,046	$1,142
	Sales	2,699	430	526	743
	Services	1,818	1,026	990	284
	Marketing	654	501	327	114
	E-Commerce	201	728	203	--
Market Share	Overall CRM Market	20.4%	10.2%	7.8%	4.3%
	Sales	45.0	7.2	8.8	12.4
	Services	17.6	9.9	9.6	2.7
	Marketing	11.5	8.8	5.8	2.0
	E-Commerce	4.7	17.1	4.8	--
Market Rank and y/y Δ	Overall CRM Market	– 1	– 2	– 3	– 4
	Sales	– 1	– 4	– 3	– 2
	Services	– 1	▲ 2	▼ 2	– 9
	Marketing	▲ 3	▼ 4	– 6	– 11
	E-Commerce	▲ 4	– 1	– 3	na
CRM Strategy		● Leverage Sales Cloud install base to continue strong cross-selling ● Take Commerce Cloud beyond retail to establish next $1 bn cloud ● Integrate Commerce Cloud with Marketing and Service Clouds	● Continue strong push in LatAm, EMEA and China ● Build on recent integration of Marketing and Commerce platforms ● Expand beyond install base and better leverage channel	● Integrate myriad CRM acquisitions into consistent platform ● Continue aggressive customer transition from on-prem to cloud contracts ● Playing catch-up on Sales cloud	● Build on recent success of Dynamics product ● Integrate LinkedIn (LNKD, Not Rated) into Dynamics and Office 365 ● Gain market and mindshare via aggressive pricing

Source: BTIG, Gartner. Market share data as of 2015 calendar year end.
Note: Salesforce pro forma acquisition of Demandware.

Wither our smaller competitors? Alas, they still have a chance despite the heavyweights lording over them at the top, largely because of their target customer segment (SMB vs. enterprise) or singular focus on one facet of the market. The latter in particular is a key differentiating factor for Adobe, as evidenced by their leading position in marketing; the company holds a 4 point advantage over its closest competitor and a 5 point advantage over Salesforce in third place.

Similarly, Shopify's single-minded focus on expanding its SMB base (the company estimates there are potentially 10 million businesses in its key geographies, so at a $1200 annual ARPU this is a $12 billion TAM) enables a significantly more agile product development and go-to-market strategy; this focus has vaulted them into 7th position in the e-commerce market, with the potential to enter the top 5 by the end of 2016.

Looking across the names we're covering in conjunction with this industry note, there appears to be a lack of "true" product, market and business model comparability (as opposed to more "normal" head-to-head enterprise software battles like Workday (WDAY, Buy, $97 PT) and Oracle in ERP). Bazaarvoice has its own unique attributes and approach in helping brands reach consumers at various phases of the customer journey, including consideration and customer advocacy/loyalty. On the other hand, Shopify at its core is an e-commerce enablement solution that offers customers an "out of the box" software tool that gets their digital storefronts up and running in minutes. Similarly, a freelancer may use Adobe Creative Cloud to build a mobile app or digital store template and list it in their Behance portfolio to be discovered by prospective recruiters or marketers looking to launch their latest campaign. The diversity of these approaches raises the question – how best to judge their positioning in the customer journey software landscape?

Unifying these three disparate examples is a relatively simple concept: the battle for marketing and commerce dollars (and attention) is a zero-sum game, regardless of approach. A dollar spent on social media branding/awareness via Kit CRM that drives traffic to a large brand's Shopify-hosted site is an interaction that can't be tracked and fed into Bazaarvoice's real time purchasing intent technology. Similarly, a template only displayed on Behance is one that isn't displayed on Shopify's own template page, thereby depriving potential customers of a site offering that could lead to a new subscription.

This isn't to say there isn't enough room in the market near term for all of them to sufficiently grow and deliver shareholder value, or that their market segmentations/target customers don't mitigate this dynamic. Rather, as they do grow, we believe the lines between a "pure" marketing and "pure" commerce solution will continue to blur, just as technology has blurred the lines of marketing and commerce from a consumer perspective.

Each of these companies then will face new competitive threats as they grow their own platforms, similar to the Big Four as they move into adjacent markets. In the interim though, they are still competing with other large and small vendors alike in the bid to make their mark on the customer journey. Their diversity of approach simply reflects the fragmentation of customer touch points, and more specifically the transformation of the linear marketing funnel into the more complex customer journey. Amidst this change then, we offer

investors a simple template to assess prospective investment decisions, the foundation of which is that all-important fuel powering the customer journey: data.

Investing in Digital Commerce and Marketing Software

Given that software and mobile are eating the world, digital commerce and marketing companies are no different from the rest of our software coverage: secular growth industries, benefitting from an increasing digitization of the economy at large. However, given the limited barriers to entry associated with software (after all, this is the era of the no stack startup), more opportunity/ dollars at stake generally signals more competition. Therefore, public equity investors should go beyond the simple "secular trend" justification in order to find names that can generate superior long-term returns.

We favor companies that satisfy three "big picture" criteria. Shopify and Bazaarvoice satisfy all three of these qualitative conditions. Not surprisingly, the ability to leverage data is the chief differentiator.

- **Portals** – these companies are "portals" for their customers, either in terms of digital marketing or commerce. They are integral to how their customers operate in the age of the customer journey.

- **Data** – by virtue of their portal status these companies collect an extraordinary amount of data. They either leverage this to fuel their own product innovation, or play a key role in unlocking critical business insights for their customers. They go beyond simple dashboards and ROI measurement, and instead use data to enable end-user business agility. Their status as portals and data ownership are the competitive differentiators that prevents displacement.

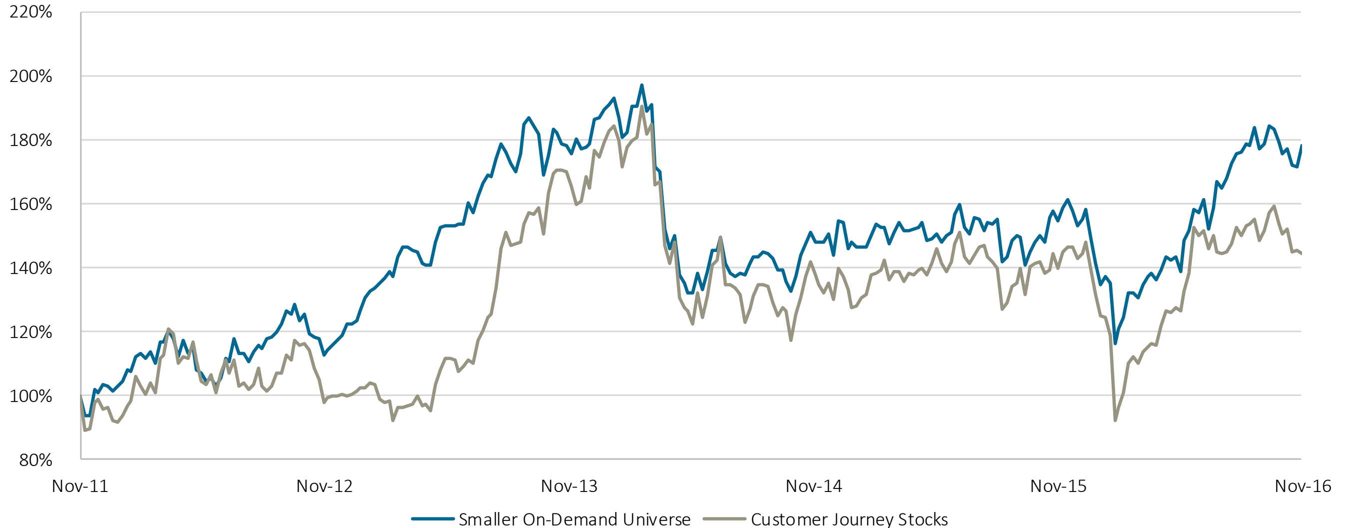
- **Ecosystems** – they are not closed systems, but rather can integrate with a host of other software providers/tools across the customer journey to ensure relevancy at every potential consumer touch point.

We believe that these three core tenets should help investors navigate the changing landscape, especially as the rising tide fails to lift all boats. Specifically, despite the strong secular trends driving the industry, price performance for stocks that we associate with the customer journey has actually lagged the broader on-demand index over the past five years. This in part can be explained by the execution missteps/transitions at Bazaarvoice and ChannelAdvisor (both of which are trading below their IPO prices), but even then the group performs essentially in line with the at-large SaaS index.

This divergence in results further accentuates the need to "be selective." As discussed previously, each company sports its own approach to exactly how they help their customers manage the customer journey. These varying routes will inevitably result in varying degrees of success, and not everyone will make the most attractive investment (or acquisition candidate).

Figure 22: Customer Journey Software Stock Performance Has Shown Strength Over the Past Six Months

	Stock Price Performance				
	3 Month	6 Month	1 Year	3 Year	5 Year
Smaller On-Demand	1.1%	28.2%	15.2%	1.4%	78.2%
Customer Journey	(4.0)	14.1	3.0	(12.7)	44.3



Source: BTIG, FactSet.
Note: Smaller On-Demand Universe includes ACTA, ADVS, AMBR, APIC, APPF, ATHN, BLKB, BNFT, BOX, CALD, COVS, CSLT, CSOD, CTCT, CVT, DIL-NZ, EGAN, EGHT, EGOV, EPAY, FIVN, FLTX, GWRE,HGN-CA, IL, ININ, INST, LOGM, LPSN, MDSO, MIXT, MB, MODN, MRIN, OPWR, PAYC, PCTY, PRO, RALY, QTWO, RNG, RP, SAAS, SNCR, SQI, SREV, SSNC, TEAM, TRAK, TWLO, TXTR, ULTI, VEEV, WAGE, WK, WWWW, XTLY and YDLE. Customer Journey Stocks include ADBE, BCOV, BV, CRM, DWRE, ECOM, HUBS, MKTO, SHOP, SPSC and ZEN. Market data taken as of IPO date where 3 or 5 year historical pricing not available. Market data as of 11/15/2016.

Stock investing is inherently both an art and a science, and (at the risk of stating the obvious) valuation also plays an important role when considering the merits of an investment. First, given the scope of the opportunity ahead, there should still be plenty of low-hanging fruit from a both a marketing and commerce standpoint.

We are by no means past the "easy growth" associated with the space, and most names should achieve at- or above-market revenue growth for the next few years (Bazaarvoice and ChannelAdvisor are the exceptions given their recent transitions). Second, there is a scarcity value associated with these names, as there are only a handful of companies that represent pure-play calls on the growth in digital commerce and marketing. Third, there is M&A optionality associated with the smaller names under our coverage.

Figure 23: M&A Multiples for Digital Marketing & Commerce Are Typically Greater Than the Overall Application Sector

Announce Date	Acquirer	Target Name	Target Primary Sector	Transaction Value ($mm)	EV/ TTM Revs	Proj. Revs
10/04/16	salesforce.com Inc.	Krux	Customer relationship management / Customer analytics	$680	13.1x	na
10/04/16	Criteo SA	HookLogic Inc.	Online marketing & e-commerce software / Merchandising	250	na	1.9x
06/13/16	Microsoft Corporation	LinkedIn Corporation	Internet content & commerce / Social networking & collaboration	26,200	8.2	6.7
06/01/16	salesforce.com Inc.	Demandware Inc.	Online marketing & e-commerce software / Commerce & payments	2,800	11.0	8.8
05/31/16	Vista Equity Partners Management LLC	Marketo	Customer relationship management / Marketing automation	1,790	7.9	6.2
02/01/16	Telenor ASA	Tapad Inc.	Advertising enablement	360	6.3	4.0
12/23/15	salesforce.com Inc.	SteelBrick Inc.	Customer relationship management / Salesforce automation	300	27.3	10.0
11/02/15	Endurance International Group Holdings Inc.	Constant Contact Inc.	Online marketing & e-commerce software / Email marketing	919	2.6	2.3
06/29/15	Vista Equity Partners Management LLC	Mediaocean	Advertising enablement	594	2.9	na
04/28/15	Twitter Inc.	TellApart	Advertising enablement	533	na	na
12/22/14	Oracle Corporation	Datalogix	Customer relationship management / Customer analytics	1,100	9.2	na
11/11/14	Cox Automotive	Xtime Inc.	Customer relationship management / Marketing automation	325	8.1	na
07/10/14	salesforce.com Inc.	RelateIQ	Customer relationship management / Salesforce automation	352	na	na
04/07/14	GTCR LLC	Vocus, Inc.	Online marketing & e-commerce software / Other	413	2.2	2.3
01/06/14	Verint Systems Inc.	KANA Software, Inc.	Customer relationship management / Customer service automation	514	3.8	3.5
12/20/13	Oracle Corporation	Responsys, Inc.	Online marketing & e-commerce software / Email marketing	1,500	7.7	6.6
12/19/13	DealerTrack Holdings Inc.	Dealer Dot Com, Inc.	Online marketing & e-commerce software / General	987	4.4	4.3
10/23/13	Oracle Corporation	BigMachines, Inc.	Customer relationship management / Salesforce automation	450	7.5	6.9
09/26/13	PayPal Inc.	Braintree Payment Solutions, LLC	Online marketing & e-commerce software / Commerce & payments	800	na	na
06/27/13	Adobe Systems Inc.	Neolane Inc.	Customer relationship management / Marketing automation	600	8.6	na
06/05/13	SAP SE	hybris GmbH	Online marketing & e-commerce software / General	1,341	10.7	na
06/04/13	salesforce.com Inc.	ExactTarget	Customer relationship management / Marketing automation	2,399	7.6	6.1
05/08/13	Trulia Inc.	Market Leader Inc.	Online marketing & e-commerce software / Other	333	7.4	5.7
12/20/12	Oracle Corporation	Eloqua	Customer relationship management / Marketing automation	871	9.7	8.1
10/31/12	Vantiv, Inc.	Litle & Co.	Online marketing & e-commerce software / Commerce & payments	361	na	na
07/31/12	Google Inc.	Wildfire Interactive	Customer relationship management / Marketing automation	350	na	na
06/04/12	salesforce.com Inc.	Buddy Media, Inc.	Customer relationship management / Marketing automation	652	20.0	na
05/23/12	Oracle Corporation	Vitrue, Inc.	Customer relationship management / Marketing automation	325	16.3	na
05/02/12	IBM Corporation	Tealeaf Technology, Inc.	Customer relationship management / Customer analytics	500	10.0	na
04/27/12	Intuit Inc.	Demandforce	Customer relationship management / Marketing automation	424	11.4	na
01/17/12	Blackbaud Inc.	Convio, Inc.	Customer relationship management / General	275	3.6	3.1
11/30/11	Adobe Systems Inc.	Efficient Frontier	Advertising enablement	400	5.3	na
11/01/11	Yahoo! Inc.	interclick	Advertising enablement	265	2.2	1.7
10/24/11	Oracle Corporation	RightNow Technologies Inc.	Customer relationship management / Customer service automation	1,434	6.6	5.5
06/16/11	DG	MediaMind Technologies	Advertising enablement	416	5.0	4.0
12/22/10	Teradata Corporation	Aprimo, Inc.	Customer relationship management / Marketing automation	500	6.3	na
11/02/10	Oracle Corporation	Art Technology Group, Inc.	Online marketing & e-commerce software / Commerce & payments	848	4.4	3.8
08/13/10	IBM Corporation	Unica Corporation	Customer relationship management / Marketing automation	480	4.4	3.6

	Transaction Value ($mm)	EV/ TTM Revs	Proj. Revs
Online Marketing & E-Commerce M&A Mean	$959.3	6.3x	4.5x
Online Marketing & E-Commerce M&A Median	848.0	5.9	4.1
Customer Relationship Management M&A Mean	$716.0	10.1x	5.9x
Customer Relationship Management M&A Median	500.0	8.4	6.1
Advertising Enablement M&A Mean	$427.8	4.3x	3.2x
Advertising Enablement M&A Median	407.9	5.0	4.0
All Digital Marketing and Commerce M&A Mean	$1,411.6	8.2x	5.0x
All Digital Marketing and Commerce M&A Median	507.0	7.6	4.3

Average transaction multiples on a TTM basis for Marketing & E-Commerce and CRM deals are well above those for overall large enterprise application/SaaS businesses (5.7x EV/TTM Revenues).

CRM deals are a full turn ahead on an EV/NTM Reveneues basis, while Marketing & E-Commerce Deals are in line (4.7x EV/NTM Revenues)

Source: BTIG, 451 Research.
Note: Includes all transactions announced since 2010 with >$250 million transaction value.

The last point in particular is quite pertinent in light of recent deal activity. The overall EV/NTM Revenue multiple for digital media and commerce transactions since 2010 is in line with that of the overall applications space at ~5x. However, looking at just the past year, the multiple jumps a full turn higher to ~6x (this holds if we exclude the Hooklogic and Steelbrick deals as outliers). Moreover, there have been three large deals (>$250m enterprise value) *each* in the online marketing & e-commerce and CRM segments in just the past twelve months – including four acquisitions of publicly traded companies – suggesting that M&A appetite for larger assets remains healthy.

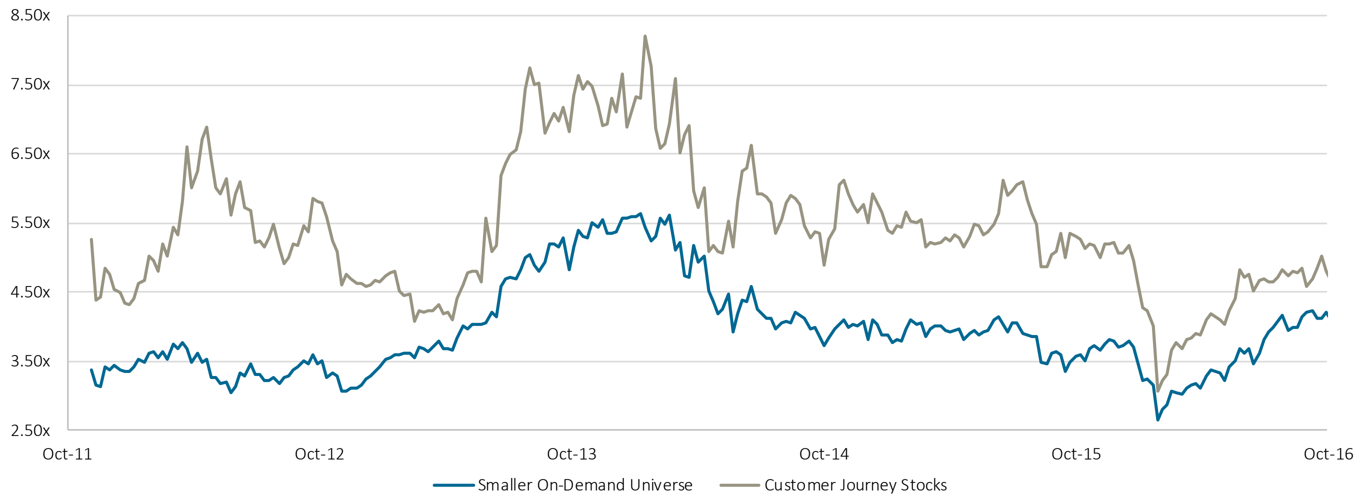
This is evident in Microsoft's purchase of LinkedIn, by far the largest transaction over the past five years in both the enterprise application/social networking space at $26 billion (6.7x EV/NTM Revenues). While not a core digital marketing and commerce transaction like the other deals on our list, we still consider it a CRM transaction given Microsoft's intended uses for the product (and Salesforce's persistent interest).

The combination of these three factors yields valuations that are typically at a premium to the overall SaaS/enterprise application universe. Notably, the three names that do trade individually at a discount to the smaller SaaS universe are going through (or have recently undergone) a business model transition/ disruption in results.

On the other hand, the cheapest of the "clean" companies still trade at nearly a full turn higher than the rest of the smaller SaaS universe, while the most expensive names are either expected to deliver >35% revenue growth over the next twelve months (Shopify, Zendesk (ZEN, Not Rated) and HubSpot), or are the clear category leader in their CRM segment (Adobe in Marketing, Salesforce in Sales and Service). And while we won't argue that those coming through transitions will tick up to the same levels as their peers, we do believe that stocks in this sector should remain at a premium relative to the broader publicly traded SaaS landscape.

So, investors taking a look at the space for the first time face the interesting quandary of higher valuations but lower historical returns, likely reflecting still-high expectations despite a track record of relatively moderate (and in some cases disappointing) results. That said, we do believe there are some good opportunities for investors interested in the space, primarily grounded in our three step qualitative framework and the varying importance of data in each of these companies' solutions.

Figure 24: Customer Journey Software Stocks Historically Trade at a Premium to the Rest of the Applications Space



		Average EV/NTM Revenues					Historical
	Current	3 Month	6 Month	1 Year	3 Year	5 Year	Δ
Smaller On-Demand	4.04x	4.08x	3.90x	3.62x	4.05x	3.94x	0.10x
Customer Journey	4.28	4.69	4.64	4.45	5.37	5.40	(1.12)
Memo: Customer Journey Stocks Valuation Dispersion							
Demandware [(1)]	7.43x	7.43x	6.30x	4.83x	7.67x	7.97x	(0.54x)
Adobe [(2)]	6.96	7.24	7.17	7.17	7.01	na	(0.05)
Shopify	5.84	6.83	6.23	6.02	7.25	na	(1.41)
Zendesk	4.95	6.35	6.35	6.04	7.37	na	(2.42)
Hubspot	5.56	5.66	5.54	5.72	6.74	na	(1.17)
Salesforce	5.32	5.47	5.81	5.95	6.27	6.14x	(0.82)
SPS Commerce	4.44	4.65	4.40	4.26	5.40	5.35	(0.92)
Marketo [(3)]	4.79	6.71	6.84	6.80	6.91	na	(2.12)
Brightcove	1.52	2.28	1.96	1.59	1.65	2.01	(0.50)
Bazaarvoice	1.64	1.69	1.51	1.35	2.01	2.76	(1.12)
Channeladvisor	2.26	2.02	2.22	2.23	3.62	4.10	(1.84)

Source: BTIG, FactSet.
Note: Smaller On-Demand Universe includes ACTA, ADVS, AMBR, APIC, APPF, ATHN, BLKB, BNFT, BOX, CALD, COVS, CSLT, CSOD, CTCT, CVT, DIL-NZ, EGAN, EGHT, EGOV, EPAY, FIVN, FLTX, GWRE,HGN-CA, IL, ININ, INST, LOGM, LPSN, MDSO, MIXT, MB, MODN, MRIN, OPWR, PAYC, PCTY, PRO, RALY, QTWO, RNG, RP, SAAS, SNCR, SQI, SREV, SSNC, TEAM, TRAK, TWLO, TXTR, ULTI, VEEV, WAGE, WK, WWWW, XTLY and YDLE. Customer Journey Stocks include ADBE, BCOV, BV, CRM, DWRE, ECOM, HUBS, MKTO, SHOP, SPSC and ZEN. Market data as of 11/15/2016.
(1) DWRE current and 3 month average multiple represent most recent value at acquisition.
(2) ADBE values included since 5/1/14, when the company became a majority subscription revenue business.
(3) MKTO current multiple represents most recent value at acquisition.

Our Stock Picks

Shopify

We believe Shopify is the best way to play the digital commerce trend. There is still plenty of "easy" growth ahead given the low level of current e-commerce penetration, not to mention the company's bread and butter in helping organic, net-new online sellers get up and running. New businesses are inherently digital-first, and Shopify is best positioned to capture both traditional sellers looking to go digital and new ones that start digital. With respect to data, as the de facto online selling portal for >325,000 SMBs, Shopify has unprecedented insight into the health of the SMB economy, and has been quick to leverage the data from their platform to drive new product innovation. These additional

services enhance the "stickiness" of the overall offering, thereby mitigating potential disintermediation from competitors as their core SMB base processes more GMV and scales their businesses.

Bazaarvoice

From a digital marketing perspective, we believe Bazaarvoice presents a compelling investment opportunity at a reasonable entry point. The company has emerged from a messy, government-mandated divestiture of its closest rival with one of the largest networks of addressable shoppers (150 million and counting, on par with Amazon). In short, we believe they are developing into the "non-Amazon Amazon," as they help their retail customers drive stronger conversions through their core ratings and reviews product, and they help brands develop stronger, data-informed shopper advertising campaigns. There is still much heavy lifting ahead to reach the company's target of doubling their revenue base to $400m over the next five years. However, Bazaarvoice remains one of the few companies that can actually track a consumer's digital footsteps across the customer journey; we believe customers will find value in the data-focused nature of the product set, and that this adoption will translate into long-term shareholder value.

Figure 25: BTIG Digital Commerce Software Coverage ($mm)

Company Name	Ticker	Rating	Price	Price Target	Implied Return	Market Cap	Qualitative Criteria			EV/Revenues		EV/EBIT		P/E		Revenue Growth	
							Portal	Data	Ecosystem	FY1	FY2	FY1	FY2	FY1	FY2	FY1	FY2
Adobe Systems Inc.	ADBE	Neutral	$103.66	na	na	$52,210	✓	✓	✓	7.0x	5.8x	20.1x	16.2x	27.3x	21.7x	22.0%	19.8%
Bazaarvoice, Inc.	BV	Buy	4.80	$8.00	67%	395	✓	✓	✓	1.7	1.6	nm	64.5	nm	nm	1.8	5.3
Channeladvisor Corp.	ECOM	Neutral	13.65	na	na	351	✓	✗	✗	2.2	2.0	nm	nm	nm	nm	12.9	14.5
HubSpot, Inc.	HUBS	Neutral	56.30	na	na	1,972	✓	✓	✗	5.2	4.1	nm	nm	nm	nm	33.2	27.8
Shopify, Inc.	SHOP	Buy	39.92	55.00	38	3,390	✓	✓	✓	5.2	3.8	nm	nm	nm	nm	51.5	35.1
				Mean	52%					4.3x	3.5x	20.1x	40.4x	27.3x	21.7x	24.3%	20.5%

Source: BTIG, FactSet.
Note: Market data as of 11/15/2016.

Overview of Private Digital Commerce and Marketing Companies

Ten Software Vendors to Watch

Bounce Exchange

Bounce Exchange is a cloud-based behavioral marketing platform that analyzes consumers' digital behavior to run strategic, individualized, analytics-based marketing campaigns. The primary goal of the technology is to understand exactly which users display "exit intent," or are willing to abandon a retailer's or publisher's site without making a purchase, and targeting them with personalized offers and drive higher conversions. The company has nearly a dozen Fortune 500 customers, as well as popular internet retailers and eight of the world's top 10 largest publishers. Bounce Exchange was founded in 2012 and is based in New York, NY.

Customer Journey segment: Consideration, Conversion

Button

Button uses deep linking to create smart connections between mobile applications and enable contextualized commerce. The limited screen space and input mechanisms associated with mobile apps typically forces users to engage in several steps before a purchasing action/conversion. Button solves this problem by "embedding intent" in one app by using information or calls-to-action in another. This drives higher conversions for digital sellers and marketers, while also providing valuable data around attribution (i.e. understanding where consumer traffic comes from and exactly how it leads to conversion). Notable customers include Uber, OpenTable, Deliver.com, Hotels.com, Jet and Ticketmaster. Button was founded in May 2014 and is based in New York, NY.

Customer Journey segment: Conversion

CloudCraze

CloudCraze is a cloud-based B2B digital commerce enablement platform built entirely on Salesforce's Force.com platform. This enables relatively simple integration with Salesforce's Sales, Service and Community Clouds, thereby helping Salesforce clients achieve a unified view of the customer. The company's platform enables enterprise B2B organizations to launch digital storefronts and generate revenue in only 8 to 10 weeks at a starting cost of <$250K. Notable customers include Coca-Cola, Avid, Barry-Callebaut, Ecolab, FE, L'Oreal and Kellogg's. The company was founded in 2009 and is based in Chicago, IL.

Customer Journey segment: Conversion

Eventbrite

Eventbrite is the world's largest self-service ticketing platform for live experiences. It provides a self-service platform that helps event organizers sell more tickets through robust technology and promotional tools, and is a destination for consumers looking to discover a variety of live experiences of all kinds and sizes. The company facilitates over 2 million events per year and

processes over 4 million tickets per month. Eventbrite was founded in 2006 and is based in San Francisco, CA.

Customer Journey segment: Service/Engagement

Foursquare

Foursquare is a local search-and-discovery mobile application. Foursquare asks users to "check-in" at different locations based on their GPS technology and add reviews or helpful tips for other users. Using this hyper-local data, the application can provide recommendations to users based on their location and previous visits/preferences, thereby generating greater foot traffic for merchants. More recently, the company has expanded into "location intelligence" by leveraging foot traffic data to provide real-word behavioral insights and forecast local business trends. The company was founded in March 2009 and is based in New York, NY.

Customer Journey segment: Consideration, Loyalty/Advocacy

Gainsight

Gainsight offers customer intelligence and automation products to manage retention, reduce unexpected churn and identify opportunities. The company's cloud-based solution is 100% Salesforce native and uses predictive analytics to drive revenue from sales, usage, support, survey and other sources of external customer data. The platform focuses on reaching customers, tracking customer health consistently and transforming customer success processes. Gainsight's ultimate aim is to provide a 360-degree view of the customer and drive retention cross customer success, sales, marketing and executive and product management. The company was founded is August 2011 and is based in Redwood City, CA.

Customer Journey segment: Loyalty/Advocacy

Gigya

Gigya offers a scalable, secure customer identity management platform. The platform's value proposition is to enable web properties to get better insight into website visitors, converting anonymous users into known customers with the ability to identify and understand users across marketing channels. Organizations can then leverage this data to drive more effective and personalized marketing campaigns and foster better long term customer relationships. Gigya has more than 700 enterprise customers, including 50% of the comScore top 100 U.S. web properties. The company was founded in 2006 and is based in Mountain View, CA.

Customer Journey segment: Loyalty/Advocacy

Hootsuite

Hootsuite is a social media management system that manages social media marketing programs across multiple networks from one integrated dashboard. Customers get a full picture of online brand engagement, manage future publishing and use analytics/insights to understand how to re-tailor their social media marketing campaigns in real time. The company has over 15 million users, including >800 of the Fortune 1000. Hootsuite was founded in November 2008 and is based in Vancouver, Canada.

Customer Journey segment: Service/Engagement, Loyalty/Advocacy

SendGrid

SendGrid is a cloud-based transactional email delivery and management service. The company enables businesses to create, send and analyze marketing campaigns and transactional email through cloud-based email infrastructure, including sign-up confirmations, shipping notifications and customer interactions. The solution also manages all email technical challenges, such as ISP monitoring, domain keys, sender policy framework and feedback loops. SendGrid also tracks more basic email campaign performance metrics including email opens, unsubscribes, bounces and spam reports. Notable customers include Booking.com, Foursquare, eBay and Airbnb. The company was founded in 2009 and is based in Boulder, CO.

Customer Journey segment: Consideration, Service/Engagement

Sprinklr

Sprinklr provides cloud-based social media marketing, social advertising, content management, collaboration, advocacy and social media monitoring for large enterprises. The company's Experience Cloud combines data from 24 different social channels so a company can get a total view of what customers are saying about them. This enables businesses to connect with customers at every social point while also fine-tuning their social media strategy from a single integrated dashboard. The company has over 1000 customers including large brands like Nike, NASDAQ, McDonald's and Samsung. The company was founded in September 2009 and is based in New York, NY.

Customer Journey segment: Service/Engagement, Loyalty/Advocacy

Ten Digital-First Brands to Watch

Away

Away markets and sells luggage direct to consumer. The company sources its own components and works directly with a manufacturer to bypass traditional retail channels and offer its products at a reduced cost. The minimalist luggage comes equipped with "modern" innovations, including a rugged polycarbonate shell, a smartphone charger, a small nylon bag to separate dirty clothes from clean and a compression pad to keep contents compact. The company was founded in 2015 and is based in New York, NY.

Incumbents: Samsonite International S.A. (1910-HK, Not Rated), Tumi Holdings, Inc. (Private)

Bevel (Walker & Company Brands)

Walker & Company Brands is the first premium health and beauty brand focused on people of color. The company develops, designs and tests products and services specifically tailored to its community's needs, supplemented with a purely digital, direct to consumer shopping experience with a focus on customer service. The company's flagship brand – Bevel – is the first and only end-to-end shaving system specifically engineered to prevent and reduce shaving irritation for men with curly, coarse hair. The company was founded on the premise that traditional consumer packaged goods manufacturers and traditional retailers don't build brands nor merchandising experiences which cater to the uniquely differentiated needs of Black, Latino and Asian consumers – America's fastest growing demographic groups. The company was founded in April 2013 and is based in Palo Alto, CA.

Incumbents: Procter & Gamble Co. (PG, Not Rated), Edgewell Personal Care Company (EPC, Not Rated), Unilever PLC (ULVR LN, Not Rated)

Bonobos

Bonobos is a clothing brand focused on delivering great fit, excellent customer experience, and a fun approach to menswear. Launched online in 2007 with its signature line of better-fitting men's pants, Bonobos is now the largest apparel brand ever built on the web in the United States. In 2011 Bonobos extended offline, launching Bonobos Guideshops, e-commerce stores that deliver personalized, one-to-one service to those wanting to experience the brand in person. The company has ~30 guideshops around the U.S. (which don't hold any inventory for sale), and is estimated to have $150m in annual sales. Bonobos was founded in June 2007 and is based in New York, NY.

Incumbents: Gap Inc. (GPS, Not Rated)

Casper

Casper is a sleep-focused startup that launched with a comfortable mattress sold directly to consumers. The company's award winning mattress is sold at a discount to those in traditional mattress retail stores, and is delivered to a consumer's doorstep in a convenient, shipping-friendly box. The company built on the success of its initial mattress product with sheets and pillows in November 2015. Casper was founded in November 2013 and is based in New York, NY.

Incumbents: Sleepy's LLC (Private), Bed Bath & Beyond, Inc. (BBBY, Neutral; Analyst: Alan Rifkin)

Everlane

Everlane is a luxury clothing design and manufacturing company founded on the premise of "radical transparency." The company provides a pricing breakdown for the cost of materials, hardware, labor, duties and transport for every item of clothing, followed by the amount of the company's markup versus that of traditional retail. In this way, Everlane fulfills its promise of providing low-cost, high-quality goods direct to consumers at a better price. The company was founded in 2010 and is based in San Francisco, CA.

Incumbents: Michael Kors Holdings Ltd. (KORS, Not Rated), Ralph Lauren Corp. (RL, Not Rated), Burberry Group Plc (BRBY LN, Not Rated), Hermes International SCA (RMS FR, Not Rated)

Hungryroot

Hungryroot is a manufacturer and marketer of fresh, all natural convenience foods. The company offers a product line of 7-minute meals, sides, sweets, spreads and breakfast items direct-to-consumer. The company's goal is to create innovative, fresh and healthy food products in a category historically defined by frozen and chemically-preserved foods. The company was founded in 2015 and is based in New York, NY.

Incumbents: Unilever Plc (ULVR LN, Not Rated), General Mills Inc. (GIS, Not Rated), Kellogg Co. (K, Not Rated), Conagra Brands Inc. (CAG, Not Rated)

Interior Define

Interior Define offers high-design, well-crafted furniture direct to consumers. Their unique supply chain eliminates middlemen and their associated markups, enabling them to sell high-quality furniture for less. The company builds every

piece of furniture on demand and customizes every facet of the order, including size, shape, color, fabric, filling and frame. The company was founded in 2013 and is based in Chicago, IL.

Incumbents: Pier 1 Imports, Inc. (PIR, Sell, $3.50 PT; Analyst: Alan Rifkin), Williams-Sonoma, Inc. (WSM, Sell, $41 PT; Analyst: Alan Rifkin)

quip

quip sells electric toothbrushes with simple, elegant designs and minimal features. The brushes are designed to emphasize length and areas of brushing over gimmicks, thereby promoting better oral care. The company also offers a subscription option for regular shipments of toothpaste and brush head replacements every few months. quip was founded in 2014 and is based in New York, NY.

Incumbents: Colgate-Palmolive Co. (CL, Not Rated), Procter & Gamble Co. (PG, Not Rated)

ThirdLove

ThirdLove is a vertically integrated intimates brand, combining patented mobile fit technology with affordable luxury product. The company initially focused on personalizing bras, designed with proprietary sizing that's designed to maximize fit and comfort. Recently, it's expanded into offering underwear and sleepwear for women leveraging the same personalized design, direct to consumer selling and digital branding methodologies. The company was founded in 2013 and is based in San Francisco, CA.

Incumbents: L Brands, Inc. (LB, Not Rated)

Warby Parker

Warby Parker is a lifestyle brand with a socially-conscious mission, offering designer eyewear at a large discount to traditional brands and retailers. The company saves consumers money by cutting out licensing fees, designing glasses in-house, working with suppliers and shipping products directly to consumers. Warby Parker was also among the first of the "new retail" brands, or companies that started digital-first, but leveraged data through initial online success to tailor their brick and mortar retail experiences. The company was founded in 2010 and is based in New York, NY.

Incumbents: Luxottica Group S.p.A. (LUX IT, Not Rated)

Five Digital Commerce Services to Watch

Airbnb

Airbnb is a community marketplace for people to list, discover and book unique spaces around the world – online or through their mobile phones. The company connects people to unique travel experiences at any price point, in more than 34,000 cities and 191 countries. Its community of users continues to grow, making it one of the easiest ways for people to monetize their extra space and showcase it to an audience of millions from around the world. The company was founded in 2008 and is based in San Francisco, CA.

Traditional industry at risk: Hotels

Blue Apron

Blue Apron offers a weekly subscription service that delivers everything customers need to make fresh meals. The company buys ingredients from local suppliers around the U.S. at wholesale prices, and delivers them in exactly the right proportions, along with detailed recipe cards and easy-to-follow instructions. Blue Apron was founded in 2012 and is based in New York, NY.

Traditional industry at risk: Grocery stores

Rent the Runway

Rent the Runway provides women with the ability to rent designer dresses, accessories and other essentials for a fraction of the retail price. The company also leverages data generated by what its customers rent to provide brand partners with feedback and access to younger customers for whom luxury items may not yet be affordable. The company was founded in 2009 and is based in New York, NY.

Traditional industry at risk: Luxury fashion (ownership)

Stitch Fix

Stich Fix is a fashion retailer that blends personalized styling, data collection and proprietary technology to deliver unique fashion experiences. The company uses a data-driven onboarding process to collect consumer data/style preferences and uses algorithms to optimize product selection. Curated items are then shipped to consumers, and the company collects feedback on each item based on style, fit/cut, size and price. The more data the company collects, the more information it has on its consumers and the higher the ultimate probability of a purchase. The company was founded in 2011 and is based in San Francisco, CA.

Traditional industry at risk: Department stores

Uber

Uber is an on-demand transportation company that connects riders with drivers in real-time. The company initially started as a premium black car request service, but has since expanded into automotive liquidity (aka free space in peoples' cars) to transport riders in hundreds of cities around the world. It also offers on-demand meal and package delivery, and recently launched its own self-driving car initiative. Uber was founded in 2009 and is based in San Francisco, CA.

Traditional industry at risk: Taxi/Limousine, Automobiles (ownership)

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Software and Digital Commerce

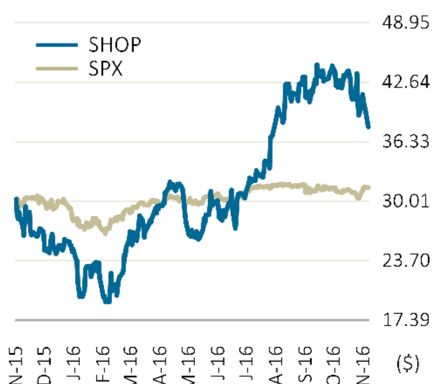
Shopify, Inc.

Watch The Throne; Initiating at Buy With a $55 PT

Shopify is the de facto gateway to selling online for >325,000 merchants, and has successfully married its simple out-of-the-box software solution with a host of merchant services that turn it into a foundational pillar of digital commerce, rather than just another third-party integration channel. There are several layers to the Buy thesis, but the simple takeaway is that we see Shopify as the name to own in digital commerce. Its emergence as the "homepage" for the digital-first brands of tomorrow and innate ability to leverage data drive innovation should further entrench its status as the premier digital selling platform.

SHOP	**$39.92**
12 month target	$55.00
BUY	
52 week range	$19.33 - $44.50
Market Cap (m)	$3,390

Price Performance



Source: IDC. Market data as of 11/15/2016.

- **Shades of Amazon and Apple in the SMB.** Shopify started with a simple, out-of-the-box solution to get sellers up and running, but has built-in a host of additional services, digital channel integrations and a full-fledged app store. By leveraging Amazon- and Apple-like strategies for its own unique context, Shopify has built a diverse yet sticky platform focused on SMB digital commerce. And most importantly, the stickiness associated with them not only ensures that existing subscribers get more out of the platform, but also drives competitive differentiation as more digital sellers come online.

- **Street estimates fail to capture the upside of this strategy.** We are >$10m ahead of the Street on FY17 subscription revenues and >$20m ahead for FY18, driven by stronger monthly recurring revenue (MRR) gains and underlying business model efficiency. Street merchant services revenue estimates imply significant GMV deceleration (a 40pt reduction y/y in FY17); we expect GMV growth to slow, but this seems too conservative. We expect upside here as Shopify garners a disproportionate share of GMV over the next few years.

- **Valuation:** Our $55 PT is a 50/50 blend of our 10-year DCF analysis – which assumes a 30% revenue CAGR and a terminal operating margin of 18% on $5 billion of revenues – and 8x EV/FY17 revenues. We view 8x as reasonable in light of the company's growth profile, which is in line with other elite "category killer" SaaS companies.

Estimates

	1Q15 A	2Q15 A	3Q15 A	4Q15 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	FY17 E
Sales	37	45	53	70	205	73	87	100	122	381	578
Diluted EPS (Adj.)	(0.06)	(0.03)	(0.03)	(0.01)	(0.13)	(0.06)	(0.04)	(0.02)	(0.03)	(0.15)	(0.07)
FCF	1	4	(6)	0	(1)	(2)	(2)	7	(11)	(8)	(13)
EV/Sales (x)	-	-	-	-	14.57	-	-	-	-	7.84	5.18
P/FCF (x)	-	-	-	-	-	-	-	-	-	-	-

Source: BTIG Estimates and Company Documents ($ in millions, except per share amount)
Adjusted EPS excludes stock-based comp, amortization and acquisition related costs.

Please Read: Important disclosures and analyst's certification appear in Appendix

Company Description

Shopify, Inc. provides a cloud-based commerce platform designed for small and medium-sized businesses. Merchants use its software to run their business across all of their sales channels, including web, tablet and mobile storefronts, social media storefronts, and brick-and-mortar and pop-up shops. Its platform provides merchants with a single view of their business and customers and enables them to manage products and inventory, process orders and payments, build customer relationships and leverage analytics and reporting. The company mainly focuses on Merchant Solutions and Subscription Solutions. The company was founded in September 2004 and is headquartered in Ontario, Canada.

Investment Thesis

The stock is up >50% this year, but its status as digital commerce royalty is deserved. The company is the de facto gateway to selling online for >325,000 merchants, and has successfully married its simple out-of-the-box software solution with a host of merchant services that turn it into a foundational pillar of digital commerce, rather than just another third-party integration channel. This iPhone-like strategy – where its technology effectively underpins a broader ecosystem – should enable the company to garner a disproportionate share of gross merchandise value (GMV) over the next several years.

From a secular perspective, Shopify's focus of "innovating at the bottom" of the merchant pyramid is a key differentiating factor relative to other digital enablement platforms. Specifically, as larger brands and retailers attempt to balance decades of investment in the legacy brick-and-mortar distribution system with the new digital reality, the new large brands of the future will start small as digital-first companies, with Shopify the likely their default selling platform. And rather than resting on its laurels as the preferred solution for these new sellers, the company instead leverages the data generated by their use of the platform to layer in new services (Payments, Shipping, Capital and Kit CRM). This further drives differentiation/increases the competitive moat, and mitigates merchants from leaving the Shopify "walled garden" for their digital commerce needs. Furthermore, this intense focus on innovation enables the company to be a crucial partner throughout a merchant's lifecycle, from small seller all the way up to mid-market brand.

To augment the "laddering up" of its core SMB base, the company is similarly investing in attracting larger brands to its platform. But while other names under our coverage can be accused of chasing above-market growth at exorbitant costs, the Shopify model is defined by its SMB virality and efficiency. Even with accelerating investments to move up-market via Shopify Plus (the company's first foray into building an outbound sales team), the strong unit economics associated with its core SMB base enable these investments to effectively pay for themselves.

There are several layers to the Buy thesis, but the simple takeaway is that we see Shopify as the name to own in digital commerce. Its emergence as the "homepage" for digital merchants, innate focus on the digital-first brands of tomorrow and ability to leverage data to innovate and add new services should further entrench its status as the premier digital selling platform.

We see these factors as driving sustained upside to estimates, thereby propelling the stock higher. It's notable to point out that our estimates are above consensus, but still imply a large deceleration in revenue growth through FY19 (+38% CAGR vs. ~86% y/y estimated for FY16). We view this as conservative, in part due to the difficulty in forecasting the level of GMV growth, as well as our own conservative assumptions around monthly recurring revenue (MRR).

Our $55 PT is a 50/50 blend of our 10-year DCF analysis – which assumes a 30% revenue CAGR and a terminal operating margin of 18% on $5 billion of revenues – and 8x EV/FY17 revenues. We view 8x as reasonable in light of the company's growth profile, which is in line with other elite "category killer" SaaS companies (see comp table later in this note).

Shades of the Amazon and Apple Strategies in the SMB

Shopify was not unique in its original product as a digital commerce enablement platform. The conversion segment of the customer journey is crowded with rival offerings aiming to help SMB digital sellers hock their goods, including BigCommerce, Volusion/Mozu and Magento (all Private). However, the company's relentless focus on making SMB selling easy – along with highly accessible pricing on a subscription basis – has perpetuated the "virality" of the model. This has enabled Shopify to gain vital traction with merchants and put distance between itself and these competitors.

On top of this, by understanding the high churn associated with the SMB market, the company has innovated tremendously to keep merchants within its "walled garden." The word is overused in the software landscape today, but we see Shopify as a digital commerce platform (we prefer the term "portal"): it started with a simple, out-of-the-box solution to get sellers up and running, but has built-in a host of additional services (Payments, Shipping, Capital), digital channel integrations (social media buy buttons, fulfilment by and selling on Amazon) and a full-fledged app store. This strategy echoes that of larger, more established technology companies: Amazon (AMZN, Not Rated) and Apple (AAPL, Buy, $133 PT; Analyst: Walter Piecyk).

We all know Amazon's history of selling books online, before steadily expanding into other categories to become the most dominant digital retailer today. However, a more nuanced understanding of their strategy today is that of a services-based ecosystem that primarily relies on the strength of its subscription-based loyalty program (Amazon Prime). Despite the myriad choices available to consumers for shopping online or streaming movies and music, Amazon finds it relatively easy to replicate other point solutions and integrate them as Prime benefits. This enhances the overall value of a Prime subscription, and mitigates a subscriber's need to use a third party (often times at an additional cost).

We can apply the same lens to understand Shopify's current standing among the digital commerce enablement competitive landscape. It too started with its own point solution (its core solution is akin to just selling books online), but has similarly turned that into the subscription-based access point for a broader range of services. A consumer's use of Prime to listen to music or get free two-hour delivery is analogous to an SMB using Shopify Payments or selling via

Facebook (FB, Neutral; Analyst: Rich Greenfield) Messenger: why use another provider when the service is just as good and you're already paying for access to the service via your subscription?

Similarly, Shopify is also borrowing a strategy employed by other "platform" companies, including Salesforce (CRM, Buy, $100 PT) and Apple. And while the latter may be belatedly pivoting into services, it pioneered the concept of the application ecosystem. Specifically, Apple is the "pipe" through which every third party app developer's content must flow in order to reach a critical mass of users. Because Apple owns a critical mass of users, these developers have no choice but to go through Apple and build on their iOS platform.

From this standpoint, Shopify mirrors Apple's strategy, except as a merchant aggregator rather than a consumer one. Because of the company's critical mass of merchants, it has become the foundation for a rich application ecosystem seeking to integrate with its core out-of-the-box selling product. This "pipe"/content dynamic then perpetuates a virtuous cycle as more merchants sign up for subscriptions in order to access the ecosystem, which in turn causes more developers to build applications for the merchant base.

By leveraging Amazon- and Apple-like strategies for its own unique context, Shopify has been able to build a diverse yet sticky platform focused on SMB digital commerce. And most importantly, the associated stickiness not only ensures that existing subscribers get more out of the platform, but also drives competitive differentiation as more digital sellers come online. This then provides the company with crucial insight into which pockets of its app ecosystem are accessed the most, and provides a natural starting point for determining how to best incorporate it more fully into its native platform.

As we saw with its acquisition of Kit CRM, prior to the deal Kit was a highly regarded app, garnering nearly perfect reviews from ~300 Shopify sellers. Kit's strong adoption and positive feedback from merchants essentially made it an ideal acquisition target for the broader Shopify platform. Therefore, by making it an official piece of its platform, the company can assuredly incorporate an already popular service while collecting the full economic benefit (rather than simply taking a cut for facilitating Kit's business).

This platform approach gives us confidence that the company can garner a disproportionate share of GMV over the coming years. Furthermore, we think Shopify will only go from strength to strength here, as it's already proven the ability to leverage data on how users are using the broader ecosystem. By taking those insights and incorporating incremental services, it adds greater functionality to the product at-large, strengthening its credentials as a digital commerce portal. This should further attract more merchants to the platform (both small and mid-market), willing to pay the subscription fee for broader access to the ecosystem.

How to Assess the Health of the Platform

We see three key metrics for understanding the strength of Shopify's platform. Some of these are unique to digital commerce (GMV), but others provide a metric as to how efficient the underlying business is relative to other SaaS companies. The most important takeaway from these metrics is to understand

how they've driven a tremendous amount of growth to date, and also how they factor into our above consensus estimates.

Monthly Recurring Revenue (MRR)

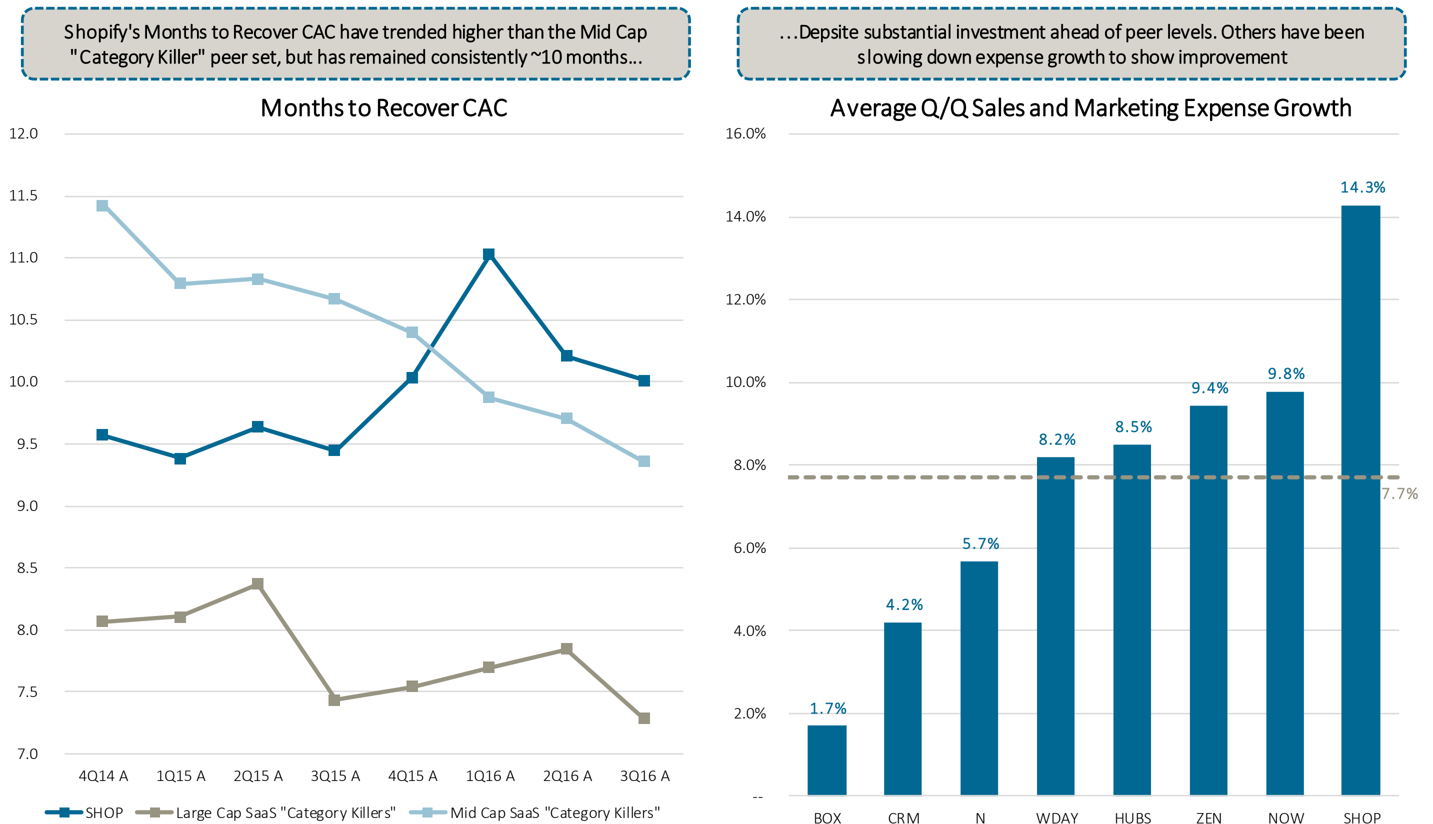
Only half of the revenue base is subscription, but as we mentioned earlier, this is the "entrance fee" that merchants pay to access the overall platform. Moreover, it is a predictable monthly stream of revenue that serves as the foundation for the company's incremental investment and innovation in auxiliary services. This gives this metric added gravitas, as it represents a commitment by a merchant to use the other parts of the platform, essentially making MRR a leading indicator for GMV (and overall merchant services revenue) growth.

Aside from being a barometer for subscription revenue though, MRR plays a crucial part in understanding the overall efficiency of the business. From this standpoint, Shopify is (and should continue to be) the leader in recovering its customer acquisition costs (CAC). In particular, the company has invested heavily in acquiring larger, higher MRR and GMV brands via its Shopify Plus initiative. Shopify doesn't break out the segment's contribution to overall MRR, but its share of the overall pie has grown every quarter since inception, and average MRR per Plus merchant also continues to expand. We estimate there are only ~1000 merchants in total, (<1% of the total merchant base), but as the company expands its Plus sales and account management teams, we could see upside to longer-term MRR and subscription revenue estimates.

This is not based on blind faith that Shopify can simply adjust to the different go-to-market dynamic needed for chasing larger accounts, but rather that the Plus strategy itself is rooted in the company's core SMB base. Since embarking on this strategy, Shopify has maintained a healthy 50/50 split between net-new and home grown Plus merchant additions. This highlights the balance approach to moving up-market, as the CAC on the 50% of SMBs transitioning into Plus is effectively zero, while the subscription benefit of one customer switching to the Plus pricing tier represents $20m in incremental annual subscription revenue (estimated $2K per month for Plus vs. $299 per month for Advanced Shopify).

The past eight quarters of operating results for "category killer" SaaS companies gives a true sense of how Shopify efficiently recoups its go-to-market investments. Specifically, the company is the only one among its peers to sequentially grow sales and marketing expenses by double-digits. However, its Months to Recover CAC (annualized GAAP sales and marketing expense divided by GAAP subscription gross profit) has remained steady around the ~10 month mark. This suggests that substantially higher investments are already being recouped such that there's no fundamental negative drag on the overall business. On the other hand, mid-cap peers have reduced their Months to Recover CAC in recent quarters below Shopify's levels, but this is driven to a greater extent by reigning in spending, rather than by subscription gross profit outperformance.

Figure 1: Strong Subscription Revenue Offsets Shopify's Large Increase in Investment, Maintaining Business Model Efficiency



Source: BTIG, Factset, Company reports.
Note: Large Cap peers includes CRM, NOW and WDAY. Mid Cap peers includes BOX, HUBS, N and ZEN. Results for CRM, WDAY and BOX are calendarized. 3Q16 results for CRM, WDAY and BOX per BTIG estimates.

Ultimately, the product innovation and services we mentioned earlier put the company's platform in a unique position: it's flexible enough to cater to both its core SMB market and larger brands out-of-the-box. On top of this, the scope of the product ensures that successful SMB customers can scale their businesses wholly on Shopify, thereby necessitating a migration to higher price points, and therefore generating more MRR. Because of this dynamic, we view the company's balanced approach to growth as sustainable, and believe our MRR estimates (annual increases of $6-7m from FY16 to FY19, resulting in an MRR CAGR of ~40% - a far cry from the ~71% in FY15 or ~68% expected in FY16) could prove conservative.

Gross Merchandise Value (GMV)

In conjunction with MRR, GMV completes the basic picture of the health of a commerce enablement platform. The former addresses what subscribers are willing to pay for to access the platform, while the latter highlights exactly how well these merchants are doing once they join (the point of commerce is to sell after all!).

On this front, we expect Shopify to capture a disproportionate share of GMV as its stature as a digital commerce portal grows. There are two primary reasons why this matters. First, merchant growth (either in the SMB base or via Plus customers) drives greater GMV onto the platform, with each

additional merchant adding ~$49K in annual GMV as of 3Q16. Second, and more importantly, it also represents the company's "tax base," or the value on which it can monetize additional services. This is most recently exemplified by the extraordinary growth of Shopify Payments, which has triggered a >150% CAGR in merchant solutions revenue since FY13. This translates to a take rate – merchant solutions revenue as a percentage of GMV processed – of ~1.3%. If subscription revenue is the entry fee for the platform, then the take rate is the effective tax rate for using its services.

This is a key factor in understanding how Shopify differentiates itself from traditional commerce enablement offerings; the company has turned GMV from a byproduct of its subscription solution (i.e. a reflection of the health of its subscribers) into a primary revenue driver (a la the Amazon tax strategy we outlined earlier). This dynamic appropriately aligns incentives between Shopify and its merchants with respect to customer success: the more a merchant sells, the greater the potential revenue to the company. This also holds true for new platform-expanding solutions, such as Shipping and Capital. Pricing for these initiatives isn't GMV-based, but they are still intimately linked to overall merchant selling, as Shopify collects a fixed fee on each package shipped or a fixed remittance rate that's paid off with each individual sale.

This GMV-driven revenue model is even more crucial in the context of Shopify Plus, particularly with respect to the ~50% of merchants that are existing Shopify customers prior to migrating to the highest membership tier. While net-new Plus customers are less likely to adopt Payments (they may have their own broader corporate policies regarding payment gateways and security), existing customers effectively "grow up" in the platform, and therefore either already have Payments or are more willing to adopt it as they scale. And while the higher subscription tier offers them some negotiating power with respect to the take rate, the resulting lift in GMV processed should still sustain strong merchant services revenue growth (1% of a big number is still a big number!).

We ultimately think that our GMV projections (and therefore merchant services revenue) may prove conservative. Specifically, current Street estimates imply a drastic deceleration in GMV growth despite the company's track record of consistent *triple-digit* y/y growth; our model suggests that consensus for FY17 merchant services revenue implies 59% y/y GMV growth (a 40 point reduction from the FY16 expectation) and a take rate of 1.28% (a slight down tick from the FY16 mark). These assumptions imply ample room for continued top-line surprises, even assuming a 20 point reduction in GMV growth and more severe contraction in the take rate. We view these scenarios as more likely, as the platform strategy continues to garner a disproportionate share of GMV for the company.

Figure 2: Various Scenarios on GMV Growth and Take Rate Imply Meaningful Upside to Street Merchant Services Rev ($mm)

FY17 Merchant Services Revenue Sensitivity

		FY17 Take rate				Implied Merchant Services y/y Growth				Δ vs. Consensus			
		1.22%	1.24%	1.28%	1.30%								
FY17 GMV Growth	50.0%	$273	$278	$287	$291	41.0%	43.3%	47.9%	50.2%	(10.3%)	(8.8%)	(5.9%)	(4.4%)
	59.4	290	295	305	310	49.8	52.3	57.1	59.6	(4.7)	(3.1)	--	1.6
	70.0	310	315	325	330	59.8	62.4	67.6	70.3	1.7	3.4	6.7	8.4
	80.0	328	333	344	350	69.2	72.0	77.5	80.3	7.7	9.4	12.9	14.7

FY18 Merchant Services Revenue Sensitivity

		FY18 Take rate				Implied Merchant Services y/y Growth				Δ vs. Consensus			
		1.20%	1.22%	1.24%	1.26%								
FY18 GMV Growth	35.0%	$386	$392	$399	$405	26.6%	28.7%	31.0%	32.9%	(9.7%)	(8.2%)	(6.6%)	(5.2%)
	44.5	413	420	427	433	35.5	37.7	40.2	42.3	(3.4)	(1.8)	--	1.4
	55.0	443	450	458	465	45.3	47.8	50.5	52.6	3.6	5.4	7.3	8.8
	65.0	471	479	488	495	54.7	57.3	60.2	62.5	10.3	12.2	14.2	15.8

Source: BTIG, Factset.

Financial Condition

As of its most recent quarter end, Shopify has $400m in cash and short term securities and $1m in debt. The balance sheet will become more important as Shopify scales its Capital merchant cash advance service, but the company is partnered with Export Development Canada to insure these funding agreements. Moreover, each cash advance is only extended to merchants on the platform, enabling the company to make data-informed decisions about exactly how much capital to extend and the nature of the risk. The company also completed a $224m public equity offering in August 2016 to further strengthen its balance sheet.

From a P&L and FCF perspective, the company still generates losses. However, we expect them to reach quarterly breakeven from both a P&L and FCF perspective within the next 12-18 months. We see no material risks to its liquidity/funding position.

Our Estimates and Valuation

Although or merchant services numbers are in line with the Street, we are comfortably ahead with respect to subscription revenues ($12m in FY17 and $22m in FY18). This again is tied to our MRR estimates, as well as the underlying efficiency in the model that we discussed earlier. The relative consistency with which Shopify recoups these investments paves a clear path for profitable growth over the long term. Most importantly, this dynamic drives a virtuous cycle that pushes MRR and subscription revenues above Street levels. And while we err on the side of caution on our merchant services estimates (there are more moving parts here and GMV is tougher to predict), the assumptions implied by the sensitivity analysis above again highlight the conservatism baked into Street expectations.

It's important again to fully appreciate the strategy at play here, as the subscription and services businesses are intimately linked, rather than two distinct operations. Just as a consumer subscribes to Amazon Prime to take

advantage of free two day shipping, Prime Video, Music, Twitch streaming and other services, so too does a merchant become a Shopify member to access the wider array of services on the platform. And just as the App Store functions as the creative hub on which a consumer can build their own customer experience on Apple's hardware, so too does a merchant leverage the Shopify ecosystem to customize their own toolkits for their businesses.

Shopify is the embodiment of both of these strategies in the digital commerce space, the result of which has been revenue growth at a ~100% CAGR over the past three years. But – in line with our broader industry thesis that digital commerce is a multi-decade opportunity – we believe this is only the beginning for the company, and think that its emergence as the "homepage" for digital merchants, innate focus on the digital-first brands of tomorrow and ability to leverage data to innovate and add new services make it the name to own in the space.

Our $55 PT is a 50/50 blend of our 10-year DCF analysis – which assumes a 30% revenue CAGR and a terminal operating margin of 18% on $5 billion of revenues – and 8x EV/FY17 revenues. We view 8x as reasonable in light of the company's growth profile, which is in line with other elite "category killer" SaaS companies.

Shopify BTIG Est. Summary	Dec-17	Dec-18	Dec-19
($ in millions, except per share)	FY17 E	FY18 E	FY19 E
Revenue	$577.6	$780.1	$993.5
Billings	581.5	777.0	981.3
Operating income	(7.5)	19.1	38.3
EPS	(0.07)	0.21	0.37
FCF	(13.4)	5.7	9.9
Capex	40.4	46.8	59.6
Year over year growth			
Revenue	*51.5%*	*35.1%*	*27.4%*
Billings	*49.4*	*33.6*	*26.3*
Operating income	*nm*	*nm*	*100.6*
EPS	*nm*	*nm*	*79.1*
FCF	*nm*	*nm*	*73.4*

Valuation Summary	FY17 E	FY18 E	FY19 E
EV/Revenues	5.2x	3.8x	3.0x
P/E	nm	194.1	108.4
P/E ex cash	nm	171.2	95.6

Source: BTIG, Company Filings.
Note: Market data as of 11/15/2016.

Risks

Our revenue estimates for FY17 are ahead of the Street, so there is added risk if the company's expectations fail to match ours. Shopify is also a core SMB offering, so there is risk if the transition up-market via Shopify Plus encounters any disruption. The platform is highly dependent upon constant innovation, so a slowdown in new products and services would detract from merchant adds, GMV and ultimately revenue growth.

Figure 4: Shopify Deserves a Higher Multiple Than "Category Killing" SaaS Peers Given its Higher Growth Profile ($mm)

			EV / NTM			NTM	Revenue Δ		NTM FCF
Company	Category	Mkt Cap	Sales	EBITDA	FCF	P/E	LTM	NTM	Margin
salesforce.com	CRM	$50,267	5.8x	25.4x	31.0x	61.6x	25.1%	22.7%	18.6%
Workday	HCM	15,956	8.1	70.7	nm	nm	38.6	32.3	8.6
Palo Alto Networks	Next-Gen Security	14,543	7.1	28.5	17.9	51.8	48.5	33.1	39.9
ServiceNow	IT Service Mgmt	14,214	8.2	36.5	32.9	85.1	40.6	30.9	24.9
Red Hat	Open Source Software	13,795	5.2	18.4	16.7	30.5	17.3	16.2	31.0
NetSuite	Mid-Mkt ERP	6,138	5.8	53.8	53.8	nm	32.6	29.6	10.9
Tableau	Analytics/Visualization	3,542	3.1	42.8	74.4	nm	31.2	10.4	4.1
		Average	6.2x	39.4x	37.8x	57.2x	33.4%	25.0%	19.7%
		Median	5.8	36.5	32.0	56.7	32.6	29.6	18.6
Shopify	Digital Commerce	$3,550	5.7x	nm	nm	nm	70.7%	50.8%	0.3%

Source: BTIG, Factset.

Note: Netsuite price and estimates as of 7/11/16 – the "clean price" prior to acquisition rumors. Shopify LTM and NTM revenue growth reflects subscription revenues only. EV/NTM Sales multiple for the consolidated company. Shaded rows represent "elite" category killing SaaS peers. Market data as of 11/15/2016.

Figure 5: DCF Analysis ($mm)

Shopify, Inc. DCF	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24	Dec-25		
($in millions)	FY16 E	FY17 E	FY18 E	FY19 E	FY20 E	FY21 E	FY22 E	FY23 E	FY24 E	FY25 E	TV	CAGR
Revenues	$381	$578	$780	$994	$1,262	$1,602	$2,035	$2,585	$3,282	$4,169	$5,294	**30%**
y/y % change	85.8%	51.5%	35.1%	27.4%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	
EBIT	($14)	($7)	$19	$38	$76	$128	$204	$310	$460	$667	$953	
EBIT Margin	(3.7%)	(1.3%)	2.4%	3.9%	6.0%	8.0%	10.0%	12.0%	14.0%	16.0%	18.0%	
Tax rate	-	-	-	-	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	
Taxed EBIT	**($14)**	**($7)**	**$19**	**$38**	**$53**	**$90**	**$142**	**$217**	**$322**	**$467**	**$667**	nm
Depreciation & Amortization	13	20	28	35	45	57	72	91	116	147	187	
CapEx	(22)	(40)	(47)	(60)	(76)	(80)	(81)	(78)	(98)	(125)	(159)	
Change in Working Capital	16	13	4	(5)	50	64	81	103	131	167	212	
Free Cash Flow	**($7)**	**($15)**	**$4**	**$8**	**$72**	**$130**	**$214**	**$334**	**$470**	**$656**	**$907**	nm
y/y % change		119.0%	(128.4%)	99.0%	758.3%	80.2%	64.5%	55.9%	40.7%	39.4%	38.3%	
	(1.8%)	(2.6%)	0.5%	0.8%	5.7%	8.1%	10.5%	12.9%	14.3%	15.7%	17.1%	
Discounted FCF	**($6)**	**($11)**	**$3**	**$5**	**$36**	**$56**	**$81**	**$109**	**$134**	**$162**		

Cumulative cash flow	$568
Terminal Value	3,510
Total DCF value	4,078
Debt	1
Cash	400
Market Value of Equity	**4,477**
Shares Outstanding	84.9
Share Price	**$53**
Current Price	39.92
upside/(downside)	**32%**

WACC	15.0%
Cash Flow Multiple	18.0x

WACC	Cash Flow Multiple					
	16.0x	17.0x	18.0x	19.0x	20.0x	21.0x
13%	$57.0	$59.8	$62.6	$65.4	$68.2	$70.9
14%	52.3	54.9	57.4	59.9	62.5	65.0
15%	48.1	50.4	**52.7**	**55.0**	57.3	59.6
16%	44.3	46.4	**48.5**	**50.6**	52.7	54.8
17%	40.9	42.8	44.7	46.6	48.5	50.4
18%	37.8	39.5	41.2	43.0	44.7	46.4

WACC:	
Risk Free rate	4.0%
Risk Premium	6.6%
Beta	1.7
Cost of equity	14.9%
Cost of debt	2.0%
BV Debt/Total Market Capitaliza	0.0%
MV Equity/Total Market Capitali	100.0%
After-Tax Cost of Debt	1.4%
WACC	14.9%

@ PT	FY17 E	FY18 E
Sales	$578	$780
FCFE	(13.4)	5.7
EPS	(0.07)	0.21
EV/Sales	7.1x	5.2x
EV/FCFE	nm	nm
P/E	nm	nm

Terminal Value, undiscounted	$16,328
Implied Terminal FCF growth	8.8%
Terminal Cash Flow Multiple	18.0x
Terminal Year EBITDA multiple	14.3x

Source: BTIG, Factset.
Note: Market data as of 11/15/2016.

Shopify, Inc. Income Statement

Shopify, Inc. Income Statement				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17		
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Non-GAAP Income Statement														
Subscription	$38.3	$66.7	$112.0	$38.7	$43.7	$49.8	$56.3	$188.6	$60.0	$64.8	$70.5	$77.1	$272.4	$352.8
Merchant solutions	11.9	38.4	93.3	34.0	43.0	49.7	66.0	192.7	59.6	71.4	78.2	95.9	305.2	427.3
Total Net Revenues	50.3	105.0	205.2	72.7	86.6	99.6	122.3	381.2	119.6	136.2	148.7	173.0	577.6	780.1
Cost of revenues - Subscription	8.4	16.5	24.2	8.1	8.9	10.3	12.5	39.9	12.2	12.7	13.9	15.9	54.7	67.0
Cost of revenues - Merchant solutions	5.0	26.4	69.6	25.2	31.4	36.6	51.4	144.5	42.7	50.7	56.1	74.4	223.9	309.7
Non-GAAP Gross Profit	**36.9**	**62.1**	**111.4**	**39.4**	**46.3**	**52.7**	**58.4**	**196.8**	**64.8**	**72.8**	**78.7**	**82.7**	**299.0**	**403.4**
Non-GAAP Operating Expenses														
Sales & Marketing	23.0	45.2	69.0	27.4	28.4	31.4	36.1	123.2	43.8	44.0	47.1	50.5	185.4	241.0
R&D	12.5	23.1	33.3	11.4	13.5	15.1	16.0	56.0	17.6	20.2	21.9	20.8	80.6	96.7
General & Administrative	3.8	10.8	16.3	6.5	7.7	8.4	9.2	31.8	9.1	10.3	10.9	10.1	40.5	46.6
Total Non-GAAP Operating Expenses	39.3	79.1	118.7	45.3	49.5	54.9	61.3	211.0	70.6	74.6	79.9	81.4	306.5	384.3
Non-GAAP Operating income	**(2.4)**	**(17.1)**	**(7.3)**	**(5.9)**	**(3.2)**	**(2.2)**	**(2.8)**	**(14.1)**	**(5.8)**	**(1.7)**	**(1.2)**	**1.3**	**(7.5)**	**19.1**
(+) Depreciation	1.8	4.7	7.2	3.1	2.8	3.7	3.8	13.4	5.0	4.4	5.5	5.4	20.3	27.5
Non-GAAP EBITDA	**(0.7)**	**(12.4)**	**(0.0)**	**(2.9)**	**(0.4)**	**1.5**	**1.0**	**(0.8)**	**(0.8)**	**2.6**	**4.3**	**6.7**	**12.9**	**46.6**
Interest income (expense), net	0.0	0.1	0.2	0.2	0.2	0.4	0.4	1.2	0.4	0.4	0.4	0.4	1.5	1.5
Other income	(0.6)	(0.8)	(1.2)	0.6	-	-	-	0.6	-	-	-	-	-	-
Non-GAAP Earnings Bef.Taxes	**(3.0)**	**(17.8)**	**(8.3)**	**(5.1)**	**(3.0)**	**(1.8)**	**(2.4)**	**(12.4)**	**(5.5)**	**(1.4)**	**(0.8)**	**1.7**	**(6.0)**	**20.6**
Provision for Income Taxes	-	-	(0.6)	-	-	-	-	-	-	-	-	-	-	-
Non-GAAP Tax Rate	-	-	6.8%	-	-	-	-	-	-	-	-	-	-	-
Non-GAAP Net Income [(1)]	**($3.0)**	**($17.8)**	**($7.7)**	**($5.1)**	**($3.0)**	**($1.8)**	**($2.4)**	**($12.4)**	**($5.5)**	**($1.4)**	**($0.8)**	**$1.7**	**($6.0)**	**$20.6**
Non-GAAP EPS	**($0.09)**	**($0.46)**	**($0.13)**	**($0.06)**	**($0.04)**	**($0.02)**	**($0.03)**	**($0.15)**	**($0.06)**	**($0.02)**	**($0.01)**	**$0.02**	**($0.07)**	**$0.21**
Avg. Diluted Shares Outstanding	34.9	38.9	61.5	80.5	81.3	84.9	86.9	83.4	88.9	90.9	92.9	94.9	91.9	99.9

(1) Non-GAAP excludes: amortization, restructuring, impairments, settlements, and stock-based comp.

Income Statement Ratios	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Revenue Analysis:														
Subscription	76.3%	63.5%	54.6%	53.2%	50.4%	50.1%	46.1%	49.5%	50.2%	47.6%	47.4%	44.6%	47.2%	45.2%
Merchant solutions	23.7%	36.5%	45.4%	46.8%	49.6%	49.9%	53.9%	50.5%	49.8%	52.4%	52.6%	55.4%	52.8%	54.8%
Expense Analysis:														
Subscription	16.7%	15.7%	11.8%	11.2%	10.3%	10.4%	10.2%	10.5%	10.2%	9.3%	9.4%	9.2%	9.5%	8.6%
Merchant solutions	10.0%	25.2%	33.9%	34.7%	36.2%	36.7%	42.0%	37.9%	35.7%	37.2%	37.7%	43.0%	38.8%	39.7%
Total Cost of Revenues	26.7%	40.9%	45.7%	45.8%	46.5%	47.1%	52.2%	48.4%	45.8%	46.5%	47.1%	52.2%	48.2%	48.3%
Sales & Marketing	45.8%	43.1%	33.6%	37.7%	32.8%	31.5%	29.5%	32.3%	36.7%	32.3%	31.7%	29.2%	32.1%	30.9%
R&D	24.9%	22.0%	16.2%	15.6%	15.6%	15.2%	13.1%	14.7%	14.7%	14.8%	14.7%	12.0%	14.0%	12.4%
General & Administrative	7.5%	10.2%	7.9%	9.0%	8.8%	8.4%	7.5%	8.3%	7.6%	7.6%	7.3%	5.8%	7.0%	6.0%
Depreciation	3.5%	4.4%	3.5%	4.2%	3.2%	3.7%	3.1%	3.5%	4.2%	3.2%	3.7%	3.1%	3.5%	3.5%
Margin Analysis:														
Subscription	78.1%	75.2%	78.4%	79.0%	79.5%	79.3%	77.8%	78.9%	79.7%	80.4%	80.2%	79.3%	79.9%	81.0%
Merchant solutions	58.0%	31.1%	25.3%	25.9%	27.0%	26.5%	22.1%	25.0%	28.4%	29.0%	28.3%	22.4%	26.6%	27.5%
Gross Margin	73.3%	59.1%	54.3%	54.2%	53.5%	52.9%	47.8%	51.6%	54.2%	53.5%	52.9%	47.8%	51.8%	51.7%
Operating Margin	**(4.8%)**	**(16.3%)**	**(3.5%)**	**(8.1%)**	**(3.7%)**	**(2.2%)**	**(2.3%)**	**(3.7%)**	**(4.9%)**	**(1.3%)**	**(0.8%)**	**0.7%**	**(1.3%)**	**2.4%**
EBITDA Margin	(1.3%)	(11.8%)	(0.0%)	(3.9%)	(0.5%)	1.5%	0.8%	(0.2%)	(0.7%)	1.9%	2.9%	3.9%	2.2%	6.0%
Tax Rate	-	-	6.8%	-	-	-	-	-	-	-	-	-	-	-
Net Margin	(6.0%)	(16.9%)	(3.8%)	(7.1%)	(3.5%)	(1.8%)	(2.0%)	(3.3%)	(4.6%)	(1.0%)	(0.6%)	1.0%	(1.0%)	2.6%
Q/Q Growth Rates:														
Subscription				11.8%	12.8%	14.1%	13.0%		6.5%	8.0%	8.8%	9.4%		
Merchant solutions				(4.4%)	26.3%	15.7%	32.6%		(9.6%)	19.8%	9.5%	22.6%		
Total Revenue				***3.6%***	***19.1%***	***14.9%***	***22.8%***		***(2.2%)***	***13.9%***	***9.2%***	***16.3%***		
Gross Profit				10.5%	17.6%	13.8%	10.9%		10.8%	12.4%	8.1%	5.1%		
Sales & Marketing				25.4%	3.6%	10.6%	14.9%		21.6%	.4%	7.0%	7.2%		
R&D				13.6%	18.4%	12.1%	6.2%		10.0%	14.6%	8.3%	(4.8%)		
General & Administrative				28.2%	17.5%	9.7%	9.0%		(.3%)	13.3%	5.6%	(7.8%)		
Total Non-GAAP Operating Expenses				22.6%	9.3%	10.8%	11.6%		15.3%	5.6%	7.2%	1.9%		
Non-GAAP Operating Income				***nm***	***nm***	***nm***	***nm***		***nm***	***nm***	***nm***	***nm***		
Y/Y Growth Rates:														
Subscription	99.7%	73.9%	68.0%	73.2%	71.5%	68.6%	62.8%	68.4%	55.0%	48.4%	41.5%	36.9%	44.5%	29.5%
Merchant solutions	164.0%	221.9%	143.2%	126.8%	120.7%	114.2%	85.5%	106.6%	75.3%	66.2%	57.3%	45.4%	58.4%	40.0%
Total Revenue	***111.9%***	***109.0%***	***95.4%***	***94.7%***	***92.9%***	***88.6%***	***74.3%***	***85.8%***	***64.5%***	***57.2%***	***49.4%***	***41.5%***	***51.5%***	***35.1%***
Gross Profit	94.5%	68.4%	79.5%	82.1%	82.9%	82.9%	63.9%	76.7%	64.5%	57.2%	49.4%	41.5%	51.9%	34.9%
Sales & Marketing	88.6%	96.7%	52.6%	105.0%	78.4%	75.4%	65.0%	78.6%	60.0%	55.0%	50.0%	40.0%	50.4%	30.0%
R&D	103.1%	84.7%	44.1%	74.2%	69.0%	71.2%	60.0%	67.9%	55.0%	50.0%	45.0%	30.0%	43.9%	20.0%
General & Administrative	122.5%	186.4%	51.7%	73.5%	130.1%	103.4%	80.0%	94.7%	40.0%	35.0%	30.0%	10.0%	27.5%	15.0%
Total Non-GAAP Operating Expenses	95.9%	101.4%	50.0%	91.5%	82.0%	78.0%	65.7%	77.8%	55.9%	50.5%	45.6%	32.9%	45.3%	25.4%
Non-GAAP Operating Income	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***
Non-GAAP Net Income	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
Non-GAAP EPS	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm

Source: BTIG, Company Filings.

Shopify, Inc. Balance Sheet

Shopify, Inc. Balance Sheet				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17		
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Assets														
Cash & Cash Equivalents	$83.5	$42.0	$110.1	$83.9	$68.1	$187.4	$176.1	$176.1	$177.3	$173.8	$163.5	$162.6	$162.6	$168.4
Marketable securities	-	17.7	80.1	105.6	111.5	212.9	212.9	212.9	212.9	212.9	212.9	212.9	212.9	212.9
Trade and other receivables	3.4	7.2	6.1	6.5	9.1	7.7	13.6	13.6	8.0	11.3	13.2	19.0	19.0	22.2
Merchant cash advances, net	-	-	-	-	-	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Other current assets	1.1	1.5	6.2	7.1	7.1	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
Total Current Assets	88.0	68.4	202.5	203.2	195.9	427.4	422.0	422.0	417.6	417.4	408.9	413.9	413.9	422.9
PP&E, net	4.5	21.7	33.0	34.6	39.1	42.8	45.4	45.4	48.7	53.9	58.8	65.5	65.5	84.8
Long-term marketable securities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intangible assets	0.9	2.7	5.8	5.2	6.8	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Goodwill	2.4	2.4	2.4	2.4	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Assets	$95.8	$95.2	$243.7	$245.3	$251.1	$486.3	$483.6	$483.6	$482.5	$487.5	$483.9	$495.6	$495.6	$523.8
Liabilities														
Accounts payable and accrued liabilities	$5.6	$12.5	$23.7	$27.1	$32.3	$42.3	$39.4	$39.4	$42.0	$46.6	$42.0	$51.5	$51.5	$60.3
Deferred Revenues	4.1	6.8	12.7	14.5	16.5	18.3	20.4	20.4	21.6	22.7	24.1	24.1	24.1	21.1
Notes payable / lease obligations	0.3	0.5	0.8	0.9	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	10.0	19.8	37.2	42.5	49.8	61.9	61.0	61.0	64.8	70.6	67.3	76.8	76.8	82.6
Long-term debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LT Deferred Revenues	0.2	0.4	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.0
Lease incentives	0.2	7.3	10.5	11.0	11.7	12.1	12.6	12.6	13.1	13.6	14.1	14.6	14.6	16.6
Other long-term liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Liabilities	10.4	27.5	48.4	54.3	62.4	74.8	74.5	74.5	78.9	85.3	82.5	92.5	92.5	100.2
Stockholders' equity	85.4	67.7	195.3	191.0	188.8	411.5	409.1	409.1	403.6	402.3	401.4	403.1	403.1	423.6
Total Liabilities + Stockholder's Equi	$95.8	$95.2	$243.7	$245.3	$251.1	$486.3	$483.6	$483.6	$482.5	$487.5	$483.9	$495.6	$495.6	$523.8
% Change Y/Y														
Cash and Cash Equivalents	na	(28.6%)	218.8%	220.3%	(9.6%)	114.1%	104.6%	104.6%	106.0%	115.3%	(6.0%)	(3.5%)	(3.5%)	1.5%
Receivables	na	113.1%	(15.7%)	22.6%	176.1%	100.3%	124.0%	124.0%	21.4%	24.2%	71.3%	39.0%	39.0%	17.0%
Deferred Revenue	na	64.6%	86.7%	84.2%	70.4%	65.1%	59.4%	59.4%	47.9%	37.5%	31.4%	18.0%	18.0%	(12.5%)
Balance Sheet Summary														
Current Ratio	8.8x	3.5x	5.4x	4.8x	3.9x	6.9x	6.9x	6.9x	6.4x	5.9x	6.1x	5.4x	5.4x	5.1x
Book Value Per Share	$2.45	$1.74	$3.18	$2.37	$2.32	$4.85	$4.71	$4.90	$4.54	$4.42	$4.32	$4.25	$4.39	$4.24
Cash Per Share	2.40	1.53	3.09	2.35	2.21	4.71	4.48	4.66	4.39	4.25	4.05	3.96	4.09	3.82
Net Cash Per Share	2.40	1.53	3.09	2.35	2.21	4.71	4.48	4.66	4.39	4.25	4.05	3.96	4.09	3.82
Return On Equity (LTM)		(23.2%)	(5.9%)		(6.0%)	(5.5%)	(4.1%)	(4.1%)	(3.6%)	(2.7%)	(2.5%)	(1.5%)	(1.5%)	5.0%
Return on Assets (LTM)		(18.6%)	(4.6%)		(4.8%)	(4.5%)	(3.4%)	(3.4%)	(3.0%)	(2.3%)	(2.1%)	(1.2%)	(1.2%)	4.0%
Working Capital, net	($2.2)	($5.3)	($17.6)	($20.5)	($23.2)	($34.7)	($25.7)	($25.7)	($34.0)	($35.3)	($28.8)	($32.6)	($32.6)	($38.1)
Avg. Diluted Shares Outstanding	34.9	38.9	61.5	80.5	81.3	84.9	86.9	83.4	88.9	90.9	92.9	94.9	91.9	99.9
Model Assumptions														
DSO (excluding deferred revenue)	24.6	25.1	10.8	8.2	9.6	7.0	10.2	13.1	6.1	7.6	8.1	10.0	12.0	10.4
DSO (billings)	na	24.5	10.5	8.0	9.4	6.9	10.0	12.8	6.0	7.5	8.0	10.0	11.9	10.4
Accounts Payable Days (off COGS)	242.1	276.3	357.5	304.3	329.0	374.3	287.6	360.3	315.0	335.0	275.0	295.0	343.6	328.7

Source: BTIG, Company Filings.

Shopify, Inc. Cash Flow Statement

Shopify, Inc. Cash Flow Statement				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17		
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Cash flows from operations:														
Net income	($4.8)	($22.3)	($18.8)	($8.9)	($8.4)	($9.1)	($11.6)	($38.1)	($12.0)	($10.2)	($11.2)	($11.3)	($44.8)	($24.8)
Depreciation and amortization	1.8	4.7	7.2	3.1	2.8	3.7	3.8	13.4	5.0	4.4	5.5	5.4	20.3	27.5
Stock-based comp	1.4	3.8	7.8	3.4	5.0	6.5	9.2	24.0	6.6	8.9	10.4	13.0	38.8	45.3
Vesting of restricted shares	0.3	0.7	0.4	0.1	0.1	0.0	-	0.2	-	-	-	-	-	-
Loss on asset disposal	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Unrealized foreign exchange (gain) loss	0.1	0.5	1.8	(1.0)	(0.2)	0.1	-	(1.1)	-	-	-	-	-	-
Changes in operating assets & liabilities														
Accounts receivable, net	(1.2)	(3.9)	1.2	(0.1)	(2.2)	1.6	(6.0)	(6.6)	5.7	(3.3)	(1.9)	(5.8)	(5.3)	(3.2)
Other current assets	(0.7)	(0.4)	(5.2)	(0.7)	(0.1)	(3.3)	-	(4.1)	-	-	-	-	-	-
Accounts payable	2.3	6.0	11.5	2.3	5.7	8.4	(3.0)	13.4	2.6	4.7	(4.7)	9.5	12.2	8.8
Change in lease incentives	0.2	7.3	3.5	0.6	0.9	0.5	0.5	2.5	0.5	0.5	0.5	0.5	2.0	2.0
Deferred revenue	1.9	2.8	6.2	1.9	2.0	1.9	2.2	8.0	1.3	1.2	1.4	(0.0)	3.8	(3.1)
Other long-term liabilities	-	-	-	-	-	2.5	-	2.5	-	-	-	-	-	-
Net Cash from Operations	$1.4	($0.8)	$15.8	$0.7	$5.6	$12.7	($4.9)	$14.1	$9.6	$6.0	$0.1	$11.3	$27.0	$52.5
Cash flows from investing:														
Proceeds from sales/maturity of marketable secu	-	$2.4	$48.4	$20.7	$28.8	$40.6	-	$90.1	-	-	-	-	-	-
Purchases of short-term investments	-	(20.1)	(111.2)	(46.4)	(35.0)	(142.3)	-	(223.7)	-	-	-	-	-	-
Capital expenditures	(3.5)	(20.6)	(16.5)	(2.7)	(7.3)	(5.2)	(6.4)	(21.7)	(8.4)	(9.5)	(10.4)	(12.1)	(40.4)	(46.8)
Business combinations	(1.9)	(2.0)	(4.5)	(0.3)	(8.9)	(0.7)	-	(10.0)	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash from Investing	($5.3)	($40.4)	($83.8)	($28.8)	($22.4)	($107.6)	($6.4)	($165.2)	($8.4)	($9.5)	($10.4)	($12.1)	($40.4)	($46.8)
Cash flows from financings:														
Proceeds from issuance of common stock, net of	-	-	$136.3	-	-	$224.4	-	$224.4	-	-	-	-	-	-
Proceeds from exercise of stock options	0.3	0.1	1.6	0.8	1.0	1.4	-	3.2	-	-	-	-	-	-
Proceeds from / (repayment) of notes payable ar	69.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends paid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash from Financings	$70.1	$0.1	$137.9	$0.8	$1.0	$225.8	-	$227.7	-	-	-	-	-	-
Foreign Currency Impact	(0.2)	(0.5)	(1.7)	1.1	0.2	(0.1)	-	1.2	-	-	-	-	-	-
Net Increase / Decrease in Cash	$65.9	($41.6)	$68.1	($26.2)	($15.7)	$130.9	($11.3)	$77.6	$1.3	($3.5)	($10.4)	($0.8)	($13.4)	$5.7
Free Cash Flow	($2.1)	($21.4)	($0.8)	($2.1)	($1.8)	$7.5	($11.3)	($7.6)	$1.3	($3.5)	($10.4)	($0.8)	($13.4)	$5.7
as a % of revenues	(4.1%)	(20.4%)	(0.4%)	(2.8%)	(2.1%)	7.5%	(9.2%)	(2.0%)	1.1%	(2.6%)	(7.0%)	(0.5%)	(2.3%)	0.7%
as a % of billings		(59.3%)	(0.4%)	(2.8%)	(2.0%)	7.4%	(9.1%)	(2.0%)	1.1%	(2.6%)	(6.9%)	(0.5%)	(2.3%)	0.7%
q/q % change				924.9%	(13.0%)	(518.4%)	(250.5%)		(111.3%)	(377.4%)	192.8%	(92.2%)		
y/y % change	(716.7%)	934.6%	(96.4%)	(242.9%)	(145.0%)	(225.2%)	5,515.0%	893.5%	(161.9%)	97.4%	(238.2%)	(92.8%)	75.8%	(142.5%)

Source: BTIG, Company Filings.

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BTIG

Equity Research

November 16, 2016

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Bazaarvoice, Inc.

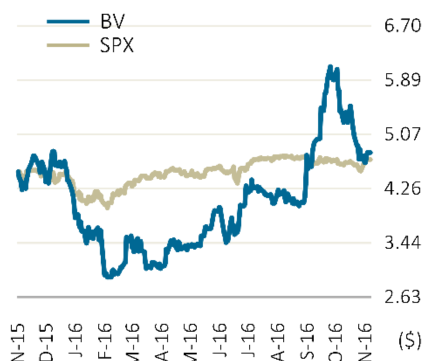
Building the Non-Amazon Amazon; Initiating at Buy Rating With a $8 PT

Bazaarvoice is emerging from its troubled past with one of the smartest, most far-reaching networks of consumer data outside of the Holy Trinity of digital commerce and marketing Facebook (FB, Neutral; Analyst: Richard Greenfield), Google (GOOGL, Not Rated) and Amazon (AMZN, Not Rated). This puts the company at a crucial position within the customer journey, as its technology makes it the de facto owner of consumer touch points. The monetization strategy here is still nascent, but the value of the network makes Bazaarvoice a crucial partner for brands and retailers fighting back against the Amazon effect. We think declining unit economics trends will bottom-out this year, and the company is just getting started on its high-potential advertising initiative. We err on the side of caution on the latter, but still see near-term expectations as sufficiently low; modest upside to estimates should be enough to drive stock outperformance.

- **Turning a corner, ride the improvement.** The divestiture is in the rear-view, and dollar churn should climb back above customer churn as unit economics bottom out in FY17. The bar for improvement is low, and core SaaS business expectations seem achievable. We're cautious on the advertising business, but bullish on the data-focused approach.
- **In the customer's journey, the data provider is king.** There are many hurdles to clear on the path to the $400m revenue target by FY21, a big part of which includes a dramatic increase in the advertising business. We're cautious here, but it's undeniable that the value of first-party data gives it a leg-up on much of the competition. The opportunity is vast, and Bazaarvoice could be the key for traditional offline brands and retailers in an increasingly digital world, in our view.
- **M&A optionality provides downside support.** Should the company fail to realize its vision, we see plenty of suitors for a network that tracks >150m addressable shoppers.
- **Valuation:** Our $8 price target assumes a 3x EV/FY18 Revenues. See page 9 for detailed valuation and risks discussion.

BV	**$4.80**
12 month target	$8.00
BUY	
52 week range	$2.93 - $6.09
Market Cap (m)	$395

Price Performance



Source: IDC. Market data as of 11/15/2016.

Estimates

	1Q16 A	2Q16 A	3Q16 A	4Q16 A	FY16 A	1Q17 A	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Sales	49	50	50	51	200	50	50	51	51	203	214
Diluted EPS (Adj.)	(0.06)	0.00	0.02	(0.01)	(0.06)	0.00	0.00	0.01	(0.02)	(0.01)	0.04
FCF	(9)	6	(1)	0	(4)	(3)	1	3	(7)	(5)	10
EV/Sales (x)	-	-	-	-	1.73	-	-	-	-	1.70	1.61
P/FCF (x)	-	-	-	-	-	-	-	-	-	-	33.34

Source: BTIG Estimates and Company Documents ($ in millions, except per share amount)

Adjusted EPS excludes stock-based comp, amortization and acquisition related costs.

Please Read: Important disclosures and analyst's certification appear in Appendix

Company Description

Bazaarvoice, Inc. engages in the provision of social commerce solutions. Its platform enables its clients to capture and display online ratings and reviews about specific products and services; channel content into all the places where it will influence a purchase both within and outside the network, which the firm refers to as syndication; and use business insights so the clients can act on what consumers want. It also offers conversations platform and connections, analytics, and media solutions. The company was founded in May 2005 and is headquartered in Austin, TX.

Investment Thesis

Bazaarvoice has had a more turbulent initial few years as a public company than most, in part because of a messy antitrust battle with the Department of Justice (DOJ) regarding its acquisition of rival ratings and reviews provider PowerReviews in 2012. However, the company has pivoted away from being just a point solution since the divestiture verdict in 2014, and we believe is now building the smartest, most data-rich network of shoppers outside of Facebook, Google and – most importantly – Amazon.

We say "most importantly" with respect to latter because Bazaarvoice offers its core retailer customers a way to "Amazon" their own businesses through advanced ratings syndication that boosts conversion probability, while also tracking purchaser intent across its network in real-time. Therefore, Bazaarvoice is in the unique position of being the *first* consumer touch point to sufficiently capture purchaser intent, even before its own brand and retailer customers.

The opportunity to monetize this data is still nascent, but having this Amazon-like insight into consumer behavior should make Bazaarvoice a crucial partner for retailers as they fight back against the aforementioned digital commerce giant. The company's strategy also relies on leveraging this data to run highly targeted personalized marketing campaigns for its brand clients that have already proved to yield higher ROIs than competitor offerings. As a corollary to its internally expected success on this front, Bazaarvoice has set the ambitious goal of doubling its revenue base to $400m by FY21 – a 19% CAGR over the next four years.

We err on the side of caution in our model though and only assume a 12% CAGR over that period. We think it will likely be a tough slog to build new core competencies and a go-to-market strategy around an advertising business inside a "traditional" SaaS company. However, in light of the recent divestiture-related turbulence, we think expectations are fairly low and that the stock still looks compelling at current levels. It's deep in "show-me" territory right now, but with the strategy firmly focused on making the most of scope of shopper data, we think in-line results on the SaaS business and some outperformance on the advertising side should drive the stock higher.

Our Buy rating and $8 price target are based on 3x EV/FY18 Revenues of $214m (in line with consensus). We see this mark as achievable as it still assumes SaaS revenues below management's long-term guide of "mid- to

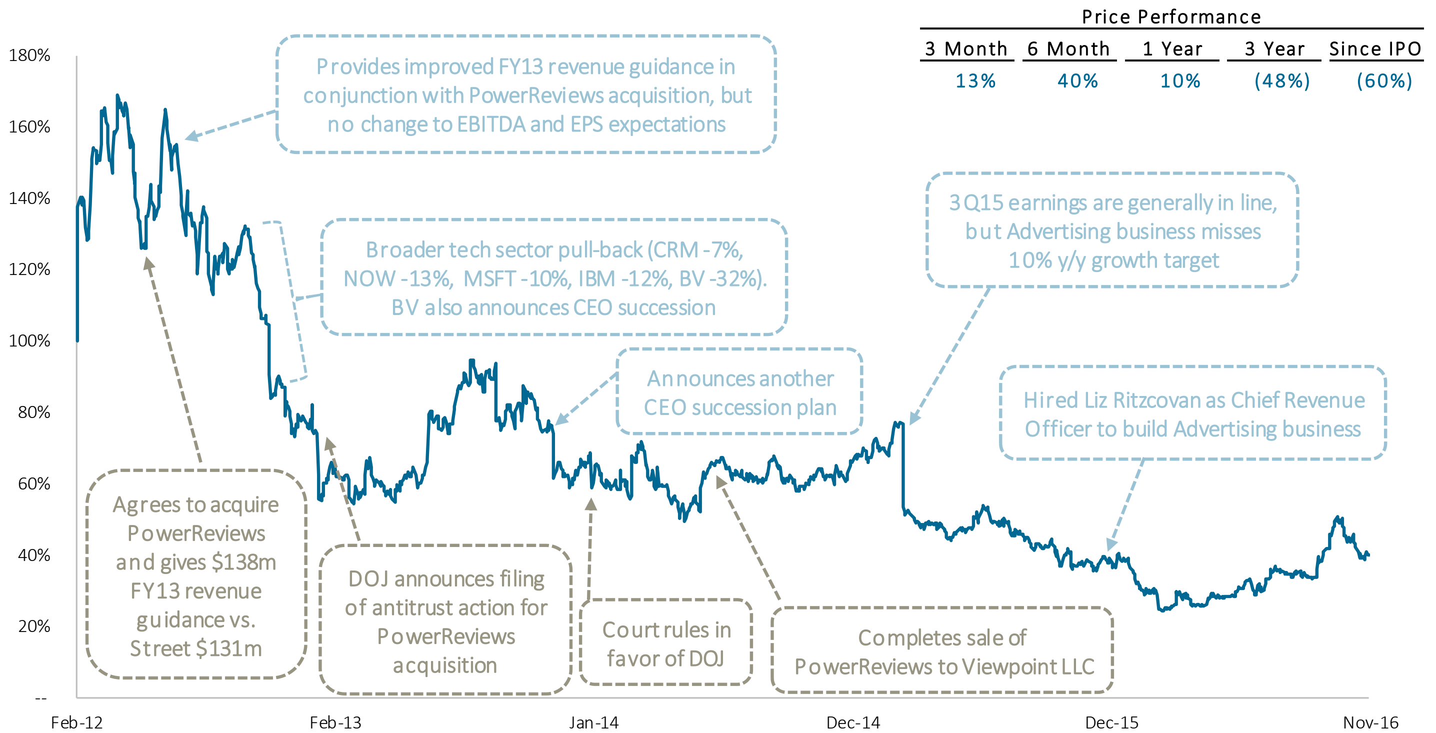
high-single digits" and an extra $3m of advertising revenues on top of the expected $10m in FY17.

Part of Where You're Going Is Knowing Where You Came From

Bazaarvoice shot to prominence as the leader in the ratings and reviews niche – an important tool that leverages customer loyalty and advocacy to drive conversion in the customer journey. Undoubtedly most of us are familiar with the star rating system associated with every product on Amazon, and the psychological impact they have on our buying decisions. To distil this impact into numbers, 88% of customers trust online reviews as much as a personal recommendation, only 12% of the population *don't* regularly read reviews and even bad reviews can improve conversion by an astounding 66%. It augmented this relatively simple point solution by building a "syndication" network: any customer browsing products on a Bazaarvoice customer's site could be shown reviews for the same product if they moved to a different Bazaarvoice customer's site. This cross-network product matching and review facilitation not only tracked buying intent, but ensured that a brand maintained consistent visibility with the consumer.

But, since the acquisition of rival ratings and review provider PowerReviews in May 2012 – a price-competitive solution that typically undercut Bazaarvoice in head-to-head deals – the stock has been on a turbulent ride:

Figure 1: The Stock is Still Less than Half of Its IPO Price ($12), But Looks to Have Turned a Corner in the Past Year



Price Performance				
3 Month	6 Month	1 Year	3 Year	Since IPO
13%	40%	10%	(48%)	(60%)

Source: BTIG, FactSet, Company Filings.
Note: Market data as of 11/15/2016.

As part of the settlement with the DOJ, the Bazaarvoice was required to separate an asset that had already been a part of its operations for two years, but also "remedy" its anticompetitive behavior through additional measures.

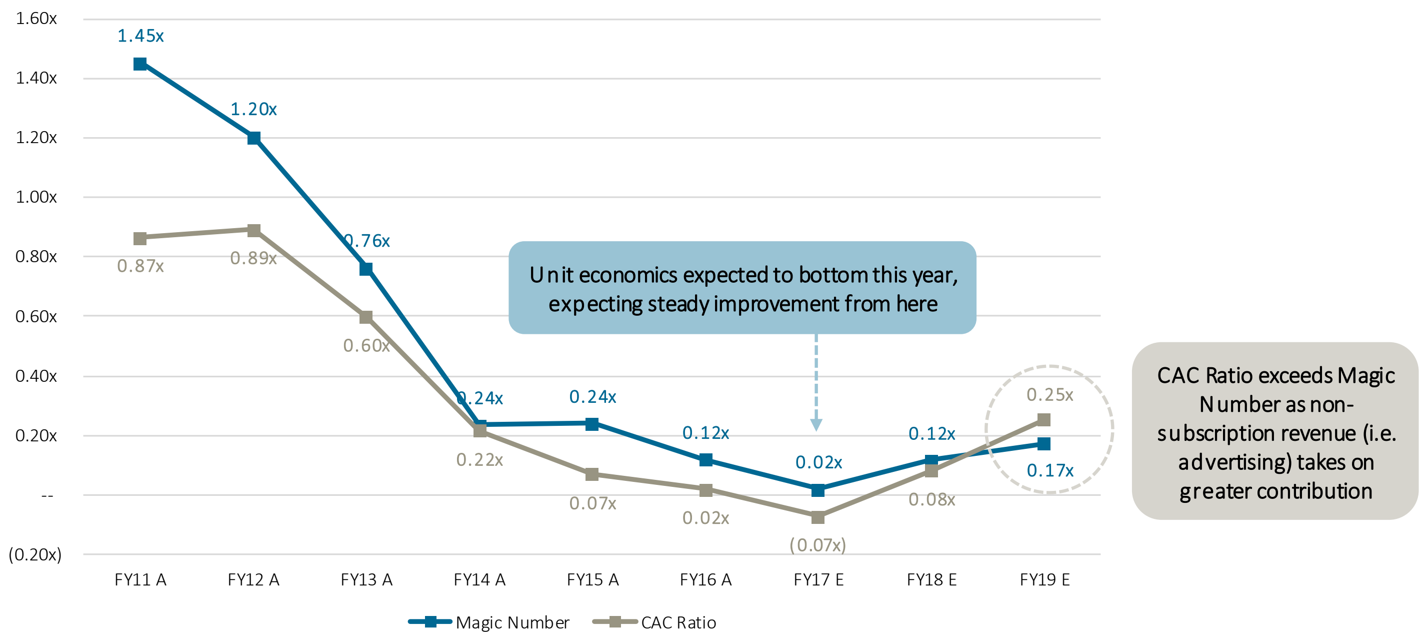
This includes providing the new PowerReviews organization with access to its syndication service for a period of four years, access to patents regarding the ratings and reviews platform and an agreement not to compete for the new organization's customers for six months. The effect of the settlement obviously impacted the underlying health of the business, primarily through greater dollar churn; customers didn't outright replace their Bazaarvoice solutions with a new PowerReviews product, but instead took the divestiture as an opportunity to renegotiate more favorable contract terms. By extension then, the hangover from the divestiture manifests itself in the form of worsening unit economics, annualized SaaS revenue per average customer that's currently at its lowest level since FY10 and flat subscription revenue guidance for FY17.

We don't point these out to pour cold water on our own bullish thesis, but rather to underscore how the company has turned the corner. The increase in dollar attrition is a material negative, from a strictly P&L perspective. However, in a different light (and admittedly a more favorable one) the fact that customer churn didn't fluctuate widely over the same period is a net-positive going forward. It solidifies Bazaarvoice's core value proposition (that ratings and reviews aren't a commodity offering and customers don't choose vendors based simply on price), thereby also marking the company as a strategic partner for its customer base. Rather, they took a one-time opportunity to negotiate better pricing, rather than leave Bazaarvoice's platform altogether.

Furthermore, the business looks to have bottomed-out with respect to churn, and the stability afforded by the customer base provides a foundation for the company's long-term data monetization strategy. With the divestiture in the rear-view, and those aforementioned cut-rate contracts coming up for renewal, dollar churn is expected to climb back up above the level of customer churn in FY17. This should improve the overall unit economics of the business, assuming the company performs in line with its guidance (flat subscription revenues in FY17, "approaching" its mid- to high-single digit target in FY18 and at its target level from FY19 and beyond).

Assuming the same level of subscription revenue contribution as gross bookings for the company's in-market SaaS solutions (75%), we estimate that Bazaarvoice has a core ratable revenue base of ~$145m. Add in the improving unit economics, and the fundamental health of business (and the means by which the company will fund its broader advertising/data monetization strategy). Our estimates don't anticipate that the company can reach the same levels seen in FY10 when it was first scaling its Conversations platform. Instead, it's simply centerd on the basic assumption that future looks marginally better than the past, and that expected results should be enough to take the stock higher. We understand there are some risks associated with pursuing the advertising approach (which we discuss later in this report), but the baseline guidance – especially the improvement over flat subscription revenue called for in FY18 – looks achievable, in our view.

Figure 2: The Worsening Unit Economics Trends Should Bottomed Out This Year; Time to Ride the Growth Back Up



Source: BTIG, Company Filings.
Note: Magic Number defined as incremental change in subscription revenue divided by prior year's GAAP sales and marketing expense. CAC Ratio defined as incremental change in GAAP gross profit divided by prior year's sales and marketing spend.

What Drives Long-Term Confidence After a Rocky History?

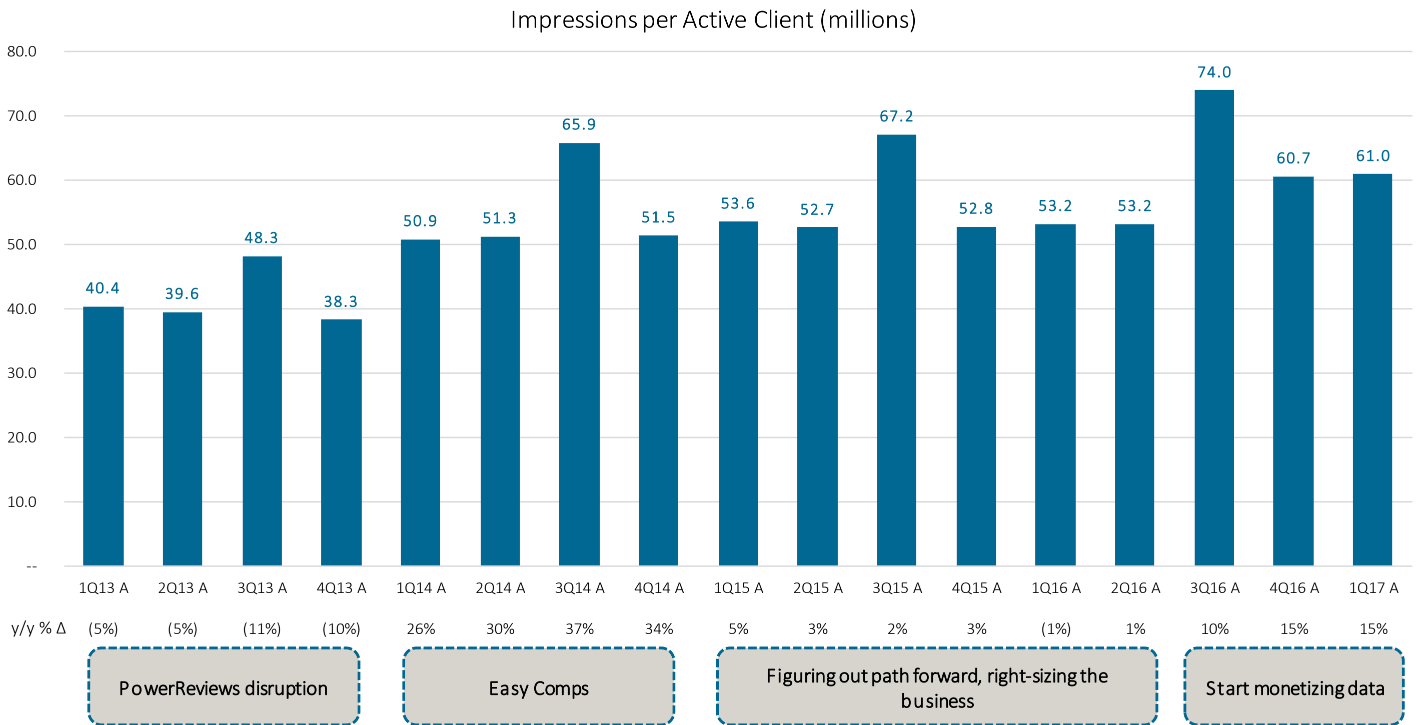
Whether the company foresaw this moment or not when it first developed its ratings and reviews product, it's developed into the most attractive network for shopper data outside of the bellwethers of digital commerce and media/marketing (Amazon, Google and Facebook). Its ability to track the purchasing intent of 150m shoppers in real time is a deep competitive advantage over other competitors within the company's customer journey segments (consideration and loyalty/advocacy), and makes Bazaarvoice a must-have partner trying to drive greater conversions in the digital age. By owning access to the consumer across a network of nearly 1400 clients, Bazaarvoice is in a unique position as the digital commerce and marketing landscape continues to evolve.

The company's increasing scope is most evident not just by its growing network of shopper data, but also by the number of digital impressions it serves. In part, the growth here is due to rising penetration rates in digital commerce more generally; but again, Bazaarvoice is uniquely positioned to capture and serve shoppers outside the confines of the Amazon ecosystem. Of course the company still needs to develop a fully-fledged business model that adequately monetizes the opportunity in front of it (advertising and the new product recommendations solutions are the first step), but we see no other company that can play such an integral role for brands and retailers in reaching consumers across their customer journeys.

One of the counterarguments we've heard to our bullishness on the data opportunity is that moving forward, the company's core retailer customers will be hesitant to volunteer their data with competitors. To put it bluntly though,

we view Bazaarvoice's role in the market as "socialism that works." As we mentioned in our industry report on the space, brands and retailers (including Amazon) are all fighting a zero-sum game for consumer time, attention and wallets. Every dollar of GMV processed by Amazon is one that isn't captured by a competitor selling the same (if not identical) product at a similar (and sometimes lower) cost. In this sense, retailers are hyper-focused on not just retaining customers and creating loyalty, but are also desperate to maximize consumer impressions on their site and drive conversions.

Figure 3: Impressions Per Active Client Rapidly Improving at the Outset of the Data Monetization Strategy



Source: BTIG, Company Filings.

In this context then, Bazaarvoice is the unifying factor, whereby customers across the network contribute a small sliver of data (the company says their largest customer is still only a single-digit percentage) in order to access the entire pool, and all the insight it can unlock. For retailers and brands, this access will only become more important when considering the Millennial trends we highlighted in our industry note.

For example, persistent low-levels of home buying among Millennials could have broad implications on a notable Bazaarvoice customer like The Home Depot (HD, Buy, $155 PT; Analyst: Alan Rifkin). Specifically, if the next generation of consumers are priced out of buying affordable houses longer than economists/the company expect, they similarly would be spending less money on big ticket items or home improvement initiatives (remodelling kitchens, etc.). This would hit at the core of Home Depot's business, and could cause disruption if unchecked. However, this is an example of where Bazaarvoice's network of shopper data comes in handy, as Home Depot could leverage the company's scope to understand prospective consumer trends in real time, and learn how exactly the next generation of consumers are using their wallets when it comes to home improvement products.

Similarly, a big brand Bazaarvoice customer such as Procter & Gamble (PG, Not Rated) can leverage the data network to understand exactly how to plot a course forward in its core Gillette business as Millennials opt for digitally native subscription brands such as Dollar Shave Club. While Procter was initially caught off guard by DSC's initial targeted, highly-effective awareness campaign, it faces an ongoing battle for shaving supremacy now that DSC has been bought by arch-CPG competitor Unilever (ULVR LN, Not Rated) for $1 billion. By working with Bazaarvoice though, Procter can gain greater insight into exactly how an increasingly digital customer is interacting with its brands. Moreover, it can avert some of its historically large advertising budget into its own highly-targeted digital campaigns and potentially drive higher conversions among those who may altogether bypass its traditional brick-and-mortar distribution channel.

In the age of the digital consumer (and the highly fragmented customer journey), owning customer touch points is the key to unlocking long-term value. This position was owned by retailers prior to the digital transformation of marketing and commerce, as brick-and-mortar stores were the primary means of procuring goods. However, the internet has radically altered retail distribution methods, our phones have turned us into everywhere consumers and Amazon has built its entire retail strategy on leveraging data to better target consumers. It's even gone a step further by introducing its own loyalty program (Amazon Prime) and layering in additional services (free two day shipping, a Black Friday-type sale called Prime Day) that mitigates consumers from leaving its ecosystem.

The company's large data network and product set is one of the key strategic assets in helping retail customers attempt to level the playing field against their own digitally native competitor in Amazon. Hence, we believe Bazaarvoice holds an important position in the current digital economy.

Still Early on the Monetization Front, But the Bar is Low

The opportunity to monetize on this position is still relatively nascent, and we err on the side of caution by assuming that the company *doesn't* achieve its $400m revenue target by FY21. Specifically, we model in line with management's expectations of the SaaS business achieving mid- to high-single digits growth over the next few years, but think that building a net-new marketing organization within a "traditional" SaaS business will be a long slog.

The core competences for an advertising/marketing campaign business require very different selling motions and very different buyers than software solutions, and beyond simply finding who to sell to within the customer base, Bazaarvoice first needs to implement the right team. The company has taken initial steps towards this by hiring digital advertising veteran Liz Ritzcovan as Chief Revenue Officer and better segmenting how it prospects customers, but there is still the difficult task of building awareness of the product in a crowded market. Again, the company's first-party data is a key competitive advantage here, but we remain in "wait and see" mode before attaching hyper-growth rates to the advertising business.

On the other hand though, we think the bar is sufficiently low near-term that consistent improvement on the SaaS business and moderate beats on the

advertising business can drive stock outperformance. The stock has rallied on the back of good F1Q17 results, and we think current levels represent a good buying opportunity in light of the bottoming out of worsening unit economic trends and solid early metrics on the advertising business (>50% renewal rate and +114% increase in revenue per seller q/q).

A Quick Note on M&A Optionality

As mentioned, the company's data is an incredibly unique (and valuable) asset. Bazaarvoice effectively acts as the neutral third-party that helps a disparate group of retailers and brands, adjust to an increasingly digital world. However, the execution path is still fraught with potential pitfalls, notably in building out a net-new advertising organization under a software umbrella. In this context then – even in spite of any execution missteps – the company's ability to attract brand and retailer clients (and by extension their data) would make it an attractive acquisition target for larger software players looking to shore up (or outright establish) their own B2C efforts. We believe this M&A optionality offers crucial downside support in a stock that (as we mentioned earlier) has already travelled a rocky road since going public.

Financial Position

As of the company's most recent quarter end, Bazaarvoice has $92m in cash and $42m in debt. The company does currently operate at a loss, but we expect it to breakeven from both a P&L and FCF standpoint in the next twelve months. This – along with its net cash position – should mitigate any fears around potential liquidity issues. Overall, we see no material risks to the company's funding position.

Valuation

Our $8 price target assumes 3x our EV/FY18 Revenues estimate of $214m, in line with Street expectations. While this is a premium to where the stock currently trades (2x), and half a turn higher than the 2.5x average since IPO, we think a higher multiple is warranted as Bazaarvoice closes the chapter on its troubled start to life as a public company. Specifically, we think numbers will move higher as the fundamentals of the SaaS business improve, along with greater traction in the advertising business. Moreover, we think valuation is supported by M&A optionality on the name, particularly as interest from more traditional enterprise software companies piques for smaller, less-traditional, but data-rich sources of customer information. This includes Salesforce's (CRM, Buy, $100 PT, Analyst: Joel Fishbein) recent interest in Twitter (TWTR, Neutral; Analyst: Richard Greenfield) and Microsoft's (MSFT, Not Rated) acquisition of LinkedIn (LNKD, Not Rated).

Bazaarvoice BTIG Estimate Summary	Apr-17	Apr-18	Apr-19
($ in millions, except per share)	FY17 E	FY18 E	FY19 E
Revenue	$203.3	$214.2	$242.2
Billings	209.3	221.9	250.7
Operating income	2.3	5.3	9.2
EPS	(0.01)	0.04	0.09
FCF	(5.2)	10.3	12.8
Capex	12.0	12.9	14.5
Year over year growth			
Revenue	*1.8%*	*5.3%*	*13.1%*
Billings	*3.6*	*6.0*	*13.0*
Operating income	*nm*	*137.0*	*71.7*
EPS	*nm*	*nm*	*103.9*
FCF	*nm*	*nm*	*23.6*

Valuation Summary	FY17 E	FY18 E	FY19 E
EV/Revenues	1.7x	1.6x	1.4x
P/E	nm	114.8	56.3
P/E ex cash	nm	100.3	49.2
EV/FCF	nm	33.3	27.0

Source: BTIG, Company Filings.
Note: Market data as of 11/15/2016.

Risks

Bazaarvoice is recently emerging from a messy, government-mandated divestiture, and its new advertising strategy is not without risks. It requires different core competencies and go-to-market strategy than a traditional software business, and any miss on the expectations front (or failure to improve the SaaS business) would set the stock back. There is also added risk if the company's in-market SaaS solutions fail to achieve management's guidance of "mid- to high-single digits."

Bazaarvoice, Inc. Income Statement

Bazaarvoice Income Statement			Jul-15	Oct-15	Jan-16	Apr-16		Jul-16	Oct-16	Jan-17	Apr-17			
($ in millions except per share)	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 A	FY16 A	1Q17 A	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E	FY19 E
Non-GAAP Income Statement														
SaaS	$161.3	$182.1	$46.8	$47.7	$47.9	$49.1	$191.5	$47.8	$47.7	$48.4	$49.1	$192.9	$200.7	$212.7
Advertising	6.8	9.1	2.0	2.3	2.4	1.6	8.3	2.3	2.8	3.0	2.3	10.4	13.5	29.5
Total Revenue	**168.1**	**191.2**	**48.9**	**49.9**	**50.3**	**50.7**	**199.8**	**50.1**	**50.5**	**51.4**	**51.4**	**203.3**	**214.2**	**242.2**
Total cost of revenue	51.8	68.4	19.1	18.5	18.3	18.8	74.7	18.4	18.7	19.0	19.3	75.4	78.3	88.1
Gross profit (Non-GAAP)	**116.4**	**122.8**	**29.8**	**31.4**	**31.9**	**32.0**	**125.1**	**31.7**	**31.8**	**32.4**	**32.1**	**128.0**	**135.9**	**154.1**
Operating expenses (Non-GAAP)														
Sales and marketing	82.0	74.5	18.1	15.9	15.4	17.5	66.9	14.7	15.5	15.4	17.5	63.2	66.3	76.3
Research and development	34.8	35.6	9.9	9.6	9.4	9.6	38.5	10.0	9.7	9.7	9.9	39.4	40.6	43.4
General and administrative	24.8	26.1	6.5	5.9	5.2	5.8	23.4	6.3	5.8	5.2	5.8	23.2	23.6	25.3
Total operating expenses	141.6	136.1	34.5	31.3	30.1	32.9	128.8	31.0	31.1	30.4	33.2	125.7	130.5	145.0
Operating income (Non-GAAP)	**(25.2)**	**(13.3)**	**(4.7)**	**0.1**	**1.8**	**(0.9)**	**(3.7)**	**0.6**	**0.7**	**2.0**	**(1.1)**	**2.3**	**5.3**	**9.2**
(+) Depreciation + amortization	3.4	9.7	3.3	3.0	3.2	3.2	12.8	3.3	3.1	3.4	3.4	13.2	12.9	13.5
EBITDA	(21.8)	(3.6)	(1.3)	3.1	5.0	2.3	9.1	3.9	3.8	5.4	2.3	15.4	18.2	22.6
Interest income	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.6	0.6	0.6
Interest expense	(0.2)	(1.5)	(0.6)	(0.5)	(0.6)	(0.6)	(2.2)	(0.5)	(0.5)	(0.5)	(0.5)	(2.0)	(2.0)	(2.0)
Other income	(0.8)	(0.5)	(0.1)	0.1	(0.1)	0.9	0.9	(0.3)	(0.3)	(0.3)	(0.3)	(1.4)	-	-
Pretax income (Non-GAAP)	(26.0)	(15.2)	(5.2)	(0.2)	1.3	(0.4)	(4.6)	(0.1)	(0.0)	1.3	(1.7)	(0.5)	4.0	7.8
Provision for income taxes	(0.3)	0.1	(0.1)	0.1	(0.2)	0.2	0.0	0.1	0.1	0.1	0.1	0.6	0.4	0.4
Tax rate	1.0%	(0.4%)	1.7%	(50.6%)	(12.6%)	(41.5%)	(1.0%)	(276.0%)	(429.0%)	10.6%	(7.9%)	(105.0%)	10.1%	5.1%
Net income (Non-GAAP)	**($25.8)**	**($15.3)**	**($5.1)**	**($0.4)**	**$1.5**	**($0.6)**	**($4.6)**	**($0.2)**	**($0.2)**	**$1.2**	**($1.9)**	**($1.1)**	**$3.6**	**$7.4**
EPS (Non-GAAP)	**($0.34)**	**($0.19)**	**($0.06)**	**($0.00)**	**$0.02**	**($0.01)**	**($0.06)**	**($0.00)**	**($0.00)**	**$0.01**	**($0.02)**	**($0.01)**	**$0.04**	**$0.09**
Avg. Diluted Shares Outstanding	75.6	78.6	80.2	80.7	81.1	81.5	80.9	82.2	82.8	83.4	84.0	83.1	85.0	86.6

(1) Non-GAAP excludes: amortization, restructuring, impairments, and stock-based comp.

Income Statement Ratios														
Revenue Analysis:														
SaaS	95.9%	95.3%	95.8%	95.5%	95.3%	96.8%	95.9%	95.4%	94.5%	94.2%	95.5%	94.9%	93.7%	87.8%
Advertising	4.1%	4.7%	4.2%	4.5%	4.7%	3.2%	4.1%	4.6%	5.5%	5.8%	4.5%	5.1%	6.3%	12.2%
Expense Analysis:														
Cost of Revenues	30.8%	35.8%	39.0%	37.1%	36.5%	37.0%	37.4%	36.8%	37.0%	37.0%	37.5%	37.1%	36.6%	36.4%
Sales and marketing	48.8%	38.9%	37.0%	31.8%	30.7%	34.5%	33.5%	29.4%	30.8%	30.0%	34.0%	31.1%	31.0%	31.5%
Research and development	20.7%	18.6%	20.2%	19.1%	18.7%	19.0%	19.3%	20.0%	19.3%	18.9%	19.3%	19.4%	18.9%	17.9%
General and administrative	14.8%	13.6%	13.3%	11.8%	10.4%	11.4%	11.7%	12.6%	11.6%	10.2%	11.3%	11.4%	11.0%	10.4%
Total operating expenses	84.2%	71.2%	70.5%	62.7%	59.8%	64.9%	64.5%	62.0%	61.7%	59.1%	64.6%	61.8%	60.9%	59.8%
Depreciation + amortization	2.0%	5.1%	6.8%	6.1%	6.4%	6.4%	6.4%	6.5%	6.2%	6.6%	6.6%	6.5%	6.0%	5.6%
Margin Analysis (non-GAAP):														
Gross margin	69.2%	64.2%	61.0%	62.9%	63.5%	63.0%	62.6%	63.2%	63.0%	63.0%	62.5%	62.9%	63.4%	63.6%
Operating margin	**(15.0%)**	**(7.0%)**	**(9.6%)**	**0.1%**	**3.7%**	**(1.8%)**	**(1.9%)**	**1.3%**	**1.3%**	**3.9%**	**(2.1%)**	**1.1%**	**2.5%**	**3.8%**
EBITDA margin	(13.0%)	(1.9%)	(2.7%)	6.2%	10.0%	4.5%	4.6%	7.8%	7.6%	10.5%	4.5%	7.6%	8.5%	9.3%
Tax rate	1.0%	(0.4%)	1.7%	(50.6%)	(12.6%)	(41.5%)	(1.0%)	(276.0%)	(429.0%)	10.6%	(7.9%)	(105.0%)	10.1%	5.1%
Net margin	(15.3%)	(8.0%)	(10.5%)	(0.7%)	2.9%	(1.2%)	(2.3%)	(0.4%)	(0.3%)	2.3%	(3.7%)	(0.5%)	1.7%	3.0%
Q/Q growth rates:														
SaaS			*1.4%*	*1.8%*	*0.4%*	*2.6%*		*(2.7%)*	*(0.3%)*	*1.5%*	*1.5%*			
Advertising			*(4.6%)*	*10.2%*	*5.1%*	*(32.5%)*		*43.3%*	*22.1%*	*7.1%*	*(23.3%)*			
Total Revenue			*1.2%*	*2.1%*	*0.7%*	*0.9%*		*(1.2%)*	*0.8%*	*1.8%*	*0.1%*			
Gross Profit			*(2.2%)*	*5.3%*	*1.7%*	*0.1%*		*(0.9%)*	*0.4%*	*1.8%*	*(0.7%)*			
Research & Development			*(7.2%)*	*(12.3%)*	*(2.7%)*	*13.3%*		*(15.8%)*	*5.6%*	*(0.7%)*	*13.3%*			
Sales & Marketing			*6.7%*	*(3.4%)*	*(1.5%)*	*2.2%*		*4.1%*	*(2.7%)*	*(0.5%)*	*2.2%*			
General & Administrative			*1.3%*	*(9.2%)*	*(11.3%)*	*10.6%*		*8.7%*	*(7.1%)*	*(10.4%)*	*10.6%*			
Total Non-GAAP Operating Expenses			*(2.0%)*	*(9.2%)*	*(4.0%)*	*9.4%*		*(5.7%)*	*0.3%*	*(2.5%)*	*9.3%*			
Non-GAAP Operating Income			*(0.6%)*	*(101.5%)*	*2,613.2%*	*(150.8%)*		*(168.8%)*	*2.8%*	*201.9%*	*(152.7%)*			
Non-GAAP Net Income			*13.5%*	*(92.8%)*	*(493.8%)*	*(141.1%)*		*(68.5%)*	*(9.5%)*	*(786.5%)*	*(261.6%)*			
Y/Y growth rates:														
SaaS	*12.0%*	*12.9%*	*5.7%*	*5.5%*	*3.1%*	*6.4%*	*5.1%*	*2.1%*	-	*1.0%*	-	*0.8%*	*4.0%*	*6.0%*
Advertising	*151.0%*	*32.8%*	*23.8%*	*6.1%*	*(24.3%)*	*(25.3%)*	*(8.6%)*	*12.1%*	*24.2%*	*26.5%*	*43.7%*	*25.6%*	*29.9%*	*118.5%*
Total Revenue	*14.5%*	*13.7%*	*6.3%*	*5.5%*	*1.4%*	*5.0%*	*4.5%*	*2.5%*	*1.1%*	*2.2%*	*1.4%*	*1.8%*	*5.3%*	*13.1%*
Gross Profit	*16.2%*	*5.5%*	*(0.5%)*	*3.4%*	*(0.3%)*	*4.9%*	*1.9%*	*6.3%*	*1.3%*	*1.4%*	*0.5%*	*2.3%*	*6.2%*	*13.4%*
Sales and marketing	*17.0%*	*(9.2%)*	*(9.8%)*	*(10.7%)*	*(10.1%)*	*(10.2%)*	*(10.2%)*	*(18.6%)*	*(2.0%)*	-	-	*(5.5%)*	*5.0%*	*15.0%*
Research and development	*18.5%*	*2.3%*	*6.8%*	*7.7%*	*15.1%*	*3.8%*	*8.2%*	*1.3%*	*2.0%*	*3.0%*	*3.0%*	*2.3%*	*3.0%*	*7.0%*
General and administrative	*(2.1%)*	*5.0%*	*(6.2%)*	*(14.4%)*	*(10.3%)*	*(9.8%)*	*(10.2%)*	*(3.2%)*	*(1.0%)*	-	-	*(1.1%)*	*2.0%*	*7.0%*
Operating expenses	*13.5%*	*(3.9%)*	*(4.9%)*	*(6.6%)*	*(3.5%)*	*(6.4%)*	*(5.4%)*	*(10.0%)*	*(0.6%)*	*0.9%*	*0.9%*	*(2.4%)*	*3.8%*	*11.1%*
Non-GAAP Operating Income	*2.3%*	*(47.2%)*	*(25.9%)*	*(102.1%)*	*115.0%*	*(80.1%)*	*(72.2%)*	*(113.8%)*	*874.7%*	*8.5%*	*12.6%*	*(161.0%)*	*137.0%*	*71.7%*
Non-GAAP Net Income	*6.3%*	*(40.8%)*	*(22.8%)*	*(90.4%)*	*(745.8%)*	*(86.8%)*	*(69.5%)*	*(96.3%)*	*(53.9%)*	*(19.6%)*	*216.2%*	*(76.8%)*	*(429.8%)*	*107.7%*
Non-GAAP EPS	*(2.5%)*	*(43.1%)*	*(25.1%)*	*(90.7%)*	*(728.3%)*	*(87.1%)*	*(70.4%)*	*(96.4%)*	*(55.1%)*	*(21.8%)*	*206.7%*	*(77.4%)*	*(422.4%)*	*103.9%*

Source: BTIG, Company Filings.

Bazaarvoice, Inc. Balance Sheet

Bazaarvoice, Inc. Balance Sheet			Jul-15	Oct-15	Jan-16	Apr-16		Jul-16	Oct-16	Jan-17	Apr-17			
($ in millions except per share)	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 A	FY16 A	1Q17 A	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E	FY19 E
Assets														
Cash and Cash Equivalents	32.5	54.0	53.5	58.1	57.9	44.0	44.0	43.5	45.0	48.0	40.9	40.9	51.3	65.3
Short-term investments	40.7	52.7	49.7	51.9	51.0	50.7	50.7	48.3	48.3	48.3	48.3	48.3	48.3	48.3
Accounts receivable, net	39.1	49.5	50.5	37.5	39.1	39.6	39.6	38.0	38.7	40.3	48.6	48.6	51.5	58.2
Prepaid expenses and other current assets	42.0	13.0	8.5	7.6	9.0	8.8	8.8	9.0	7.7	9.2	14.8	14.8	16.9	20.3
Total Current Assets	154.3	169.3	162.1	155.1	157.0	143.0	143.0	138.8	139.6	145.8	152.6	152.6	168.0	192.1
Property and equipment, net	17.0	19.1	19.4	25.3	30.1	31.6	31.6	31.4	31.1	30.5	29.7	29.7	27.0	23.4
Goodwill	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2
Acquired intangible assets, net	13.4	11.5	11.0	10.6	10.1	9.6	9.6	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Other assets	3.4	4.7	4.3	4.8	4.7	5.2	5.2	4.2	4.4	4.6	4.8	4.8	5.6	6.4
Total Assets	327.3	343.7	336.0	335.0	341.1	328.7	328.7	322.7	323.3	329.1	335.5	335.5	348.8	370.1
Liabilities														
Accounts payable	3.3	3.5	3.1	7.5	5.6	6.1	6.1	3.5	7.6	5.8	4.2	4.2	4.5	5.0
Accrued expenses and other current liabilitie	27.1	27.4	24.1	21.3	22.8	22.8	22.8	19.2	21.5	23.3	29.1	29.1	31.1	35.1
Debt	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Deferred revenue	55.0	60.4	63.1	56.7	60.8	62.7	62.7	66.0	60.6	65.0	68.9	68.9	76.4	84.6
Other	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	116.0	91.3	90.3	85.6	89.2	91.6	91.6	88.8	89.7	94.2	102.3	102.3	111.9	124.7
Debt / revolving credit line	-	57.0	57.0	57.0	57.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0
Deferred revenue less current portion	1.7	2.5	2.3	2.3	2.4	2.5	2.5	2.2	2.0	2.2	2.3	2.3	2.5	2.8
Deferred tax liability, long-term	1.7	0.8	0.1	-	-	-	-	-	-	-	-	-	-	-
Other liabilities, long-term	1.4	0.6	0.6	3.7	5.8	7.3	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Total Liabilities	120.8	152.3	150.4	148.6	154.4	143.4	143.4	140.0	140.8	145.4	153.7	153.7	163.5	176.6
Stockholders' Equity	206.5	191.4	185.6	186.3	186.7	185.3	185.3	182.7	182.5	183.7	181.8	181.8	185.4	192.7
Total Liabilities + Stockholder's Equity	327.3	343.7	336.0	335.0	341.1	328.7	328.7	322.7	323.3	329.1	335.5	335.5	348.8	369.3
% Change Y/Y														
Cash and Cash Equivalents	(23.7%)	45.8%	10.8%	33.4%	3.9%	(11.4%)	(11.4%)	(11.0%)	(15.2%)	(11.6%)	(5.7%)	(5.7%)	11.6%	14.1%
Receivables	33.6%	26.7%	32.7%	(6.3%)	(29.9%)	(20.1%)	(20.1%)	(24.7%)	3.0%	3.0%	22.7%	22.7%	6.0%	13.0%
Deferred Revenue	(0.4%)	11.0%	10.9%	7.7%	(0.5%)	3.6%	3.6%	4.2%	6.0%	6.4%	9.2%	9.2%	10.8%	10.8%
Balance Sheet Summary														
Current Ratio	1.3x	1.9x	1.8x	1.8x	1.8x	1.6x	1.6x	1.6x	1.6x	1.5x	1.5x	1.5x	1.5x	1.5x
Book Value Per Share	$2.73	$2.43	$2.32	$2.31	$2.30	$2.27	$2.29	$2.22	$2.20	$2.20	$2.16	$2.19	$2.18	$2.23
Cash Per Share	0.97	1.36	1.29	1.36	1.34	1.16	1.17	1.12	1.13	1.15	1.06	1.07	1.17	1.31
Return On Equity (LTM)	(11.5%)	(7.7%)	(7.2%)	(5.4%)	(4.6%)	(2.5%)	(2.5%)	0.2%	0.3%	0.1%	(0.6%)	(0.6%)	1.9%	3.9%
Return on Assets (LTM)	(7.7%)	(4.5%)	(4.1%)	(3.0%)	(2.5%)	(1.4%)	(1.4%)	0.1%	0.2%	0.1%	(0.3%)	(0.3%)	1.0%	2.1%
Working Capital, net	$51	$32	$32	$16	$20	$19	$19	$24	$17	$20	$30	$30	$33	$38
Avg. Diluted Shares Outstanding	75.6	78.6	80.2	80.7	81.1	81.5	80.9	82.2	82.8	83.4	84.0	83.1	85.0	86.6
Model Assumptions														
DSO (Revenue)	84.9	94.6	94.3	68.6	71.0	71.3	72.3	69.3	69.9	71.5	86.2	87.2	87.8	87.7
DSO (Billings)	83.9	91.6	89.7	78.6	65.6	99.6	71.5	65.4	78.6	65.6	80.0	84.7	84.7	84.7
DPO	23.6	18.9	15.0	37.1	28.0	20.1	29.9	17.6	37.1	28.0	20.1	71.8	78.8	84.2
Prepaid expenses as a % of revenues	25.0%	6.8%	4.3%	3.8%	4.5%	7.2%	4.4%	4.5%	3.8%	4.5%	7.2%	7.3%	7.9%	8.4%
Accrued liabilities as a % of revenues	16.1%	14.3%	12.3%	10.7%	11.3%	14.2%	11.4%	9.6%	10.7%	11.3%	14.2%	14.3%	14.5%	14.5%

Source: BTIG, Company Filings.

Bazaarvoice, Inc. Cash Flow Statement

Bazaarvoice, Inc. Cash Flow			Jul-15	Oct-15	Jan-16	Apr-16		Jul-16	Oct-16	Jan-17	Apr-17			
($ in millions except per share)	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 A	FY16 A	1Q17 A	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E	FY19 E
Cash flows from operations:														
Net income	($63.2)	($34.4)	($10.2)	($4.9)	($3.1)	($6.4)	($24.6)	($5.1)	($0.2)	$1.2	($1.9)	($6.0)	$3.6	$7.4
Depreciation and amortization	15.1	12.5	3.6	3.3	3.5	3.6	14.1	3.6	3.4	3.7	3.8	14.5	15.6	17.8
Share-based compensation	14.5	12.7	4.0	3.9	3.9	3.5	15.4	3.9	-	-	-	3.9	-	-
Bad debt expense	1.9	3.2	0.1	(0.0)	(0.3)	0.4	0.1	(0.2)	-	-	-	(0.2)	-	-
Excess tax benefit from share-based comp	(0.2)	(0.0)	-	-	-	-	-	-	-	-	-	-	-	-
Amortization of deferred financing costs	-	0.1	0.1	0.1	0.1	0.1	0.2	0.1	-	-	-	0.1	-	-
Other	8.7	1.7	0.1	(0.0)	0.0	0.5	0.6	(0.0)	-	-	-	(0.0)	-	-
Changes in operating assets and liabilities:														
Accounts receivable, net	(12.1)	(13.6)	(1.1)	13.0	(1.2)	(0.9)	9.8	1.7	(0.6)	(1.6)	(8.3)	(8.8)	(2.9)	(6.7)
Prepaid expenses and other current assets	(1.6)	(0.2)	(0.0)	1.0	(1.5)	0.3	(0.2)	(0.5)	1.3	(1.6)	(5.6)	(6.4)	(2.1)	(3.4)
Other non-current assets	(1.6)	(0.2)	(0.3)	(0.6)	(0.0)	(0.6)	(1.5)	0.9	(0.2)	(0.2)	(0.2)	0.3	(0.8)	(0.8)
Accounts payable	(3.1)	(0.3)	(0.8)	3.0	(0.4)	0.6	2.4	(2.6)	4.0	(1.8)	(1.6)	(1.9)	0.2	0.6
Accrued expenses and other current liabilities	(2.6)	(1.2)	(4.2)	(1.8)	0.9	0.3	(4.8)	(4.4)	2.3	1.8	5.8	5.5	1.9	4.0
Deferred revenue	2.0	6.3	2.5	(6.3)	4.1	2.1	2.3	3.0	(5.6)	4.6	4.0	6.0	7.7	8.5
Other liabilities, long-term	(1.5)	(2.6)	0.0	3.0	2.1	1.2	6.2	(0.2)	-	-	-	(0.2)	-	-
Net cash from operations	**(43.7)**	**(16.1)**	**(6.3)**	**13.6**	**8.0**	**4.7**	**20.0**	**0.1**	**4.5**	**6.1**	**(3.9)**	**6.8**	**23.2**	**27.3**
Investing activities														
Purchases of PP&E and internal-use software dev costs	(10.7)	(11.9)	(3.0)	(7.4)	(9.3)	(4.5)	(24.3)	(2.8)	(3.0)	(3.1)	(3.1)	(12.0)	(12.9)	(14.5)
Purchase of short-term investments	(60.1)	(82.8)	(15.2)	(24.7)	(13.6)	(8.4)	(61.8)	(12.7)	-	-	-	(12.7)	-	-
Proceeds from maturities of investments	58.5	65.7	18.2	22.3	14.5	8.6	63.7	15.0				15.0	-	-
Proceeds from sale of short-term investments	31.3	5.0	-	-	-	-	-	-				-	-	-
Acquisitions / disposals of assets	(9.6)	25.5	4.5	-	-	-	4.5	-	-	-	-	-	-	-
Other	-	0.5	-	-	-	-	-	-				-	-	-
Net cash from investing	**9.4**	**2.0**	**4.5**	**(9.8)**	**(8.4)**	**(4.2)**	**(18.0)**	**(0.4)**	**(3.0)**	**(3.1)**	**(3.1)**	**(9.6)**	**(12.9)**	**(14.5)**
Financing Activities														
Proceeds from equity offerings	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds from employee stock comp plans	13.5	7.5	1.1	1.0	0.7	0.3	3.0	0.4	-	-	-	0.4	-	-
Proceeds from debt	27.0	57.0	-	-	-	-	-	-	-	-	-	-	-	-
Repayment of debt	-	(27.0)	-	-	-	(15.0)	(15.0)	-	-	-	-	-	-	-
Excess tax benefit related to stock-based comp	0.2	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	(0.7)	-	-	-	-	-	-	-	-	-	-	-	-
Net cash from financings	**40.7**	**36.8**	**1.1**	**1.0**	**0.7**	**(14.8)**	**(12.0)**	**0.4**	**-**	**-**	**-**	**0.4**	**-**	**-**
Effect of exchange rate fluctuations	0.4	(0.7)	0.1	(0.2)	(0.4)	0.3	(0.2)	(0.5)	-	-	-	(0.5)	-	-
Net increase / decrease in cash	**$6.9**	**$22.1**	**($0.6)**	**$4.6**	**($0.1)**	**($14.0)**	**($10.1)**	**($0.5)**	**$1.4**	**$3.0**	**($7.0)**	**($3.0)**	**$10.3**	**$12.8**
Free Cash Flow	**($54.3)**	**($28.0)**	**($9.3)**	**$6.2**	**($1.3)**	**$0.2**	**($4.3)**	**($2.6)**	**$1.4**	**$3.0**	**($7.0)**	**($5.2)**	**$10.3**	**$12.8**
as a % of revenue	(32.3%)	(14.6%)	(19.0%)	12.3%	(2.6%)	0.4%	(2.1%)	(5.3%)	2.9%	5.9%	(13.7%)	(2.6%)	4.8%	5.3%
as a % of billings	(31.9%)	(14.2%)	(18.1%)	14.1%	(2.4%)	0.4%	(2.1%)	(5.0%)	3.2%	5.4%	(12.7%)	(2.5%)	4.7%	5.1%
q/q % change			nm	nm	nm	nm		nm	nm	109.3%	nm			
y/y % change	nm	nm	nm	nm	nm	(23.7%)	nm	nm	(76.6%)	nm	nm	nm	nm	23.6%

Source: BTIG, Company Filings.

BTIG

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BTIG

Equity Research

November 16, 2016

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Adobe Systems, Inc.

Are You Experienced? Initiating at Neutral

Adobe clearly looks to be one of the best positioned software companies as the world of marketing and commerce shifts from product-focused to experience-focused. The company is at the forefront of helping large enterprises manage their digital transformations via an end-to-end, closed-loop content creation and marketing platform. Moreover, Adobe should remain a key part of the conversation as the amount of digital content we consume continues exploding at a rapid pace. However, enthusiasm abounds around the company's well-managed transition to a subscription revenue base and compelling margin profile. Any upside form here looks priced in, and we'd wait for a pullback before becoming positive on the shares. Initiate at Neutral.

- **Building a platform, but still highly depend on one offering.** Despite the enthusiasm – and strong secular tailwinds – around the Digital Marketing business, Adobe is still a content creation offering at its core. The company wants to leverage its leadership here to build a closed-loop, end-to-end platform where customers can create, manage, market and analyze all of their digital content. However, the Digital Media business still comprises >60% of revenues, and growth is decelerating into the ~20% range. We need to see evidence that the company can deliver Digital Media results well above Street expectations in order to unlock sufficient EPS expansion to drive the stock higher from current levels.

- **Competition intensifying despite strong mind- and market share.** With digital advertising spending set to become the first $100bn advertising category over the next 4-5 years, competition is heating up in the marketing software landscape. Adobe is currently the leader in the space (and continues to gain share), but several more traditional vendors and innovative private companies are entering the fray.

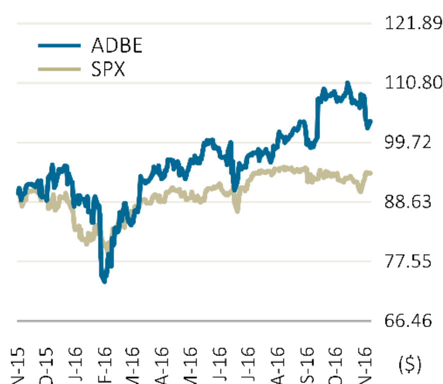
- **Valuation:** We rate Adobe Neutral based on a 50/50 blend of our 10-year DCF analysis – which assumes a 15% revenue CAGR and 16% FCF CAGR – and 26x our FY17 EPS estimate of $3.80

ADBE $103.66

NEUTRAL

52 week range	$73.85 - $110.81
Market Cap (m)	$52,210

Price Performance



Source: IDC. Market dat as of 11/15/2016.

Estimates

	1Q16 A	2Q16 A	3Q16 A	4Q16 A	FY16 A	1Q17 A	2Q17 A	3Q17 A	4Q17 E	FY17 E	FY18 E
Sales	1,383	1,399	1,464	1,606	5,852	1,659	1,684	1,797	1,934	7,074	8,387
Diluted EPS (GAAP)	0.66	0.70	0.75	0.86	2.97	0.85	0.89	0.98	1.09	3.80	4.81
FCF	451	435	463	560	1,909	612	526	541	656	2,335	2,890
EV/Sales (x)	-	-	-	-	8.49	-	-	-	-	7.02	5.92
P/FCF (x)	-	-	-	-	26.02	-	-	-	-	21.28	17.19

Source: BTIG Estimates and Company Documents ($ in millions, except per share amount)

Adjusted EPS excludes stock-based comp, amortization and acquisition related costs.

Please Read: Important disclosures and analyst's certification appear in Appendix

Company Description

Adobe Systems, Inc. provides digital marketing and digital media solutions. The company operates its business through three segments: Digital Media, Digital Marketing, and Print and Publishing. The Digital Media segment offers creative cloud services, which allow members to download and install the latest versions of products, such as Adobe Photoshop, Adobe Illustrator, Adobe Premiere Pro, Adobe Photoshop Lightroom and Adobe InDesign, as well as utilize other tools, such as Adobe Acrobat. The Digital Marketing segment offers various solutions, including analytics, social marketing, targeting, media optimization, digital experience management and cross-channel campaign management, as well as premium video delivery and monetization. The Print and Publishing segment offers legacy products and services for eLearning solutions, technical document publishing, web application development and high-end printing. Adobe Systems was founded in December 1982 and is headquartered in San Jose, CA.

Investment Thesis

Adobe clearly looks to be one of the best positioned software companies as the world of marketing and commerce shifts from product-focused to experience-focused. The company is at the forefront of helping large enterprises manage their digital transformations via an end-to-end, closed-loop content creation and marketing platform. Moreover, Adobe should remain a key part of the conversation as the amount of digital content we consume continues exploding at a rapid pace (reflected in the wave of digital advertising spending we alluded to in our industry note).

This is clearly favorable from a business standpoint, but from a stock perspective, it looks like the rest of the Street has already caught on. On the Digital Media side, expectations are high that the company can continue converting its fixed license install base at a steady pace (~7 million users), while still expanding the overall addressable market via new user acquisition. However, we still see revenue growth peaking in FY16, even if the company continues adding ~$1bn in annual recurring revenue (ARR). From a Digital Marketing perspective, consistent revenue growth of ~20% y/y is expected to converge with bookings growth of 30% y/y over the next few years, but it will still remain less than half the size of the Digital Media business. As a result, despite the massive market opportunity ahead, the mix of revenue will contribute to revenue deceleration from current levels.

On the other hand, margins should remain healthy over this time frame (high-30s), supporting strong EPS growth. And while we concede that it's tough to find another enterprise software company that is expected to ~25% EPS growth over the next few years, the euphoria already looks priced in. As a result, we'd look for a pullback in shares before putting new money to work at current levels.

We rate Adobe Neutral based on a 50/50 blend of our 10-year DCF analysis – which assumes a 15% revenue CAGR and 16% FCF CAGR – and 26x our FY17 EPS estimate of $3.80.

Helping Large Enterprises Navigate the New Reality

Adobe has a long list of enterprise customers, and is at the forefront of helping them manage their transitions into the digitally-based "experience economy." As an example, we point to the top 10 digitally-native brands we called out in our industry note. Traditional retail commerce was based on linear television marketing and selling products in brick and mortar environments with high foot traffic. However, the flexibility (and cost-effective nature) of the digital canvas has enabled each of these digitally-native brands to paint themselves as "lifestyle choices," (rather than simple product vendors) complete with their own image and storytelling rather than simple product vendors. They supplement consideration of their product with images and stories about "ambassadors" of their brand that potential consumers can identify with, thereby prompting higher engagement and conversion.

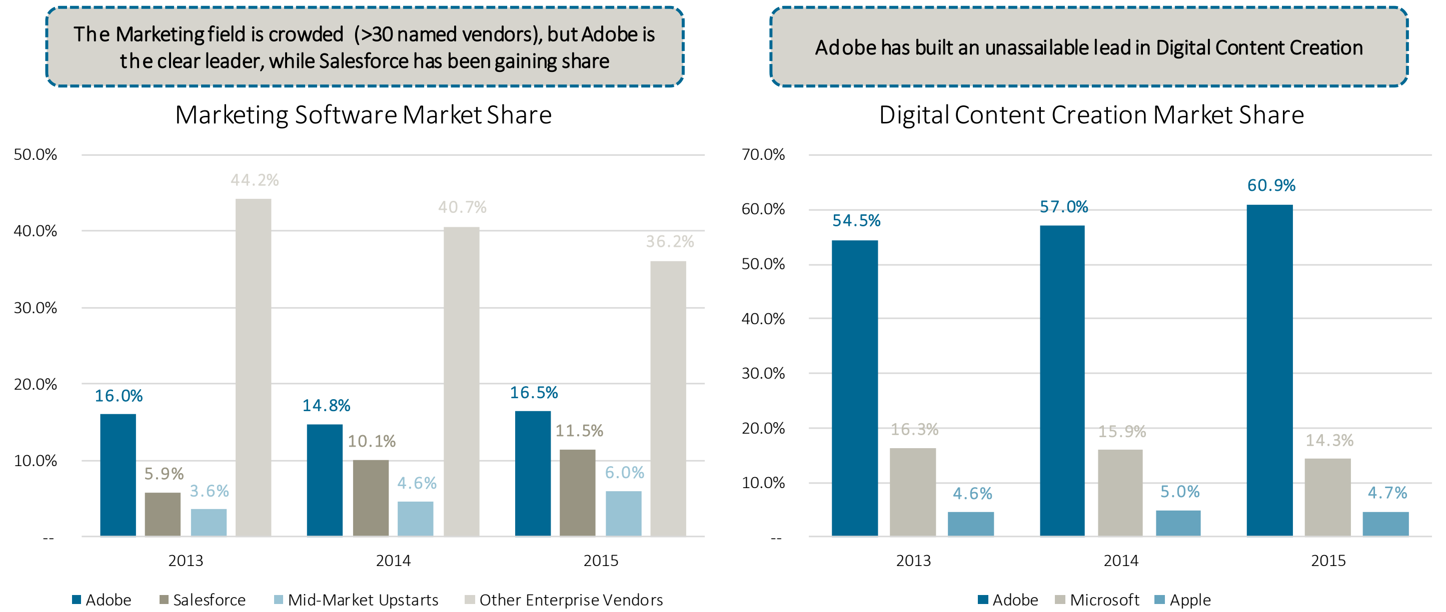
Digital commerce and marketing are defined by the breaking down of these traditional borders between brands and consumers (i.e. the circumvention of the traditional retail distribution model); our smartphones and the ubiquity of the internet enable these companies to reach us whenever and wherever we are. Digital-native brands take advantage of this new reality to be – in the words of Andy Dunn, the founder of Bonobos (Private) – "maniacally focused on customer experience and customer intimacy. The experience tends to be a three-part bundle of physical product, web/mobile experience and customer service that collectively become the brand in the consumer's imagination."

By virtue of their status as incumbents, large brands and retailers face the challenge of adapting to this new reality, and need the right tools to do so. Just as Salesforce (CRM, Buy, $100 PT; Analyst: Joel Fishbein) leverages its core CRM technology to help its primarily B2B customers manage every aspect of the customer journey, so too does Adobe use its digital content creation and marketing platform in an attempt to provide a unified view of the customer in primarily B2C contexts.

The company's strong product offering clearly resonates with large customers, and Adobe has translated its substantial mindshare into leading market positions in both Marketing and Digital Content Creation. Moreover, it's continued to gain share in digital marketing despite the recent hype around the long term opportunity, which has attracted a host of private competitors, not to mention a formidable challenge from Salesforce via its acquisition of ExactTarget.

This market share analysis also highlights the platform-focused strategy that both Adobe and Salesforce are pursuing. The former's strategy is based on owning the content, and leveraging this ownership to also be the platform for its usage via its Marketing Cloud. On the other hand, the latter is taking a much more "traditional" enterprise software approach by cross-selling new products/services to its core customer base. Specifically, through its acquisitions of ExactTarget and Demandware, Salesforce has expanded its mandate as a "customer experience" company to include marketing and selling, and is attempting to combine its core sales and service functionality with integrated marketing and commerce offerings. More simply put, Adobe owns the *content*, but Salesforce owns the *customer*.

Figure 1: Adobe Has a Strong Position in the Competitive Marketing Field to Match its Leadership in Digital Content Creation



Source: BTIG, Gartner.
Note: Mid-Market Upstarts include Marketo and HubSpot. Other Enterprise Vendors include IBM, SAP, SAS Institute, Oracle and Microsoft.

It's still too early to tell which company will be the long term winner in the space (although Adobe's lead certainly helps). However, we do expect both companies – along with some of the Top 10 Private Software Vendors to Watch from our industry note – to continue taking share, particularly from other enterprise-focused incumbents. We anticipate that Adobe can continue to grow faster than the overall market and achieve sustained 25-30% y/y revenue growth over the next few years (the company already sees bookings growth of ~30% y/y).

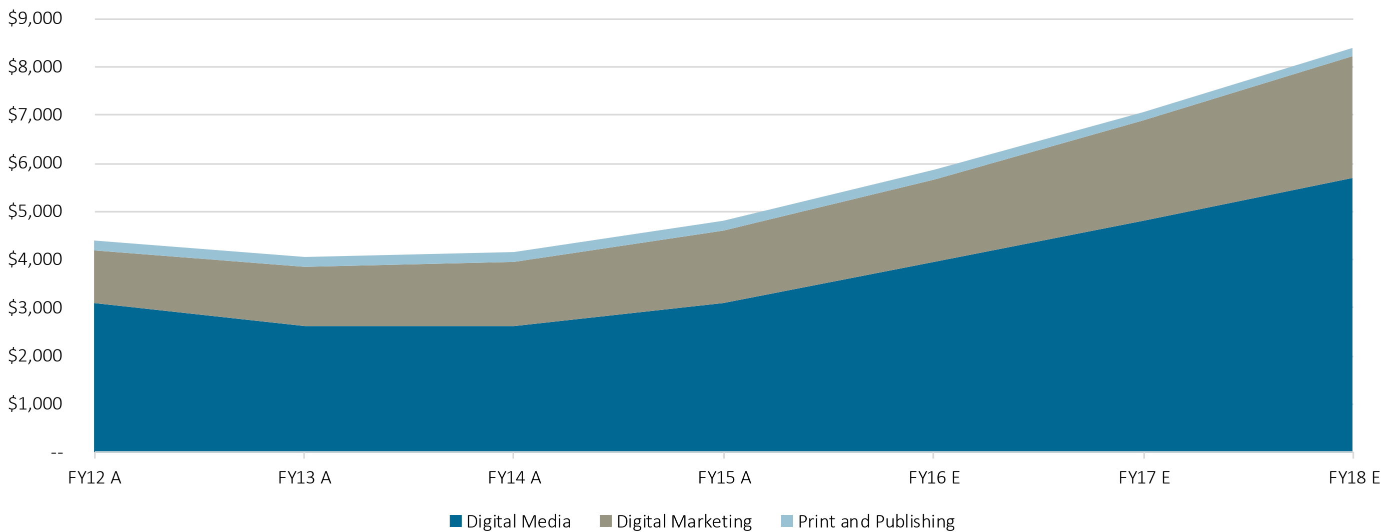
Marketing Growth Accretive to the Base, But Adobe Still Largely a Content Creation Business

Despite the strong underlying performance expected in the Digital Marketing segment, Adobe is still largely dependent on its Digital Media (Creative + Document) business, which comprises two-thirds of the revenue base. And while growth here has been a bright spot for the company (revenue growth accelerated from ~19% in FY15 to ~27% projected in FY16), we expect a "law of large numbers" effect to cause deceleration from here. And in light of the large revenue imbalance between the two businesses, any slowdown in the Digital Media segment acts as an anchor on the consolidated growth of the company, regardless of how well the Digital Marketing business performs.

This dynamic plays out in our estimates (which are in line with the Street); despite Digital Marketing's steady climb towards 30% y/y revenue growth (in line with current bookings growth) over the next few years, it should still only constitute ~35-40% of revenues. This places greater emphasis for outsized growth in the Digital Media segment to drive longer term consolidated revenue growth >20% y/y.

The company still has a migration opportunity of ~7m Creative Suite licenses, so there is likely some conservatism baked into management's guidance of ~20% y/y Digital Media revenue growth in FY17. To approximate the scope of this opportunity (and to account for the fact that ~35% of Creative Cloud customers are net-new to Adobe), we assume that the company continues to add ~$1 billion annually in overall Digital Media ARR (~$900m annually in Creative ARR). This analysis though reveals the myriad moving parts at play in the company, as much of the new ARR and subscription revenue growth in the Creative business is actually offset by declines in the Document business. And despite only being ~20% of Digital Media revenues, this part of the company is undergoing its own transition from product to subscription based pricing, albeit a much slower rate than the Creative business.

Figure 2: Adobe's Consolidated Growth is Highly Levered to the Success of the Digital Media Business



Revenues	FY12 A	FY13 A	FY14 A	FY15 A	FY16 E	FY17 E	FY18 E	CAGR '12-'15	CAGR '15-'18E	CAGR '12-'18E
Digital Media	$3,102	$2,626	$2,603	$3,095	$3,936	$4,818	$5,702	(0.1%)	22.6%	10.7%
Digital Marketing	1,085	1,229	1,355	1,509	1,738	2,088	2,517	11.6	18.6	15.1
Print and Publishing	217	201	189	191	178	169	168	(4.1)	(4.3)	(4.2)
Total	4,404	4,055	4,147	4,796	5,852	7,074	8,387	(0.1)	22.6	11.3
Y/Y Growth										
Digital Media		(15.3%)	(0.9%)	18.9%	27.2%	22.4%	18.4%			
Digital Marketing		13.3	10.3	11.3	15.2	20.1	20.6			
Print and Publishing		(7.5)	(5.9)	1.4	(7.0)	(5.0)	(0.7)			
Total		(7.9)	2.3	15.6	22.0	20.9	18.6			
Revenue Contribution										
Digital Media	70.4%	64.8%	62.8%	64.5%	67.3%	68.1%	68.0%			
Digital Marketing	24.6	30.3	32.7	31.5	29.7	29.5	30.0			
Print and Publishing	4.9	4.9	4.6	4.0	3.0	2.4	2.0			
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0			

Despite strong blended performance for Digital Media, the growth rate peaks in FY16...

Consolidated growth still highly levered to Digital Media, contribution unchanged

Source: BTIG, Company Filings.

But what about ARPU expansion? Much has been made of the additional services that Adobe layers onto its Creative Cloud subscriptions (specifically around Adobe Stock and Typekit marketplaces), as well as potential market

expansion into net-new use cases such as photographers and consumers. However, despite being on course for an >100% ARR CAGR from FY12 to FY16, ARR per average subscriber has actually *declined* for the past 10 consecutive quarters. This suggests that much of the "easy" growth (i.e. migration of the most valuable customers) has already occurred, and that future migrations – while adding to the overall ARR base – will do so at potentially lower price points. As a counter to this the company claims that the initial ARR does include discounted pricing, so there will be a natural "lift" when customers renew their subscriptions. However, at a high level, we are hesitant to say this will provide a substantial enough boost to overall Digital Media growth near term as the Marketing business continues to scale.

We believe that Digital Media revenues *must grow >25% y/y in FY17 and >20% in* FY18 in order to become more positive on the stock. We contend that both of these conditions are necessary, as only growing above 20% in FY18 would fail to yield enough upside based on our 26x P/E multiple (discounted back at a 12% WACC). Of course this analysis assumes that this potential revenue outperformance is not matched by any extraordinary margin gains via operating leverage, but we think this is reasonable given the company is already through its 35% operating margin target and has committed to investing further.

Figure 3: Potential Scenarios Where Adobe Stock Looks Attractive – Though We Believe Assumptions Are a Stretch

FY17				FY18				
Creative Cloud Rev Growth	Digital Media Rev Growth	EPS	Implied Price @ 26x	Creative Cloud Rev Growth	Digital Media Rev Growth	EPS	Implied Price @ 26x	Discounted @ 12%
32.0%	24.4%	$3.86	$100.37	26.0%	21.6%	$5.07	$131.70	$117.59
33.0	25.2	3.88	100.95	27.0	22.4	5.10	132.48	118.29
34.0	26.0	3.90	101.52	28.0	23.3	5.13	133.27	118.99
35.0	26.8	3.93	102.09	29.0	24.1	5.16	134.05	119.69
36.0	27.6	3.95	102.67	30.0	25.0	5.19	134.84	120.39

Source: BTIG, Company Filings.

The sensitivity above yields a very simple conclusion about investing in Adobe at current levels: in order to hit the minimum threshold for sufficient upside, investors need to believe the company can achieve well in excess of $5 in EPS in FY18, representing at least 30% EPS growth y/y for both FY17 and FY18.

Financial Condition

As of its most recent quarter end, Adobe has $4.4 billion in cash and short term investments and $1.9 billion in debt. From a leverage perspective, the company has a 1.2x Debt/LTM EBITDA ratio (on a GAAP basis), due to the company's strong margin profile. We see no material risks to the company's liquidity/funding position.

Valuation

Despite our hesitance on the plausibility of the above scenarios, we still like the company's fundamentals. Adobe is in rarefied air with respect to enterprise software investment opportunities, as not many companies feature strong secular tailwinds, ~20% revenue growth on a base of >$5 billion in revenue, category leading margins (we estimate ~35% in FY17) and mid-20s EPS growth. However, the stock looks fully valued in light of these lofty growth expectations. We'd look for a pullback in shares before becoming more positive on the name, although conversely will be watching for any signs of better than expected revenue growth on both the Digital Media and Digital Marketing fronts.

We rate Adobe Neutral based on a 50/50 blend of our 10-year DCF analysis – which assumes a 15% revenue CAGR and 16% FCF CAGR – and 26x our FY17 EPS estimate of $3.80.

Adobe BTIG Est. Summary	Nov-17	Nov-18	Nov-19
($ in millions, except per share)	FY17 E	FY18 E	FY19 E
Revenue	$7,074	$8,387	$9,776
Billings	7,669	9,110	10,557
Operating income	2,459	3,086	3,799
EPS	3.80	4.81	5.92
FCF	2,335	2,890	3,484
Capex	318.4	377.4	439.9
Year over year growth			
Revenue	*20.9%*	*18.6%*	*16.6%*
Billings	*20.7*	*18.8*	*15.9*
Operating income	*26.3*	*25.5*	*23.1*
EPS	*27.9*	*26.5*	*23.1*
FCF	*22.7*	*24.2*	*20.3*

Valuation Summary	FY17 E	FY18 E	FY19 E
EV/Revenues	7.0x	5.9x	5.1x
P/E	27.3	21.6	17.5
P/E ex cash	26.0	20.5	16.7
EV/FCF	21.3	17.2	14.3

Source: BTIG, Company Filings.
Note: Market data as of 11/15/2016.

Risks

A high growth stock comes with lofty expectations. If the company fails to add new ARR at a level consistent with Street expectations, we could see a pullback. Similarly, the company is investing for the opportunity ahead, so any miss on revenues would magnify the potential impact to margins. Adobe's core large enterprise customers are undergoing digital transformations, but competition is also heating up in its core Marketing Cloud product.

Figure 5: DCF Analysis ($mm)

Adobe DCF	Nov-16	Nov-17	Nov-18	Nov-19	Nov-20	Nov-21	Nov-22	Nov-23	Nov-24	Nov-25		
($in millions)	FY16 E	FY17 E	FY18 E	FY19 E	FY20 E	FY21 E	FY22 E	FY23 E	FY24 E	FY25 E	TV	CAGR
Revenues	$5,852	$7,074	$8,387	$9,776	$11,298	$12,943	$14,699	$16,610	$18,769	$21,209	$23,966	15.4%
y/y % change	22.0%	20.9%	18.6%	16.6%	15.6%	14.6%	13.6%	13.0%	13.0%	13.0%	13.0%	
EBIT	$1,947	$2,459	$3,086	$3,799	$4,519	$5,177	$5,880	$6,644	$7,508	$8,484	$9,587	17.8%
EBIT Margin	33.3%	34.8%	36.8%	38.9%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	
Taxed EBIT	$1,538	$1,942	$2,438	$3,002	$3,570	$4,090	$4,645	$5,249	$5,931	$6,702	$7,573	
Depreciation	338	345	349	353	408	467	531	600	678	766	865	
CapEx	(219)	(318)	(377)	(440)	(497)	(570)	(647)	(714)	(807)	(912)	(1,007)	
Change in Working Capital	266	492	632	749	753	797	832	857	875	883	877	
Free Cash Flow	$1,923	$2,461	$3,041	$3,664	$4,234	$4,785	$5,361	$5,992	$6,677	$7,439	$8,310	16.2%
y/y % change		28.0%	23.6%	20.5%	15.6%	13.0%	12.0%	11.8%	11.4%	11.4%	24.5%	
Discounted FCF	$1,717	$1,962	$2,165	$2,328	$2,402	$2,424	$2,425	$2,420	$2,408	$2,395		

Cumulative cash flow	$22,646	37%
Terminal Value	38,221	63%
Total DCF value	60,868	100%
Debt	1,917	
Cash	4,446	
Market Value of Equity	63,397	
Shares Outstanding	504.7	
Share Price	$125.61	
Current Price	$103.66	
upside/(downside)	21%	

Tax Rate	21.0%
WACC	12.0%
Cash Flow Multiple	16.0x

WACC	Cash Flow Multiple					
	14.0x	15.0x	16.0x	17.0x	18.0x	19.0x
8%	$159.4	$166.5	$173.6	$180.6	$187.7	$194.7
9%	146.9	153.3	159.7	166.1	172.4	178.8
10%	135.6	141.4	147.2	152.9	158.7	164.5
11%	125.4	130.6	135.8	141.1	146.3	151.5
12%	116.1	120.9	125.6	130.3	135.1	139.8
13%	107.8	112.0	116.3	120.6	124.9	129.2

WACC:	
Risk Free rate	4.0%
Risk Premium	6.0%
Beta	1.50
Cost of equity	13.0%
Cost of debt	1.8%
BV Debt/Total Market Capitaliza	3.0%
MV Equity/Total Market Capitali	97.0%
After-Tax Cost of Debt	1.4%
WACC	12.6%

@ PT	FY17 E	FY18 E
Sales	$7,074	$8,387
FCFE	2,335	2,890
EPS	3.80	4.81
EV/Sales	8.6x	7.3x
EV/FCFE	26.1x	21.1x
P/E	33.0x	26.1x

Terminal Value, undiscounted	$132,955
Implied Terminal FCF growth	6.0%
Terminal Cash Flow Multiple	16.0x
Terminal Year EBITDA multiple	12.7x

Source: BTIG, Factset.
Note: Market data as of 11/15/2016.

Adobe Systems, Inc. Income Statement

Adobe Income Statement				Feb-16	May-16	Aug-16	Nov-16		Feb-17	May-17	Aug-17	Nov-17		
($ in millions)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Non-GAAP Income Statement														
Subscriptions	$1,137.9	$2,076.6	$3,223.9	$1,070.3	$1,083.7	$1,168.6	$1,238.9	$4,561.5	$1,432.9	$1,449.1	$1,534.0	$1,595.7	$6,011.7	$7,426.6
Product	2,470.1	1,627.8	1,125.1	201.1	196.5	181.0	249.0	827.5	110.5	111.6	143.3	214.7	580.2	452.6
Services and support	447.3	442.7	446.5	112.0	118.5	114.4	117.9	462.8	115.3	123.2	120.1	123.8	482.5	507.9
Total Revenue	**4,055.2**	**4,147.1**	**4,795.5**	**1,383.3**	**1,398.7**	**1,464.0**	**1,605.8**	**5,851.8**	**1,658.7**	**1,684.0**	**1,797.5**	**1,934.2**	**7,074.4**	**8,387.1**
Cost of subscriptions	271.4	327.8	401.4	105.1	113.2	114.8	123.9	457.0	126.4	136.9	135.4	143.6	542.3	632.8
Cost of product	45.1	27.2	11.2	5.0	2.4	2.8	5.0	15.2	3.3	1.9	3.0	5.4	13.6	15.0
Cost of services and support	156.6	179.1	233.9	67.7	67.8	67.4	71.3	274.2	70.9	71.7	72.0	76.1	290.7	311.1
Cost of Revenues	473.1	534.1	646.5	177.8	183.4	185.1	200.2	746.5	200.6	210.5	210.4	225.1	846.6	958.9
Non-GAAP Gross Profit	**3,582.1**	**3,613.0**	**4,149.0**	**1,205.5**	**1,215.4**	**1,278.9**	**1,405.6**	**5,105.4**	**1,458.2**	**1,473.5**	**1,587.1**	**1,709.1**	**6,227.9**	**7,428.2**
Non-GAAP Operating Expenses														
R&D	695.5	717.7	739.7	201.2	203.1	217.0	228.0	849.4	235.5	235.8	248.1	261.1	980.5	1,120.4
Sales & Marketing	1,501.3	1,551.0	1,552.8	441.0	430.4	445.3	481.7	1,798.4	522.5	522.0	557.2	589.9	2,191.7	2,535.4
General & Administrative	451.7	470.3	460.6	127.0	120.2	125.4	138.1	510.6	146.0	141.5	151.0	158.6	597.0	686.8
Total Non-GAAP Operating Expenses	**2,648.5**	**2,739.1**	**2,753.0**	**769.2**	**753.7**	**787.7**	847.9	3,158.4	904.0	899.3	956.3	1,009.7	3,769.2	4,342.6
Non-GAAP Operating Income	**933.6**	**873.9**	**1,396.0**	**436.4**	**461.7**	**491.2**	**557.7**	**1,947.0**	**554.2**	**574.2**	**630.8**	**699.5**	**2,458.7**	**3,085.6**
(+) Depreciation & Amortization	*321.2*	*313.6*	*339.5*	*81.2*	*84.5*	*84.0*	*88.4*	*338.0*	*82.2*	*86.5*	*86.0*	*90.4*	*345.0*	*349.0*
Non-GAAP EBITDA	**1,254.8**	**1,187.5**	**1,735.4**	**517.6**	**546.2**	**575.2**	646.1	2,285.0	636.4	660.7	716.9	789.8	2,803.7	3,434.6
Interest expense	(67.5)	(59.7)	(64.2)	(18.5)	(17.2)	(17.3)	(17.3)	(70.2)	(17.3)	(17.3)	(17.3)	(17.3)	(69.1)	(69.1)
Interest income	4.9	7.3	33.9	4.2	6.1	2.7	8.0	21.0	8.0	8.0	8.0	8.0	32.0	32.0
Other income, net	-	-	(21.2)	-	-	-	-	-	-	-	-	-	-	-
Non-GAAP Earnings Bef.Taxes	**871.1**	**821.4**	**1,344.5**	**422.1**	**450.6**	**476.6**	548.5	1,897.7	544.9	564.9	621.6	690.2	2,421.6	3,048.5
Provision for Income Taxes	183.1	165.0	290.1	88.4	95.0	100.1	115.2	398.7	114.5	118.7	130.6	145.0	508.7	640.4
Non-GAAP Tax Rate	*21.0%*	*20.1%*	*21.6%*	*20.9%*	*21.1%*	*21.0%*	*21.0%*	*21.0%*	*21.0%*	*21.0%*	*21.0%*	*21.0%*	*21.0%*	*21.0%*
Non-GAAP Net Income [1]	**$688.0**	**$656.4**	**$1,054.5**	**$333.7**	**$355.6**	**$376.5**	**$433.3**	**$1,499.1**	**$430.4**	**$446.3**	**$491.0**	**$545.2**	**$1,912.9**	**$2,408.1**
Non-GAAP EPS	**$1.34**	**$1.29**	**$2.08**	**$0.66**	**$0.70**	**$0.75**	**$0.86**	**$2.97**	**$0.85**	**$0.89**	**$0.98**	**$1.09**	**$3.80**	**$4.81**
Avg. Diluted Shares Outstanding	513.5	508.5	507.2	505.7	504.7	503.7	504.0	504.5	503.5	503.0	502.6	502.1	502.8	501.1

(1) Non-GAAP excludes: amortization, restructuring, impairments, settlements, and stock-based comp.

Income Statement Metrics	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Revenue Analysis:														
Subscriptions	28.1%	50.1%	67.2%	77.4%	77.5%	79.8%	77.2%	77.9%	86.4%	86.1%	85.3%	82.5%	85.0%	88.5%
Product	60.9%	39.3%	23.5%	14.5%	14.0%	12.4%	15.5%	14.1%	6.7%	6.6%	8.0%	11.1%	8.2%	5.4%
Services and support	11.0%	10.7%	9.3%	8.1%	8.5%	7.8%	7.3%	7.9%	7.0%	7.3%	6.7%	6.4%	6.8%	6.1%
Expense Analysis:														
Cost of subscriptions	6.7%	7.9%	8.4%	7.6%	8.1%	7.8%	7.7%	7.8%	7.6%	8.1%	7.5%	7.4%	7.7%	7.5%
Cost of product	1.1%	0.7%	0.2%	0.4%	0.2%	0.2%	0.3%	0.3%	0.2%	0.1%	0.2%	0.3%	0.2%	0.2%
Cost of services and support	3.9%	4.3%	4.9%	4.9%	4.8%	4.6%	4.4%	4.7%	4.3%	4.3%	4.0%	3.9%	4.1%	3.7%
Total Cost of Revenues	11.7%	12.9%	13.5%	12.9%	13.1%	12.6%	12.5%	12.8%	12.1%	12.5%	11.7%	11.6%	12.0%	11.4%
R&D	17.2%	17.3%	15.4%	14.5%	14.5%	14.8%	14.2%	14.5%	14.2%	14.0%	13.8%	13.5%	13.9%	13.4%
Sales & Marketing	37.0%	37.4%	32.4%	31.9%	30.8%	30.4%	30.0%	30.7%	31.5%	31.0%	31.0%	30.5%	31.0%	30.2%
General & Administrative	11.1%	11.3%	9.6%	9.2%	8.6%	8.6%	8.6%	8.7%	8.8%	8.4%	8.4%	8.2%	8.4%	8.2%
Margin Analysis:														
Subscriptions	76.1%	84.2%	87.5%	90.2%	89.6%	90.2%	90.0%	90.0%	91.2%	90.6%	91.2%	91.0%	91.0%	91.5%
Product	98.2%	98.3%	99.0%	97.5%	98.8%	98.4%	98.0%	98.2%	97.0%	98.3%	97.9%	97.5%	97.7%	96.7%
Services and support	65.0%	59.5%	47.6%	39.6%	42.8%	41.0%	39.5%	40.8%	38.6%	41.8%	40.0%	38.5%	39.8%	38.8%
Non-GAAP Gross Margin	88.3%	87.1%	86.5%	87.1%	86.9%	87.4%	87.5%	87.2%	87.9%	87.5%	88.3%	88.4%	88.0%	88.6%
Non-GAAP Operating Margin	**23.0%**	**21.1%**	**29.1%**	**31.5%**	**33.0%**	**33.6%**	**34.7%**	**33.3%**	**33.4%**	**34.1%**	**35.1%**	**36.2%**	**34.8%**	**36.8%**
EBITDA Margin	30.9%	28.6%	36.2%	37.4%	39.0%	39.3%	40.2%	39.0%	38.4%	39.2%	39.9%	40.8%	39.6%	41.0%
Non-GAAP Tax Rate	21.0%	20.1%	21.6%	20.9%	21.1%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
Non-GAAP Net Margin	17.0%	15.8%	22.0%	24.1%	25.4%	25.7%	27.0%	25.6%	25.9%	26.5%	27.3%	28.2%	27.0%	28.7%
Q/Q Growth Rates:														
Subscriptions				*17.9%*	*1.3%*	*7.8%*	*6.0%*		*15.7%*	*1.1%*	*5.9%*	*4.0%*		
Product				*(29.3%)*	*(2.3%)*	*(7.9%)*	*37.6%*		*(55.6%)*	*1.0%*	*28.4%*	*49.8%*		
Services and support				*(2.2%)*	*5.8%*	*(3.5%)*	*3.1%*		*(2.2%)*	*6.9%*	*(2.5%)*	*3.1%*		
Total Revenue				***5.9%***	***1.1%***	***4.7%***	***9.7%***		***3.3%***	***1.5%***	***6.7%***	***7.6%***		
Gross Profit				*6.8%*	*0.8%*	*5.2%*	*9.9%*		*3.7%*	*1.0%*	*7.7%*	*7.7%*		
Non-GAAP Operating Income				***6.3%***	***5.8%***	***6.4%***	***13.6%***		***(0.6%)***	***3.6%***	***9.9%***	***10.9%***		
Non-GAAP Net Income				*7.0%*	*6.6%*	*5.9%*	*15.1%*		*(0.7%)*	*3.7%*	*10.0%*	*11.0%*		
Y/Y Growth Rates:														
Subscriptions	*69.0%*	*82.5%*	*55.3%*	*50.0%*	*40.0%*	*41.0%*	*36.5%*	*41.5%*	*33.9%*	*33.7%*	*31.3%*	*28.8%*	*31.8%*	*23.5%*
Product	*(26.1%)*	*(34.1%)*	*(30.9%)*	*(30.8%)*	*(28.4%)*	*(34.3%)*	*(12.5%)*	*(26.4%)*	*(45.1%)*	*(43.2%)*	*(20.8%)*	*(13.8%)*	*(29.9%)*	*(22.0%)*
Services and support	*15.4%*	*(1.0%)*	*0.9%*	*6.7%*	*4.3%*	*0.9%*	*3.0%*	*3.7%*	*3.0%*	*4.0%*	*5.0%*	*5.0%*	*4.3%*	*5.3%*
Total Revenue	*(7.9%)*	*2.3%*	*15.6%*	*24.7%*	*20.4%*	*20.2%*	*22.9%*	*22.0%*	*19.9%*	*20.4%*	*22.8%*	*20.5%*	*20.9%*	*18.6%*
Gross Profit	*(10.6%)*	*0.9%*	*14.8%*	*25.0%*	*21.1%*	*21.5%*	*24.6%*	*23.1%*	*21.0%*	*21.2%*	*24.1%*	*21.6%*	*22.0%*	*19.3%*
Operating expenses	*9.9%*	*3.4%*	*0.5%*	*14.9%*	*10.1%*	*15.8%*	*18.1%*	*14.7%*	*17.5%*	*19.3%*	*21.4%*	*19.1%*	*19.3%*	*15.2%*
Non-GAAP Operating Income	***(41.5%)***	***(6.4%)***	***59.7%***	***48.2%***	***44.8%***	***31.9%***	***35.9%***	***39.5%***	***27.0%***	***24.4%***	***28.4%***	***25.4%***	***26.3%***	***25.5%***
Non-GAAP Net Income	*(41.8%)*	*(4.6%)*	*60.6%*	*49.2%*	*47.0%*	*35.9%*	*38.9%*	*42.2%*	*29.0%*	*25.5%*	*30.4%*	*25.8%*	*27.6%*	*25.9%*
Non-GAAP EPS	*(43.0%)*	*(3.7%)*	*61.1%*	*49.7%*	*47.2%*	*36.5%*	*39.5%*	*42.9%*	*29.6%*	*25.9%*	*30.7%*	*26.3%*	*28.0%*	*26.3%*

Source: BTIG, Company Filings.

BTIG

Adobe Systems, Inc. Balance Sheet

Adobe Balance Sheet				Feb-16	May-16	Aug-16	Nov-16		Feb-17	May-17	Aug-17	Nov-17		
($ in millions)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Assets														
Cash and cash equivalents	$835	$1,117	$877	$831	$886	$768	$1,178	$1,178	$1,640	$2,015	$2,407	$2,913	$2,913	$5,203
Short-term investments	2,339	2,622	3,112	3,267	3,432	3,679	3,679	3,679	3,679	3,679	3,679	3,679	3,679	3,679
Trade receivables	600	592	672	599	667	731	827	827	759	842	938	1,040	1,040	1,300
Deferred income taxes	102	96	-	-	-	-	-	-	-	-	-	-	-	-
Prepaid expense and other current assets	170	176	162	238	253	241	242	242	242	243	243	244	244	246
Total Current Assets	4,046	4,603	4,822	4,935	5,239	5,419	5,926	5,926	6,319	6,779	7,267	7,875	7,875	10,427
PP&E, net	660	785	787	795	796	812	787	787	780	769	764	761	761	789
Goodwill	4,772	4,722	5,367	5,389	5,445	5,433	5,433	5,433	5,433	5,433	5,433	5,433	5,433	5,433
Intangible assets, net	605	470	510	519	494	454	454	454	454	454	454	454	454	454
Investment in lease receivable	207	80	80	80	80	80	80	80	80	80	80	80	80	80
Other assets, net	90	126	160	178	163	169	169	169	169	169	169	169	169	169
Total Assets	$10,380	$10,786	$11,726	$11,897	$12,217	$12,367	$12,850	$12,850	$13,236	$13,685	$14,168	$14,773	$14,773	$17,353
Liabilities														
Trade payables	62	68	93	72	76	83	105	105	81	87	95	118	118	135
Accrued expenses	657	703	678	592	661	666	674	674	676	762	782	774	774	928
Capital lease obligation	15	603	-	-	-	-	-	-	-	-	-	-	-	-
Income taxes payable	10	20	6	4	16	11	11	11	11	11	11	11	11	11
Deferred revenues	776	1,098	1,434	1,564	1,633	1,745	1,932	1,932	2,076	2,158	2,292	2,509	2,509	3,210
Other	6	17	2	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	1,526	2,510	2,214	2,232	2,386	2,506	2,722	2,722	2,844	3,017	3,180	3,411	3,411	4,283
Debt	1,499	911	1,907	1,917	1,918	1,917	1,917	1,917	1,917	1,917	1,917	1,917	1,917	1,917
Deferred revenues	53	57	51	45	48	53	58	58	63	65	69	76	76	97
Income taxes payable	133	126	256	261	273	276	276	276	276	276	276	276	276	276
Deferred income taxes	376	342	208	266	246	238	217	217	195	172	147	120	120	(2)
Other	69	79	89	95	97	100	100	100	100	100	100	100	100	100
Total Liabilities	3,656	4,025	4,725	4,815	4,968	5,089	5,289	5,289	5,395	5,547	5,689	5,899	5,899	6,671
Stockholders' equity	6,725	6,761	7,002	7,081	7,249	7,278	7,561	7,561	7,842	8,138	8,479	8,874	8,874	10,682
Total Liabilities + Stockholder's Equity	$10,380	$10,786	$11,726	$11,897	$12,217	$12,367	$12,850	$12,850	$13,236	$13,685	$14,168	$14,773	$14,773	$17,353
% Change Y/Y														
Cash and Cash Equivalents	(10.3%)	17.8%	6.6%	29.0%	26.5%	21.2%	21.8%	21.8%	29.8%	31.9%	36.9%	35.7%	35.7%	34.7%
Receivables	(2.8%)	(1.3%)	13.6%	12.5%	32.7%	23.2%	23.1%	23.1%	26.6%	26.3%	28.3%	25.7%	25.7%	24.9%
Deferred Revenue	33.8%	39.4%	28.6%	36.0%	36.9%	37.7%	34.0%	34.0%	33.0%	32.2%	31.3%	29.9%	29.9%	28.0%
Balance Sheet Summary														
Current Ratio	2.7x	1.8x	2.2x	2.2x	2.2x	2.2x	2.2x	2.2x	2.2x	2.2x	2.3x	2.3x	2.3x	2.4x
Book Value Per Share	$13.10	$13.30	$13.81	$14.00	$14.36	$14.45	$15.00	$14.99	$15.57	$16.18	$16.87	$17.67	$17.65	$21.32
Cash Per Share	6.18	7.35	7.86	8.10	8.56	8.83	9.64	9.63	10.56	11.32	12.11	13.13	13.11	17.72
Net Cash Per Share	6.31	7.22	7.50	7.74	8.14	8.42	9.23	9.22	10.15	10.91	11.70	12.72	12.70	17.31
Return On Equity (LTM)	10.3%	9.7%	15.3%	16.9%	18.1%	19.3%	20.6%	20.6%	21.3%	35.7%	22.5%	36.1%	23.3%	24.6%
Return on Assets (LTM)	6.8%	6.2%	9.4%	10.1%	10.8%	11.4%	12.2%	12.2%	12.6%	21.1%	13.4%	21.5%	13.8%	15.0%
Working Capital, net	$51	($4)	$62	$174	$184	$223	$290	$290	$243	$236	$304	$392	$392	$483
Total Debt to Capitalization	2.1%	2.1%	3.6%	3.6%	3.8%	3.8%	3.7%	3.7%	3.5%	3.4%	3.3%	3.1%	3.1%	2.6%
Avg. Diluted Shares Outstanding	513.5	508.5	507.2	505.7	504.7	503.7	504.0	504.5	503.5	503.0	502.6	502.1	502.8	501.1
Model Assumptions														
DSO (excluding deferred revenue)	54.0	52.1	51.1	39.5	43.5	45.6	47.0	51.6	41.7	45.6	47.6	49.1	53.7	56.6
DSO (billings)	51.4	48.3	47.9	36.3	41.5	42.2	42.0	47.5	38.3	43.5	44.2	44.0	49.5	52.1
Payable days (COGS)	47.9	46.7	52.7	36.8	37.6	41.1	47.9	51.3	36.8	37.6	41.1	47.9	50.9	51.2
Accrued Expenses (as % of Sales)	16.2%	17.0%	14.1%	10.7%	11.8%	11.4%	10.5%	11.5%	10.2%	11.3%	10.9%	10.0%	10.9%	11.1%

Source: BTIG, Company Filings.

Adobe Systems, Inc. Cash Flow Statement

Adobe Cash Flow				Feb-16	May-16	Aug-16	Nov-16		Feb-17	May-17	Aug-17	Nov-17		
($ in millions)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Cash flows from operations:														
Net income	$290.0	$268.4	$629.6	$254.3	$244.1	$270.8	$433.3	$1,202.5	$430.4	$446.3	$491.0	$545.2	$1,912.9	$2,408.1
Depreciation and amortization	321.2	313.6	339.5	81.2	84.5	84.0	88.4	338.0	82.2	86.5	86.0	90.4	345.0	349.0
Stock-based comp	329.0	333.7	335.9	92.3	85.6	84.5	-	262.4	-	-	-	-	-	-
Deferred income taxes	29.7	(26.1)	(69.7)	56.9	(6.1)	(19.1)	(21.9)	9.8	(21.8)	(22.6)	(24.8)	(27.6)	(96.7)	(121.7)
Tax benefit from stock options	(40.6)	(0.0)	(0.0)	(0.0)	0.0	-	-	(0.0)	-	-	-	-	-	-
Sales of investments	5.7	(0.1)	(30.6)	2.0	3.3	(1.5)	-	3.9	-	-	-	-	-	-
Other	54.1	1.9	1.2	(1.4)	0.5	-	-	(0.9)	-	-	-	-	-	-
Net change in assets and liabilities, excl. acquisitions														
Receivables	33.6	7.9	(79.5)	74.3	(65.7)	(64.4)	(96.2)	(152.1)	68.7	(83.5)	(95.9)	(102.1)	(212.8)	(259.3)
Prepaid expenses and other current assets	(55.5)	(1.9)	(7.7)	(84.8)	(18.2)	12.3	(0.5)	(91.3)	(0.5)	(0.5)	(0.5)	(0.5)	(2.0)	(2.0)
Trade payables	7.1	6.2	22.9	(21.6)	2.9	7.9	21.6	10.7	(24.1)	5.9	8.1	23.2	13.1	16.5
Accrued expenses	41.8	37.5	(5.9)	(81.1)	66.6	5.3	8.2	(1.1)	2.0	85.7	19.9	(8.4)	99.3	154.0
Accrued restructuring charges	(6.9)	8.9	(16.6)	-	-	-	-	-	-	-	-	-	-	-
Income taxes payable	(58.9)	11.0	29.8	2.1	22.8	21.8		46.7					-	-
Deferred revenue	201.4	326.4	320.8	123.4	68.4	116.4	191.8	499.9	149.3	83.8	138.4	223.0	594.5	722.8
Other assets, net	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash from Operations	**$1,151.7**	**$1,287.5**	**$1,469.5**	**$497.5**	**$488.7**	**$517.9**	**$624.5**	**$2,128.6**	**$686.3**	**$601.6**	**$622.2**	**$743.2**	**$2,653.3**	**$3,267.4**
Cash flows from investing:														
Purchases of short-term investments	(2,058.1)	(2,014.2)	(2,064.8)	(534.3)	(592.0)	(247.6)	-	(1,373.9)	-	-	-	-	-	-
Maturities and sales of short-term investments	360.5	272.1	371.8	178.9	187.5	-	-	366.4	-	-	-	-	-	-
Proceeds from sales of short-term investments	1,450.0	1,443.6	1,176.5	194.5	255.7	-	-	450.2	-	-	-	-	-	-
Acquisitions, net of cash acquired	(704.6)	(29.8)	(826.0)	-	(48.4)	-	-	(48.4)	-	-	-	-	-	-
Purchases of PP&E	(188.4)	(148.3)	(184.9)	(46.2)	(53.8)	(55.2)	(64.2)	(219.4)	(74.6)	(75.8)	(80.9)	(87.0)	(318.4)	(377.4)
Proceeds (purchase) from long-term investments	(37.2)	(14.0)	39.1	(51.8)	(0.8)	(3.8)	-	(56.3)	-	-	-	-	-	-
Purchase of other assets	-	-	-	-	0.3	-	-	0.3	-	-	-	-	-	-
Net Cash from Investing	**($1,177.8)**	**($490.7)**	**($1,488.4)**	**($258.8)**	**($251.5)**	**($306.6)**	**($64.2)**	**($881.2)**	**($74.6)**	**($75.8)**	**($80.9)**	**($87.0)**	**($318.4)**	**($377.4)**
Cash flows from financing:														
Purchase of treasury stock	(1,100.0)	(600.0)	(625.0)	(150.0)	(225.0)	(400.0)	(150.0)	(925.0)	(150.0)	(150.0)	(150.0)	(150.0)	(600.0)	(600.0)
Proceeds from issuances of common stock	500.8	227.8	164.3	45.5	6.7	71.1	-	123.4	-	-	-	-	-	-
Cost of issuance of treasury stock	-	(173.7)	(186.4)	(194.8)	(13.0)	-	-	(207.8)	-	-	-	-	-	-
Excess tax benefit from stock-based compensatio	40.6	53.2	68.2	14.9	50.4	4.0	-	69.3	-	-	-	-	-	-
Proceeds from debt issuance	25.7	-	989.3	-	-	-	-	-	-	-	-	-	-	-
Repayment of debt and capital lease obligations	(25.9)	(14.7)	(602.2)	-	(0.0)	(0.1)	-	(0.1)	-	-	-	-	-	-
Payment of dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	(0.4)	-	(8.8)	-	-	-	-	-	-	-	-	-	-	-
Net Cash from Financings	**($559.1)**	**($507.3)**	**($200.7)**	**($284.4)**	**($180.9)**	**($325.0)**	**($150.0)**	**($940.2)**	**($150.0)**	**($150.0)**	**($150.0)**	**($150.0)**	**($600.0)**	**($600.0)**
Foreign Currency Impact	(5.2)	(6.6)	(21.3)	(0.2)	(0.6)	(5.0)	-	(5.8)	-	-	-	-	-	-
Net Increase / Decrease in Cash	**($590.5)**	**$282.8**	**($240.8)**	**($45.9)**	**$55.7**	**($118.7)**	**$410.3**	**$301.4**	**$461.7**	**$375.8**	**$391.3**	**$506.1**	**$1,734.9**	**$2,289.9**
Free cash flow:														
Cash flow from operations:	$1,151.7	$1,287.5	$1,469.5	$497.5	$488.7	$517.9	$624.5	$2,128.6	$686.3	$601.6	$622.2	$743.2	$2,653.3	$3,267.4
as a % of revenue	28.4%	31.0%	30.6%	36.0%	34.9%	35.4%	38.9%	36.4%	41.4%	35.7%	34.6%	38.4%	37.5%	39.0%
q/q % change				9.5%	(1.8%)	6.0%	20.6%		9.9%	(12.3%)	3.4%	19.5%		
y/y % change	(23.2%)	11.8%	14.1%	171.8%	3.7%	43.7%	37.4%	44.9%	37.9%	23.1%	20.1%	19.0%	24.6%	23.1%
CapEx:	($188.4)	($148.3)	($184.9)	($46.2)	($53.8)	($55.2)	($64.2)	($219.4)	($74.6)	($75.8)	($80.9)	($87.0)	($318.4)	($377.4)
as a % of revenue	(4.6%)	(3.6%)	(3.9%)	(3.3%)	(3.8%)	(3.8%)	(4.0%)	(3.7%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)
Free Cash Flow	**$963.3**	**$1,139.2**	**$1,284.6**	**$451.3**	**$435.0**	**$462.7**	**$560.3**	**$1,909.2**	**$611.7**	**$525.8**	**$541.3**	**$656.1**	**$2,334.9**	**$2,889.9**
as a % of revenue	23.8%	27.5%	26.8%	32.6%	31.1%	31.6%	34.9%	32.6%	36.9%	31.2%	30.1%	33.9%	33.0%	34.5%
as a % of billings	22.6%	25.5%	25.1%	30.0%	29.6%	29.3%	31.2%	30.1%	33.8%	29.7%	28.0%	30.4%	30.4%	31.7%
q/q % change				15.8%	(3.6%)	6.4%	21.1%		9.2%	(14.0%)	2.9%	21.2%		
y/y % change	(21.6%)	18.3%	12.8%	206.0%	(0.2%)	48.5%	43.7%	48.6%	35.5%	20.9%	17.0%	17.1%	22.3%	23.8%

Source: BTIG, Company Filings.

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BTIG

Equity Research
November 16, 2016

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ChannelAdvisor Corporation

I'll Be Watching You; Initiate at Neutral

The secular positioning is strong and the transition up-market towards larger, more profitable and lower churn brands and retailers is on track. Still, ChannelAdvisor isn't out of the woods just yet. There is still a large gap between underlying performance (GMV growth) and how that translates into revenues, and slow progress here prolongs the timeframe (and risk) associated with hitting the company's long term targets. This does not preclude ChannelAdvisor from posting solid results in the interim, but we'll need more clarity on the magnitude of improvement expected before being more positive on the name. Initiate at Neutral.

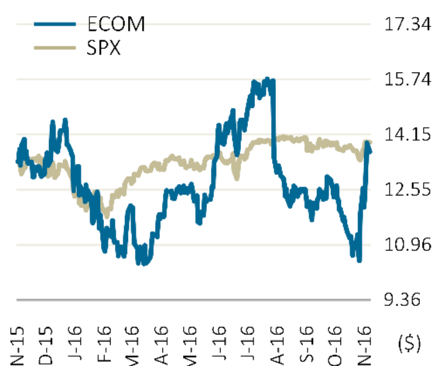
- **On a knife's edge.** ChannelAdvisor appears to be an integral partner for larger brands and retailers in the era of the endless aisle, but the company is on a knife's edge with respect to execution. The last two earnings reports best demonstrate our uncertainty around the transition: the most recent quarter's +18% y/y constant currency revenue growth obviously reflects a return to form, but 2Q results (where GMV grew +27% y/y but revenues only grew 12.5% constant currency) indicate that the company still has a long way to go.
- **Gaming out ARPU scenarios.** Although the transition up-market is working, ARPU growth is expected to decelerate in FY17. It should still remain in the low double-digits over the next few years, but we believe *acceleration* is necessary for us to be more positive on the stock. Unfortunately, the level of incremental subscription revenues and customer additions required to achieve this look unlikely near term.
- **Could stronger profitability drive shareholder value?** Revenue gains could be offset by higher investments as the company chases the large brand and retailer opportunity. Also, additional R&D will likely be needed to differentiate the product as competition intensifies. These factors cap the potential for margin expansion over the next few years.
- **Valuation:** Our 10-year DCF model yields a price target within +/- 15% of current trading levels, so we rate ChannelAdvisor Neutral.

ECOM $13.65

NEUTRAL

52 week range	$10.41 - $15.76
Market Cap (m)	$351

Price Performance



Source: IDC. Market data as of 11/15/2016.

Estimates

	1Q15 A	2Q15 A	3Q15 A	4Q15 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	FY17 E
Sales	23	24	24	29	101	26	27	28	32	114	128
Diluted EPS (Adj.)	(0.24)	(0.10)	(0.07)	0.11	(0.29)	(0.04)	(0.11)	0.01	0.05	(0.09)	(0.05)
FCF	(5)	(4)	0	3	(6)	2	3	3	(2)	6	(2)
EV/Sales (x)	-	-	-	-	2.85	-	-	-	-	2.52	2.24
P/FCF (x)	-	-	-	-	-	-	-	-	-	-	-

Source: BTIG Estimates and Company Documents ($ in millions, except per share amount)
Adjusted EPS excludes stock-based comp, amortization and acquisition related costs.

Please Read: Important disclosures and analyst's certification appear in Appendix

Company Description

ChannelAdvisor Corp. provides SaaS solutions that enable retailer and branded manufacturer customers to integrate, manage and optimize their merchandise sales across hundreds of online channels. The company enables customers to connect with new and existing sources of demand for their products, including e-commerce marketplaces, such as eBay, Amazon, Newegg and Sears, search engines and comparison shopping websites, such as Google, Microsoft's Bing, and Nextag and emerging channels, such as Facebook and Pinterest. ChannelAdvisor was founded in June 2001 and is headquartered in Morrisville, NC.

Investment Thesis

ChannelAdvisor is a classic example of the digital commerce big picture vs. nitty-gritty investment dichotomy that we touched upon in our industry note. There certainly is value in a company that helps its customers integrate with over 50 online marketplaces globally, especially as Amazon (AMZN, Not Rated) – the largest digital retailer of them all – shifts more to a third-party selling model. And because third-party marketplaces will remain a fixture of the digital commerce landscape for the foreseeable future, the long term secular trends supporting the investment story are intact.

Upon further inspection though, the recent ChannelAdvisor story is one of transition, albeit one that is in its final stages. The company appears to be at an inflection point in its churn of smaller customers in favor of larger, more profitable brands, and it's laid out an ambitious target for ~20% revenue growth (ahead of overall digital commerce growth) over the long term. Recent results (both 27% y/y GMV growth in 2Q and 20% y/y US revenue growth in 3Q) support management's claim that the move up-market is working.

However, a couple of quarters don't make a trend, and we still see sufficient execution risk to mitigate early enthusiasm. Our model gives the company the benefit of the doubt and assumes that all does go according to plan, unlocking mid-double digit revenue growth in the back half of FY17. This though still falls short of accelerating average revenue per user (ARPU) growth – the true benchmark by which to measure the up-market transition – beyond FY16 levels. From this standpoint, the recent acceleration (which is often cited as sufficient evidence for the bull thesis) looks attributable more to optics/easy comps than any real turning point in the business.

In short, FY17 looks like a holding pattern for the company, with the full extent of the new strategy not felt until FY18. Even then, this relies on the company reaccelerating revenue growth above the digital commerce growth rate, which is by no means a given since ChannelAdvisor is still building out its brand-focused team and product offerings.

We note that executing on its vision does imply sustained low double-digit ARPU growth and improving unit economics. However, it's still too early to tell whether the company can accelerate growth beyond these levels. We believe that any improvement in revenue growth will likely need to be balanced by corresponding growth in product and sales investment. We'll be on the sidelines watching this play out, waiting for further signs of improvement.

Our DCF model yields a price target within +/- 15% of current trading levels, and we believe that the current ~2x EV/FY17 Revenues represents fair value. Initiate at Neutral.

Go Big or Go Home

ChannelAdvisor once filled a niche in the broader commerce landscape, especially when digital was simply another channel in a retailer's or brand's arsenal, rather than the primary means of distribution. The company started as a very simple way for smaller sellers to simultaneously list products across multiple prominent third-party marketplaces, including Amazon and eBay (EBAY, Not Rated). This initial admittance of small customers was in fact a necessity, as selling online was the only way for smaller merchants to get in front of consumers. Additionally, for those that were dominant in brick and mortar, ChannelAdvisor represented a viable opportunity to expand into the still nascent channel. Either merchants needed to bypass the traditional retail/tiered distribution model because they lacked the scale to garner shelf space, or retailers needed a partner to efficiently manage a new method of selling to consumers.

The world has shifted though, and the internet has created a new reality where brands and retailers can be closer to consumers than ever before. In this world, digital commerce is not another channel, it's *the* channel. Retailers and brands of all sizes have no choice but to court consumers across the digital landscape. And when considering that a majority of product searches begin on Amazon (and that Amazon is increasingly relying on third-parties to sell products), marketplaces take on added significance.

ChannelAdvisor clearly understands this dynamic, and is at the tail end of a transition away from smaller, less profitable, higher churn merchants in favor of larger ones. From a qualitative standpoint, this should result in greater profitability to the company, as larger brands and retailers process more gross merchandise value (GMV), thereby guaranteeing higher contract minimums and subscription revenue. Moreover, larger customers also exhibit less churn, which drives higher renewals and a higher customer lifetime value. This also translates into better operational leverage (since renewals and upsells come at a much lower cost than net-new customer acquisition) over the long term, driving margins and EPS higher.

ChannelAdvisor then appears to be an integral partner for larger brands and retailers in the era of the endless aisle. The solution is already calibrated to enable selling and inventory management across various global marketplaces, and the company is leveraging this foundation with new data-oriented tools (like an automatic repricing algorithm) that enhance the value of the overall service.

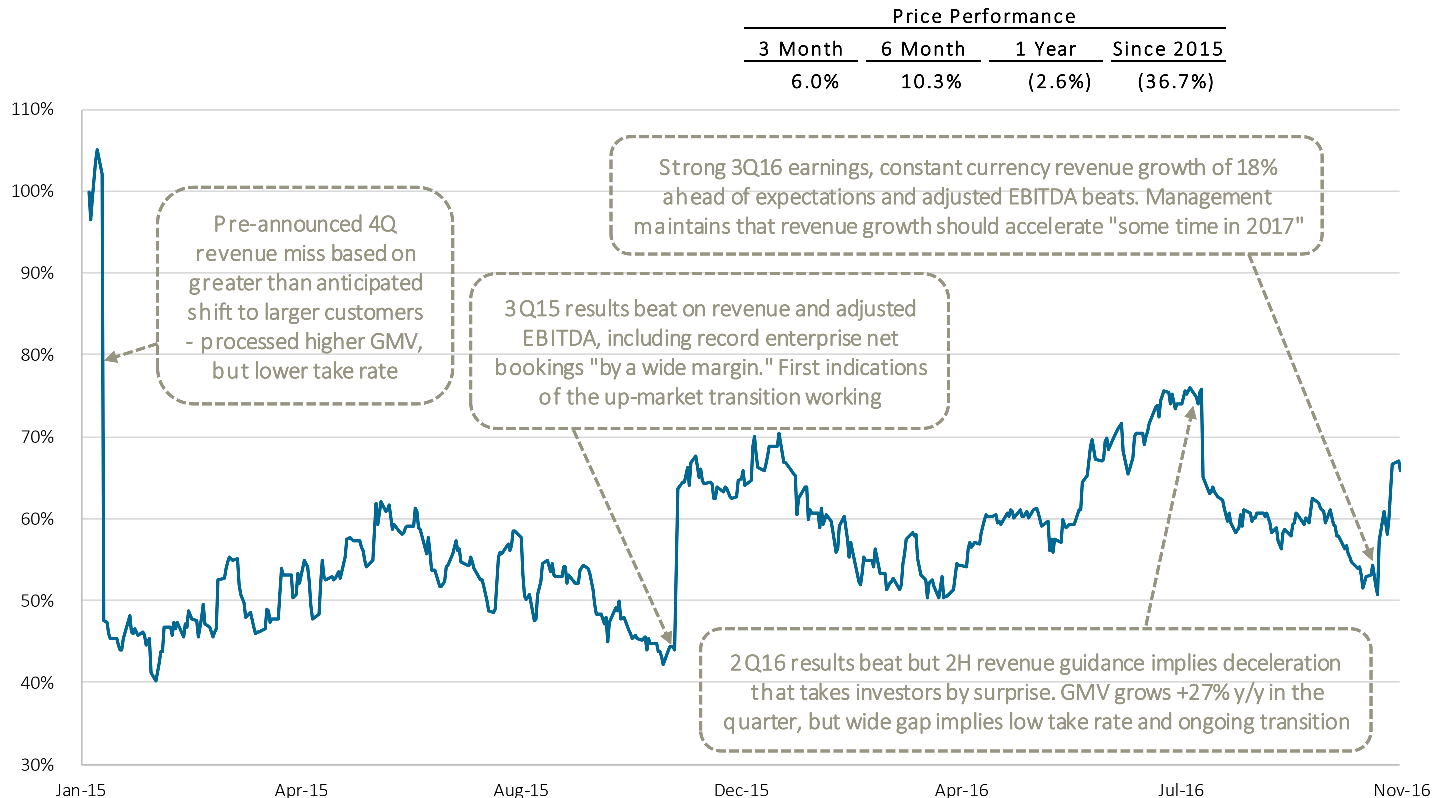
So what's the catch?

On a Knife's Edge

This transition though has not been without its disruptions, and the stock has been on a rocky ride since ChannelAdvisor pre-announced weaker than expected 4Q14 results. Ironically, this miss is what appears to have prompted

the transition to begin with, as the company highlighted a bigger than expected shift towards larger customers with lower negotiated take rates.

Figure 1: The Stock is Still Attempting to Recover From the 4Q14 Earnings Miss That Prompted the Transition



Price Performance			
3 Month	6 Month	1 Year	Since 2015
6.0%	10.3%	(2.6%)	(36.7%)

Source: BTIG, FactSet, Company Filings.
Note: Market data as of 11/15/2016.

The last two earnings reports best demonstrate our uncertainty around the transition: the most recent print is certainly encouraging (18% constant currency growth obviously reflects a return to form), but 2Q results (where GMV grew +27% y/y but revenues only grew 12.5% constant currency) indicate that the company still has a long way to go. Specifically, the move up-market is working with respect to amount of goods being sold via ChannelAdvisor solutions, but it's likely that 1) take rates could trend down further as the company negotiates larger contracts and 2) the inflection in revenue growth likely won't happen until there's a critical mass of large customers (those with >$100K in annual revenue comprise only 5% of the overall base).

This dichotomy is akin to a knife's edge, as the company has very little margin for error as it builds its base of more profitable large customers. From a fundamental perspective (i.e. outside of stock price fluctuations and investor expectations), the transition does appear to be working. However, while 3Q ARPU of ~17% is the highest level since the IPO, we note that the company calculates it on a trailing twelve month (TTM) basis. Therefore, there is some optics involved here as recent ARPU metrics account for quarters when the company was still burning off its smallest and least profitable customers. And while ChannelAdvisor should get some credit for keeping a low double-digit revenue growth rate over this time period, we think instead it's more important

to look at ARPU potential when the metric accounts for a growing customer base.

Gaming Out ARPU Scenarios

The transition to larger customers should continue to grow the ARPU number, but the question rather is to understand the level of growth. Specifically, if we use the most recent quarter's results – in which the company showed positive net customer additions for the first time in five quarters – as a guide, then we can expect the company to continue adding net customers on a quarterly basis.

However, given the aforementioned gap between GMV growth and revenue growth, our current estimates imply that ARPU growth will actually *decelerate* on an annual basis. And even accounting for the expected upward trend in the revenue growth rate over the next few years (for which the company has given a longer term target of 20%), ARPU growth should remain in the low double-digits; over the same time frame, we assume only low single-digit increase in net customer adds. Achieving ~12% annual ARPU growth isn't a bearish indicator by any stretch, but from our perspective, it does temper longer term growth expectations.

So what does the company need to do then to maintain consistent ARPU growth? Interestingly, it doesn't seem like much on the surface (we estimate only a 100bps annual increase in average annual merchant growth). However, these merchant additions would all have to be large customers with annual committed revenue of $150K, driving subscription revenue growth rates that are materially ahead of current estimates.

We admit that there is some conservatism baked into our model, and we anticipate a gradual march towards management's 20% y/y revenue growth benchmark (i.e. it will occur beyond the scope of our initial forecast period). However, we view the scale of improvement required to maintain a constant ARPU growth rate as unlikely. Again, the implications of this aren't inherently negative, but it does call out that the large gap between GMV growth and revenue growth will persist for the foreseeable future. This longer payoff timeframe introduces additional risk in the model, as it essentially leaves both execution and investors out in limbo, waiting for revenue acceleration that may come later than what the market currently expects.

Figure 2: Material Subscription Revenue Acceleration Required to Keep ARPU Growth Constant ($mm)

Average Revenue Per User Scenario Analysis	FY15 A	FY16 E	FY17 E	FY18 E	FY19 E	Assumptions
Actual/BTIG Estimates						
Subscription revenues	$100.6	$113.5	$128.1	$146.7	$170.2	
Average annual merchants	2,910	2,882	2,910	2,969	3,049	
Memo: net merchant adds	195	(28)	29	59	80	
ARPU (nominal $)	$34,571	$39,396	$44,030	$49,406	$55,807	
Y/Y Growth						
Subscription revenues	18.5%	12.9%	12.9%	14.5%	16.0%	Standalone scenario assumes gradual scaling up to 20% target
Average annual merchants	7.2	(1.0)	1.0	2.0	2.7	
ARPU	10.6	14.0	11.8	12.2	13.0	ARPU growth expected to peak in FY16 on a standalone basis
Sensitivity Assumptions						
Incremental new large merchants	--	--	24	53	84	The number of new large merchants needed to keep ARPU growth constant
Assumed annual revenue	$0.150	$0.150	$0.150	$0.150	$0.150	Assume annual revenue contribution for large merchants is $150K
Incremental annual revenue	--	--	$3.6	$8.0	$12.6	Incremental annual subscription revenue from new large merchants
Pro forma Estimates						
Subscription revenues	$100.6	$113.5	$131.7	$154.6	$182.8	
Average annual merchants	2,910	2,882	2,934	3,022	3,133	
Memo: net merchant adds	195	(28)	53	88	111	
ARPU (nominal $)	$34,571	$39,396	$44,897	$51,170	$58,333	
Y/Y Growth						
Subscription revenues	18.5%	12.9%	16.0%	17.4%	18.2%	Pro forma subscription revenue growth is materially ahead of current estimates
Average annual merchants	7.2	(1.0)	1.8	3.0	3.7	New large merchant adds add ~100bps to annual merchant growth rate
ARPU	10.6	14.0	14.0	14.0	14.0	
Subscription revenue upside	--	--	2.8%	5.4%	7.4%	Implied sub revenue upside vs. current estimates - average surprise only ~2-3%

Source: BTIG, FactSet, Company Filings.

Could Stronger Profitability Drive Shareholder Value?

The company could still be in a strong position to create shareholder value even with a deceleration in ARPU, most notably because the LTV associated with larger customers will drive margin and EPS expansion. However, this assumption ignores the fact that competition – albeit limited today – is likely to increase, and that the company still needs to build out a larger enterprise sales force to truly go after the large retailer and brand opportunity. This two factors should beget increased sales and marketing and product/R&D investment almost in line with expected revenue growth.

From a competitive standpoint, ChannelAdvisor is clearly the leader in helping sellers integrate with 50 of the largest online marketplaces around the world. The risk we see though is a competitor in an adjacent market (such as Shopify (SHOP, Buy, $55 PT) or BigCommerce (Private), both in the digital commerce enablement space) developing one or two key marketplace integrations as “good enough” solutions. For example, while ChannelAdvisor’s focus is more up-market than Shopify’s core SMB market, the latter is moving up into larger brands via its Shopify Plus initiative. And while it is aiming to help these larger brands sell direct to consumer via their own webfront, it’s primarily in the business of helping its customers sell across any possible channel at the push of a button. From that standpoint, Shopify’s Amazon marketplace integration could pre-empt customers from looking outside the platform, thereby mitigating the level of potential ChannelAdvisor revenues.

We admit that this is likely a far off scenario, but this outside threat does still necessitate greater product investment on ChannelAdvisor's part, primarily to further distinguish its offering from that of a mere marketplace integrator. Similarly, as we mentioned in our industry note along with this initiation, the dissolution of the linear marketing funnel into the winding customer journey requires marketers and sellers to leverage data across a fragmented consumer landscape. ChannelAdvisor has made recent strides to go beyond simple analytics and reporting (its product intelligence and algorithmic repricing tools are notable examples of providing customers with actionable insights on their businesses), but heightened product investment is likely required to maintain relevancy.

Similarly, from a go-to-market standpoint, the company will likely continue investing in sales and marketing as it builds out an enterprise sales force to chase larger accounts. The transition is likely in its later stages with respect churning out smaller customers from the platform, but we still believe there's work to be done if the company wants to achieve the revenue growth and ARPU numbers currently outlined in our model. Therefore, while the investments are likely to pay off in the long run as the company works towards its 20% revenue growth target, it will keep margin expansion/adjusted EBITDA growth relatively muted over the near term (we estimate only ~$2-3m increases in FY17 and FY18).

Financial Condition

As of its most recent quarter end, ChannelAdvisor has $65m in cash and no debt. The company does still generate losses from a P&L and cash flow perspective, and should continue to invest in expanding its sales force and product offering. Despite this though, management has committed to a maintaining a "neutral EBITDA" profile (on a non-GAAP basis). We expect expense growth to moderate as revenue growth accelerates, thereby driving the company to P&L and FCF breakeven over the next 12-18 months. We see no material risks to the company's liquidity/funding position.

Valuation

We like the company's positioning from a secular perspective, but there are a few too many factors that prevent us from being more positive from a fundamental standpoint. There is uncertainty over the level of inflection management expects in FY17, and our upside assumptions that maintain a constant ARPU growth rate look like a stretch at this point. Furthermore, the company needs to continue investing in its sales force and product development in order to both continue moving up-market while further differentiating its offering. The latter is particularly important; the competitive environment is favorable now, but we could foresee adjacent digital commerce players developing "good enough" solutions that would mitigate ChannelAdvisor customer growth. For now, we'll be on the sidelines watching this play out, waiting for further signs of improvement.

Our DCF model yields a price target within +/- 15% of current trading levels, so we rate ChannelAdvisor Neutral.

ChannelAdvisor BTIG Est. Summary	Dec-17	Dec-18	Dec-19
($ in millions, except per share)	FY17 E	FY18 E	FY19 E
Revenue	$128.1	$146.7	$170.2
Billings	134.7	154.2	177.4
Operating income	(0.2)	2.0	5.7
EPS	(0.05)	0.01	0.12
FCF	(1.9)	0.5	3.9
Capex	2.6	2.9	3.4
Year over year growth			
Revenue	*12.9%*	*14.5%*	*16.0%*
Billings	*13.6*	*14.5*	*15.0*
Operating income	*nm*	*nm*	*183.5*
EPS	*nm*	*nm*	*nm*
FCF	*nm*	*nm*	*nm*

Valuation Summary	FY17 E	FY18 E	FY19 E
EV/Revenues	2.2x	2.0x	1.7x
P/E	nm	nm	111.4
P/E ex cash	nm	nm	90.8
EV/FCF	nm	nm	73.3

Source: BTIG, Company Filings.
Note: Market data as of 11/15/2016.

Risks

The company has guided for revenue inflection in FY17 "at some point" from the current low double-digit levels. There are severe negative implications for the stock if this fails to materialize. Additionally, the company is still investing in R&D and its sales force to increase product differentiation and expand up-market. There's risk if expense growth is greater than Street expectations. We also believe that ChannelAdvisor's current competitive environment is favorable, but do see competitors in adjacent markets building similar functionality. We don't think another company can replicate the *number* of ChannelAdvisor's integrations, but there is risk if they build functionality with a few key marketplaces.

Figure 4: DCF Analysis ($mm)

ChannelAdvisor, Inc. DCF	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24	Dec-25		
($in millions)	FY16 E	FY17 E	FY18 E	FY19 E	FY20 E	FY21 E	FY22 E	FY23 E	FY24 E	FY25 E	TV	CAGR
Revenues	$114	$128	$147	$170	$199	$235	$280	$335	$403	$483	$580	17%
y/y % change	12.9%	12.9%	14.5%	16.0%	17.0%	18.0%	19.0%	20.0%	20.0%	20.0%	20.0%	
EBIT	($3)	($0)	$2	$6	$10	$14	$20	$27	$36	$48	$64	
EBIT Margin	(2.3%)	(0.2%)	1.4%	3.4%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%	11.0%	
Tax rate	-	-	-	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Taxed EBIT	($3)	($0)	$2	$4	$7	$10	$13	$18	$25	$33	$43	nm
Depreciation & Amortization	8	8	8	9	10	10	11	11	11	11	12	
CapEx	(2)	(3)	(3)	(3)	(4)	(5)	(6)	(7)	(8)	(10)	(12)	
Change in Working Capital	5	7	8	8	8	9	11	13	16	19	23	
Free Cash Flow	$9	$12	$16	$18	$21	$24	$30	$36	$44	$54	$67	22%
y/y % change		36.3%	27.4%	12.6%	18.2%	17.3%	21.1%	22.0%	22.0%	22.0%	24.2%	
Discounted FCF	$8	$9	$10	$10	$10	$11	$11	$12	$12	$13		

Cumulative cash flow	$107
Terminal Value	200
Total DCF value	307
Debt	-
Cash	65
Market Value of Equity	372
Shares Outstanding	25.7
Share Price	$14.46
Current Price	13.65
upside/(downside)	6%

WACC	15.0%
Cash Flow Multiple	14.0x

WACC	Cash Flow Multiple					
	12.0x	13.0x	14.0x	15.0x	16.0x	17.0x
12%	$16.3	$17.1	$17.8	$18.5	$19.3	$20.0
13%	15.2	15.9	16.6	17.2	17.9	18.6
14%	14.2	14.8	15.5	16.1	16.7	17.3
15%	13.3	13.9	14.5	15.0	15.6	16.1
16%	12.5	13.0	13.5	14.0	14.6	15.1
17%	11.8	12.3	12.7	13.2	13.6	14.1

WACC:	
Risk Free rate	4.0%
Risk Premium	6.6%
Beta	1.7
Cost of equity	14.9%
Cost of debt	1.8%
BV Debt/Total Market Capitaliza	-
MV Equity/Total Market Capitali	100.0%
After-Tax Cost of Debt	1.2%
WACC	14.9%

@ PT	FY17 E	FY18 E
Sales	$128	$147
FCFE	(1.9)	0.5
EPS	(0.05)	0.01
EV/Sales	2.4x	2.1x
EV/FCFE	nm	nm
P/E	nm	nm

Terminal Value, undiscounted	$932
Implied Terminal FCF growth	7.2%
Terminal Cash Flow Multiple	14.0x
Terminal Year EBITDA multiple	12.4x

Source: BTIG, Factset.
Note: Market data as of 11/15/2016.

ChannelAdvisor Corp. Income Statement

ChannelAdvisor, Inc. Income Statement				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17		
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Non-GAAP Income Statement														
Fixed subscription fees	$45.6	$63.4	$76.3	$20.3	$20.9	$22.4	$22.5	$86.0	$22.3	$23.4	$24.9	$25.8	$96.4	$110.4
Variable subscription fees	22.4	21.5	24.3	6.1	6.2	5.6	9.6	27.5	6.7	7.0	7.0	11.1	31.7	36.3
Total Net Revenues	68.0	84.9	100.6	26.3	27.1	28.0	32.1	113.5	29.0	30.3	31.9	36.9	128.1	146.7
Cost of goods	17.9	20.2	19.9	5.4	4.6	4.6	5.1	19.7	4.6	4.9	5.1	5.9	20.5	23.5
Non-GAAP Gross Profit	**50.1**	**64.7**	**80.7**	**20.9**	**22.5**	**23.4**	**26.9**	**93.8**	**24.3**	**25.5**	**26.8**	**31.0**	**107.6**	**123.2**
Non-GAAP Operating Expenses														
Sales & Marketing	36.9	52.0	47.6	11.9	14.4	12.7	13.7	52.7	14.3	16.1	14.2	15.2	59.9	68.2
R&D	12.3	15.4	14.4	3.6	3.9	4.0	4.6	16.1	4.1	4.4	4.5	5.2	18.3	20.8
General & Administrative	10.1	16.7	17.6	4.5	5.2	4.6	5.6	19.9	5.0	5.6	5.1	6.1	21.7	23.6
Total Non-GAAP Operating Expenses	59.3	84.0	79.5	20.1	23.4	21.3	24.0	88.8	23.4	26.1	23.7	26.5	99.8	112.7
Depreciation and amortization	-	6.3	8.8	2.1	2.0	1.9	1.8	7.7	2.2	2.0	2.0	1.8	8.1	8.5
Non-GAAP Operating income	**(9.2)**	**(25.5)**	**(7.6)**	**(1.2)**	**(2.8)**	**0.2**	**1.2**	**(2.6)**	**(1.3)**	**(2.7)**	**1.0**	**2.7**	**(0.2)**	**2.0**
Interest income (expense), net	(3.0)	(0.2)	(0.2)	(0.0)	(0.0)	0.0	0.0	-	0.0	(0.6)	(0.6)	(0.6)	(1.8)	(2.4)
Other income	(3.1)	(0.3)	0.2	0.1	(0.0)	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.4	0.4
Non-GAAP Earnings Bef.Taxes	**(15.2)**	**(26.0)**	**(7.5)**	**(1.2)**	**(2.8)**	**0.3**	**1.3**	**(2.4)**	**(1.2)**	**(3.2)**	**0.5**	**2.1**	**(1.7)**	**(0.0)**
Provision for Income Taxes	0.2	0.0	(0.2)	(0.0)	(0.0)	(0.0)	(0.1)	(0.2)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)
Non-GAAP Tax Rate	(1.3%)	(0.2%)	2.5%	3.6%	0.8%	(9.4%)	(4.5%)	6.2%	5.1%	1.9%	(11.0%)	(2.8%)	14.2%	1,822.4%
Non-GAAP Net Income [1]	**($15.4)**	**($26.0)**	**($7.3)**	**($1.1)**	**($2.8)**	**$0.3**	**$1.4**	**($2.3)**	**($1.1)**	**($3.1)**	**$0.6**	**$2.2**	**($1.4)**	**$0.2**
Non-GAAP EPS	**($1.13)**	**($1.06)**	**($0.29)**	**($0.04)**	**($0.11)**	**$0.01**	**$0.05**	**($0.09)**	**($0.04)**	**($0.12)**	**$0.02**	**$0.08**	**($0.05)**	**$0.01**
Avg. Diluted Shares Outstanding	13.7	24.6	25.1	25.3	25.5	25.7	25.9	25.6	26.5	27.1	27.7	28.3	27.4	29.8

(1) Non-GAAP excludes: amortization, restructuring, impairments, settlements, and stock-based comp.

Income Statement Ratios	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Company Adj. EBITDA:														
Net Loss	($20.6)	($34.5)	($21.0)	($4.6)	($6.7)	($2.6)	($1.5)	($15.3)	($4.0)	($6.2)	($2.6)	($1.5)	($14.3)	($13.1)
Interest income (expense), net	3.0	0.2	0.2	0.0	0.0	(0.0)	(0.0)	-	(0.0)	0.6	0.6	0.6	1.8	2.4
Provision for Income Taxes	0.2	0.0	(0.2)	(0.0)	(0.0)	(0.0)	(0.1)	(0.2)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)
Depreciation and amortization	3.7	6.3	8.8	2.1	2.0	1.9	1.8	7.7	2.2	2.0	2.0	1.8	8.1	8.5
EBITDA	(13.7)	(28.0)	(12.2)	(2.5)	(4.8)	(0.7)	0.2	(7.7)	(1.9)	(3.6)	(0.1)	0.9	(4.7)	(2.4)
Stock-based comp	2.1	8.0	11.8	3.4	3.9	2.9	2.8	13.0	2.9	3.0	3.2	3.7	12.8	13.2
Other GAAP expenses	3.1	0.5	1.8	-	-	-	-	-	-	-	-	-	-	-
Adjusted EBITDA	**(8.5)**	**(19.5)**	**1.4**	**0.9**	**(0.9)**	**2.2**	**3.0**	**5.3**	**1.0**	**(0.6)**	**3.1**	**4.6**	**8.1**	**10.8**
Revenue Analysis:														
Fixed subscription fees	67.0%	74.7%	75.9%	77.0%	77.0%	80.0%	70.0%	75.8%	77.0%	77.0%	78.0%	70.0%	75.2%	75.2%
Variable subscription fees	33.0%	25.3%	24.1%	23.0%	23.0%	20.0%	30.0%	24.2%	23.0%	23.0%	22.0%	30.0%	24.8%	24.8%
Expense Analysis:														
Total Cost of Revenues	26.3%	23.8%	19.7%	20.5%	16.8%	16.3%	16.0%	17.3%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%
Sales & Marketing	54.2%	61.2%	47.3%	45.3%	53.0%	45.2%	42.8%	46.4%	49.4%	53.0%	44.4%	41.3%	46.7%	46.5%
R&D	18.1%	18.1%	14.3%	13.6%	14.3%	14.3%	14.5%	14.2%	14.2%	14.6%	14.1%	14.1%	14.3%	14.2%
General & Administrative	14.9%	19.6%	17.5%	17.2%	19.0%	16.6%	17.5%	17.6%	17.2%	18.4%	15.9%	16.4%	16.9%	16.1%
Depreciation and Amortization	-	7.4%	8.7%	8.0%	7.2%	6.8%	5.5%	6.8%	7.5%	6.7%	6.3%	5.0%	6.3%	5.8%
Margin Analysis:														
Gross Margin	73.7%	76.2%	80.3%	79.5%	83.2%	83.7%	84.0%	82.7%	84.0%	84.0%	84.0%	84.0%	84.0%	84.0%
Operating Margin	**(13.5%)**	**(30.1%)**	**(7.5%)**	**(4.6%)**	**(10.4%)**	**0.7%**	**3.8%**	**(2.3%)**	**(4.3%)**	**(8.8%)**	**3.3%**	**7.2%**	**(0.2%)**	**1.4%**
Adj. EBITDA Margin	**(12.5%)**	**(23.0%)**	**1.4%**	**3.6%**	**(3.2%)**	**7.8%**	**9.5%**	**4.7%**	**3.3%**	**(1.8%)**	**9.8%**	**12.4%**	**6.3%**	**7.4%**
Tax Rate	(1.3%)	(0.2%)	2.5%	3.6%	0.8%	(9.4%)	(4.5%)	6.2%	5.1%	1.9%	(11.0%)	(2.8%)	14.2%	1,822.4%
Net Margin	(22.7%)	(30.7%)	(7.3%)	(4.3%)	(10.4%)	1.1%	4.3%	(2.0%)	(3.8%)	(10.3%)	1.9%	6.0%	(1.1%)	0.2%
Q/Q Growth Rates:														
Fixed subscription fees				*(0.1%)*	*2.9%*	*7.3%*	*0.3%*		*(0.6%)*	*4.7%*	*6.5%*	*3.8%*		
Variable subscription fees				*(33.6%)*	*2.9%*	*(10.2%)*	*71.9%*		*(30.7%)*	*4.7%*	*0.6%*	*57.7%*		
Total Revenue				***(10.5%)***	***2.9%***	***3.3%***	***14.6%***		***(9.7%)***	***4.7%***	***5.1%***	***15.6%***		
Gross Profit				*(14.1%)*	*7.6%*	*3.9%*	*15.1%*		*(9.7%)*	*4.7%*	*5.1%*	*15.6%*		
Non-GAAP Operating Income				***nm***	***nm***	***nm***	***551.9%***		***nm***	***nm***	***nm***	***153.5%***		
Y/Y Growth Rates:														
Fixed subscription fees		*39.1%*	*20.4%*	*15.1%*	*10.6%*	*14.8%*	*10.6%*	*12.7%*	*10.0%*	*12.0%*	*11.2%*	*15.0%*	*12.1%*	*14.5%*
Variable subscription fees		*(4.1%)*	*12.9%*	*21.9%*	*17.2%*	*14.8%*	*5.5%*	*13.3%*	*10.0%*	*12.0%*	*25.4%*	*15.0%*	*15.3%*	*14.4%*
Total Revenue	***23.0%***	***24.8%***	***18.5%***	***16.6%***	***12.1%***	***14.8%***	***9.0%***	***12.9%***	***10.0%***	***12.0%***	***14.0%***	***15.0%***	***12.9%***	***14.5%***
Gross Profit	*23.4%*	*29.2%*	*24.7%*	*19.8%*	*17.3%*	*19.1%*	*10.6%*	*16.3%*	*16.2%*	*13.1%*	*14.5%*	*15.0%*	*14.7%*	*14.5%*
Sales & Marketing	*52.9%*	*41.1%*	*(8.5%)*	*(16.0%)*	*18.6%*	*18.5%*	*30.0%*	*10.8%*	*20.0%*	*12.0%*	*12.0%*	*11.0%*	*9.0%*	*14.0%*
R&D	*23.2%*	*24.6%*	*(6.4%)*	*(1.4%)*	*9.1%*	*15.5%*	*25.0%*	*12.1%*	*15.0%*	*15.0%*	*12.0%*	*12.0%*	*13.4%*	*14.0%*
General & Administrative	*26.2%*	*64.8%*	*5.5%*	*17.4%*	*25.7%*	*(3.2%)*	*17.0%*	*13.6%*	*10.0%*	*8.0%*	*9.0%*	*8.0%*	*8.7%*	*9.0%*
Total Non-GAAP Operating Expenses	*40.7%*	*41.7%*	*(5.3%)*	*(7.6%)*	*18.3%*	*12.4%*	*25.8%*	*11.6%*	*16.8%*	*11.6%*	*11.3%*	*10.5%*	*12.4%*	*12.9%*
Non-GAAP Operating Income	***nm***	***nm***	***nm***	***nm***	***nm***	***nm***	***(58.0%)***	***nm***	***nm***	***nm***	***465.5%***	***119.9%***	***nm***	***nm***
Non-GAAP Net Income	*nm*	*nm*	*nm*	*nm*	*nm*	*nm*	*(54.4%)*	*nm*	*nm*	*nm*	*90.1%*	*61.1%*	*nm*	*nm*
Non-GAAP EPS	*nm*	*nm*	*nm*	*nm*	*nm*	*nm*	*(53.4%)*	*nm*	*nm*	*nm*	*76.7%*	*47.5%*	*nm*	*nm*

Source: BTIG, Company Filings.

ChannelAdvisor Corp. Balance Sheet

ChannelAdvisor, Inc. Balance Sheet				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17	
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E
Assets													
Cash & Cash Equivalents	$104.4	$68.4	$60.5	$61.7	$62.4	$64.7	$62.2	$62.2	$60.2	$62.0	$62.4	$60.2	$60.2
Accounts receivable	14.0	14.6	18.9	18.1	18.1	15.3	20.5	20.5	18.5	18.8	16.3	22.1	22.1
Other current assets	3.6	4.9	9.4	6.5	6.7	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Total Current Assets	121.9	87.9	88.8	86.3	87.2	87.1	89.8	89.8	85.8	87.9	85.8	89.4	89.4
PP&E, net	9.1	12.6	16.7	15.6	13.9	14.4	13.2	13.2	11.6	10.2	8.8	7.7	7.7
Goodwill	16.1	21.5	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
Intangible assets	0.7	4.1	3.2	3.1	3.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Restricted cash	0.7	0.6	0.1	-	-	-	-	-	-	-	-	-	-
Other	0.3	0.3	0.5	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0
Total Assets	$148.8	$127.0	$131.0	$127.3	$126.4	$126.7	$128.3	$128.3	$122.7	$123.5	$120.0	$122.6	$122.6
Liabilities													
Accounts payable	$4.2	$0.6	$2.4	$1.1	$4.1	$2.4	$2.5	$2.5	$0.9	$4.4	$2.7	$2.8	$2.8
Accrued expenses	7.5	7.3	9.9	7.9	8.4	8.7	10.8	10.8	8.7	9.4	9.9	12.4	12.4
Deferred Revenues	14.1	16.8	19.8	21.7	23.8	23.4	24.4	24.4	26.4	29.2	29.5	31.0	31.0
Notes payable / lease obligations	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	1.7	2.6	4.2	4.4	3.7	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Total Current Liabilities	27.5	27.3	36.4	35.0	40.0	38.8	41.9	41.9	40.3	47.3	46.4	50.5	50.5
Long-term debt	-	-	-	-	-	-	-	-	-	-	-	-	-
LT Deferred Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-
Long-term capital leases	1.6	2.0	7.1	6.9	5.0	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Other long-term liabilities	1.9	4.1	3.6	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Total Liabilities	31.0	33.4	47.0	45.1	48.0	47.8	51.0	51.0	49.4	56.3	55.4	59.5	59.5
Stockholders' equity	117.8	93.6	83.9	82.1	78.4	78.8	77.4	77.4	73.3	67.2	64.5	63.0	63.0
Total Liabilities + Stockholder's Equi	$148.8	$127.0	$131.0	$127.3	$126.4	$126.7	$128.3	$128.3	$122.7	$123.5	$120.0	$122.6	$122.6
% Change Y/Y													
Cash and Cash Equivalents	860.9%	(34.5%)	(11.5%)	(1.9%)	8.1%	9.7%	2.9%	2.9%	(2.5%)	(0.6%)	(3.7%)	(3.3%)	(3.3%)
Receivables	45.8%	4.8%	29.6%	15.4%	10.3%	(5.3%)	8.2%	8.2%	2.5%	4.0%	6.7%	7.8%	7.8%
Deferred Revenue	44.5%	19.5%	17.8%	21.3%	25.9%	17.9%	22.8%	22.8%	21.9%	22.6%	26.2%	27.1%	27.1%
Balance Sheet Summary													
Current Ratio	4.4x	3.2x	2.4x	2.5x	2.2x	2.2x	2.1x	2.1x	2.1x	1.9x	1.8x	1.8x	1.8x
Book Value Per Share	$8.60	$3.80	$3.35	$3.25	$3.07	$3.07	$2.99	$3.02	$2.77	$2.48	$2.33	$2.23	$2.30
Cash Per Share	7.62	2.78	2.41	2.44	2.44	2.52	2.41	2.43	2.27	2.29	2.25	2.13	2.20
Net Cash Per Share	na	na	na	na	na	na	na	na	na	na	na	na	na
Return On Equity (LTM)		(24.6%)	(8.3%)	(2.9%)	(3.2%)	(0.8%)	(2.9%)	(2.8%)	(2.9%)	(3.4%)	(3.2%)	(2.1%)	(2.0%)
Return on Assets (LTM)		(18.9%)	(5.7%)	(1.9%)	(2.1%)	(0.5%)	(1.8%)	(1.8%)	(1.8%)	(2.0%)	(1.8%)	(1.2%)	(1.1%)
Working Capital, net	$9.7	$14.1	$16.5	$17.0	$13.9	$12.9	$18.0	$18.0	$17.6	$14.4	$13.6	$19.3	$19.3
Avg. Diluted Shares Outstanding	13.7	24.6	25.1	25.3	25.5	25.7	25.9	25.6	26.5	27.1	27.7	28.3	27.4
Model Assumptions													
DSO (excluding deferred revenue)	74.9	62.8	68.8	62.5	60.9	49.8	58.3	65.9	58.3	56.6	46.6	54.7	62.9
DSO (billings)	na	61.1	66.7	58.4	55.9	50.1	56.6	63.1	54.4	51.9	46.1	52.6	59.9
Accounts Payable Days (off COGS)	86.5	10.2	44.8	18.5	83.0	47.7	43.9	45.8	18.5	83.0	47.7	43.9	50.6
Accrued expenses (% of Revenues)	11.0%	8.6%	9.9%	7.5%	7.7%	7.8%	8.4%	9.5%	7.5%	7.7%	7.8%	8.4%	9.7%

Source: BTIG, Company Filings.

ChannelAdvisor Corp. Cash Flow Statement

ChannelAdvisor, Inc. Cash Flow Statement				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17		
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Cash flows from operations:														
Net income	($20.6)	($34.5)	($21.0)	($4.6)	($6.7)	($2.6)	($1.5)	($15.3)	($4.0)	($6.2)	($2.6)	($1.5)	($14.3)	($13.1)
Depreciation and amortization	3.7	6.3	8.8	2.1	2.0	1.9	1.8	7.7	2.2	2.0	2.0	1.8	8.1	8.5
Bad debt expense	0.5	1.3	1.2	0.3	0.1	(0.1)	-	0.2	-	-	-	-	-	-
Stock-based comp	2.1	8.0	11.8	3.4	3.9	2.9	-	10.2	-	-	-	-	-	-
Deferred income taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	4.7	0.1	(0.3)	(0.3)	(0.3)	(0.2)	-	(0.8)	-	-	-	-	-	-
Changes in operating assets & liabilities														
Accounts receivable, net	(4.9)	(1.4)	(5.8)	0.5	(0.5)	2.8	(5.2)	(2.4)	2.0	(0.3)	2.5	(5.8)	(1.6)	(1.7)
Prepaid expenses and other assets	(1.0)	(1.1)	(3.5)	2.5	(0.3)	(0.4)	-	1.8	-	-	-	-	-	-
Restricted cash	(0.0)	0.1	0.6	-	-	-	-	-	-	-	-	-	-	-
Accounts payable and accrued expenses	5.7	(2.7)	3.6	(3.1)	2.8	(0.9)	2.2	0.9	(3.6)	4.2	(1.2)	2.7	2.0	2.1
Deferred revenue	4.5	2.4	3.1	1.9	2.5	(0.2)	0.9	5.1	2.1	2.7	0.4	1.4	6.6	7.5
Other liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash from Operations	**($5.3)**	**($21.5)**	**($1.5)**	**$2.7**	**$3.4**	**$3.2**	**($1.8)**	**$7.6**	**($1.5)**	**$2.5**	**$1.0**	**($1.4)**	**$0.7**	**$3.4**
Cash flows from investing:														
Capital expenditures	($3.7)	($6.0)	($4.1)	($0.6)	($0.1)	($0.2)	($0.6)	($1.6)	($0.6)	($0.6)	($0.6)	($0.7)	($2.6)	($2.9)
Payment of internal use software development co	(1.5)	(0.8)	(0.2)	(0.1)	(0.1)	(0.0)	(0.0)	(0.2)	(0.0)	(0.0)	(0.0)	(0.0)	(0.2)	(0.2)
Business combinations	-	(8.0)	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash from Investing	**($5.2)**	**($14.9)**	**($4.3)**	**($0.7)**	**($0.1)**	**($0.2)**	**($0.7)**	**($1.8)**	**($0.6)**	**($0.7)**	**($0.7)**	**($0.8)**	**($2.7)**	**($3.1)**
Cash flows from financings:														
Proceeds from issuance of common stock, net of	$118.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds from / (repayment) of notes payable an	(15.4)	(1.7)	(1.7)	(0.2)	(1.3)	(0.6)	-	(2.1)	-	-	-	-	-	-
Proceeds from exercise of stock options	4.0	2.1	0.9	(0.8)	1.2	0.4	-	0.8	-	-	-	-	-	-
Dividends paid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repurchase of common stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	(2.9)	-	(0.7)	(1.1)	(1.1)	(0.3)	-	(2.4)	-	-	-	-	-	-
Net Cash from Financings	**$104.2**	**$0.4**	**($1.6)**	**($2.0)**	**($1.2)**	**($0.5)**	**-**	**($3.7)**	**-**	**-**	**-**	**-**	**-**	**-**
Foreign Currency Impact	(0.1)	(0.0)	(0.6)	0.2	(0.4)	(0.1)	-	(0.3)	-	-	-	-	-	-
Net Increase / Decrease in Cash	**$93.5**	**($36.0)**	**($7.9)**	**$0.1**	**$1.8**	**$2.4**	**($2.5)**	**$1.8**	**($2.1)**	**$1.9**	**$0.3**	**($2.1)**	**($2.0)**	**$0.3**
Free Cash Flow	**($9.0)**	**($27.5)**	**($5.5)**	**$2.1**	**$3.3**	**$3.0**	**($2.5)**	**$6.0**	**($2.0)**	**$1.9**	**$0.4**	**($2.1)**	**($1.9)**	**$0.5**
as a % of revenues	(13.3%)	(32.4%)	(5.5%)	7.9%	12.4%	10.8%	(7.6%)	5.3%	(7.0%)	6.3%	1.2%	(5.7%)	(1.4%)	0.3%
as a % of billings	#DIV/0!	(114.4%)	(5.3%)	7.4%	11.3%	10.8%	(7.4%)	5.1%	(6.6%)	5.7%	1.2%	(5.5%)	(1.4%)	0.3%
q/q % change				(24.5%)	60.9%	(9.9%)	(181.3%)		(16.8%)	(193.1%)	(79.4%)	(637.6%)		
y/y % change	1,121.2%	204.8%	(79.9%)	(144.2%)	(185.0%)	724.0%	(188.9%)	(208.6%)	(198.0%)	(43.3%)	(87.0%)	(14.3%)	(130.9%)	(127.4%)

Source: BTIG, Company Filings.

BTIG

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BTIG

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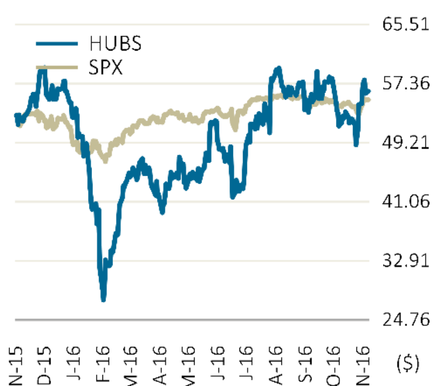
HUBS $56.30

NEUTRAL

52 week range	$27.52 - $59.55
Market Cap (m)	$1,993

Price Performance



Source: IDC. Market data as of 11/15/2016.

Software and Digital Commerce

HubSpot, Inc.

Transfer of Coverage: Walking a Tightrope and Upside Looks Priced In; Maintain Neutral

The investment story has generated enough inbound traffic on its own, and the company stands out as one a leading marketing software solution for mid-market enterprises and SMBs. This should drive upside to estimates over the next few quarters, but we still see the business as inefficient on a unit economics basis. On this front, the company is walking a tightrope towards growth and profitability. Customer churn remains high, and return on sales and marketing spend will likely peak in FY16 (even in an illustrative upside revenue scenario in which FY17 estimates are ~16% above current consensus). This business model inefficiency – along with the fact this aforementioned revenue upside already looks priced in – creates balanced risk/reward at current levels. We are transferring coverage from Joel Fishbein, maintain Neutral.

- **Unit economics point to inefficiency.** Many levers drive the machine, and a small miss can have ripple effects through the other parts of the business. In particular, the customer growth shortfall in 2Q (29% vs. >30% estimate) pushed out the timeframe for a 2x LTV/CAC ratio by a full year. Moreover, customer churn persists in the "low-20s," further pushing out the timeframe for unit economic profitability.
- **What about revenue (or ARPU) growth?** Setting aside the complex machinery of LTV and CAC math, sales and marketing ROI still looks like peaking this year. Granted, Street estimates are likely too low, but even our upside scenario (in which FY17 subscription revenue is ~16% higher than current estimates) doesn't reverse the trend.
- **What if the upside case happens?** Based on FY17 Street revenues, HubSpot looks expensive (5x vs. peers' 4x). The upside case though brings the multiple in line, suggesting that the stock is fully valued. Assuming 5x is the "right" multiple, the upside case doesn't garner enough appreciate for us to change our recommendation.
- **Valuation:** Business model risks persist and the stock trades in line with peers even in an upside case, so we rate HubSpot Neutral.

Estimates

	1Q15 A	2Q15 A	3Q15 A	4Q15 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	FY17 E
Sales	38	43	48	53	182	59	65	71	74	269	358
Diluted EPS (Adj.)	(0.18)	(0.17)	(0.27)	(0.12)	(0.74)	(0.11)	(0.07)	(0.05)	(0.21)	(0.45)	(0.31)
FCF	(3)	0	(6)	(5)	(13)	(5)	3	2	(5)	(5)	(3)
EV/Sales (x)	-	-	-	-	10.33	-	-	-	-	6.99	5.25
P/FCF (x)	-	-	-	-	-	-	-	-	-	-	-

Source: BTIG Estimates and Company Documents ($ in millions, except per share amount)

Adjusted EPS excludes stock-based comp, amortization and acquisition related costs.

Please Read: Important disclosures and analyst's certification appear in Appendix

Company Description

HubSpot, Inc. provides cloud-based marketing and sales software platform that enables businesses to deliver an inbound experience. Its software platform features integrated applications to help businesses convert visitors into leads, close leads into customers and delight customers to become promoters of those businesses. These integrated applications include social media, search engine optimization, blogging, website content management, marketing automation, email, analytics and reporting. HubSpot was founded in April 2005 and is headquartered in Cambridge, MA.

Investment Thesis

The investment story has generated enough inbound traffic on its own, and the company stands out as one of the leading marketing software solutions for mid-market enterprises and SMBs. The mindshare and brand awareness associated with the product has in turn driven strong revenue growth, and HubSpot still looks to have ample market opportunity ahead. So what's the catch?

We fully expect some upside to estimates in the coming few quarters, but believe the company is walking an execution "tightrope" over the long-term to reconcile a high-growth (and high-churn) business with increasing demands for profitability. More specifically, we believe that valuation looks stretched at current levels, particularly in light of both current Street expectations and the anticipated upside in the model. HubSpot is investing heavily to continue achieving a high level of growth, but at some point see sufficient risk of a pullback if the growth engine starts slowing next year.

The company is attempting to address this dynamic by making its customer base more profitable, and the introduction of the CRM product has helped drive ARPU growth ahead of last year's levels. This will be a crucial metric to watch as the company continues to scale, and HubSpot has made good strides in recent quarters by elevating dollar retention into the mid-90s (suggesting 15-20pts of upsell). However, despite impressive early results on ladder-up strategy into a marketing *and* sales solution, we still see the former as too "underpenetrated" (we estimate only ~6% of consolidated revenues) in the overall base to compensate for any slowdown in growth in the former.

This puts further pressure on the overall unit economics, and in turn perpetuates the inefficiency in the business model. This normally wouldn't be an issue considering the large TAM ($30 billion according to the company) and relatively friendly competitive dynamics in its core mid-market segment, but customer growth has also ticked down in recent quarters, while overall logo churn remains in the low-80s.

The common argument against our unit economic model is that expectations are sufficiently low, and that the company can reasonably overachieve on Street expectations of only ~30% y/y subscription revenue growth. We agree, but also believe that investors have already priced in the anticipated estimate revisions at the current trading price. Instead, to reiterate our point regarding the unprofitable unit economics, what's most intriguing to us is that even *with*

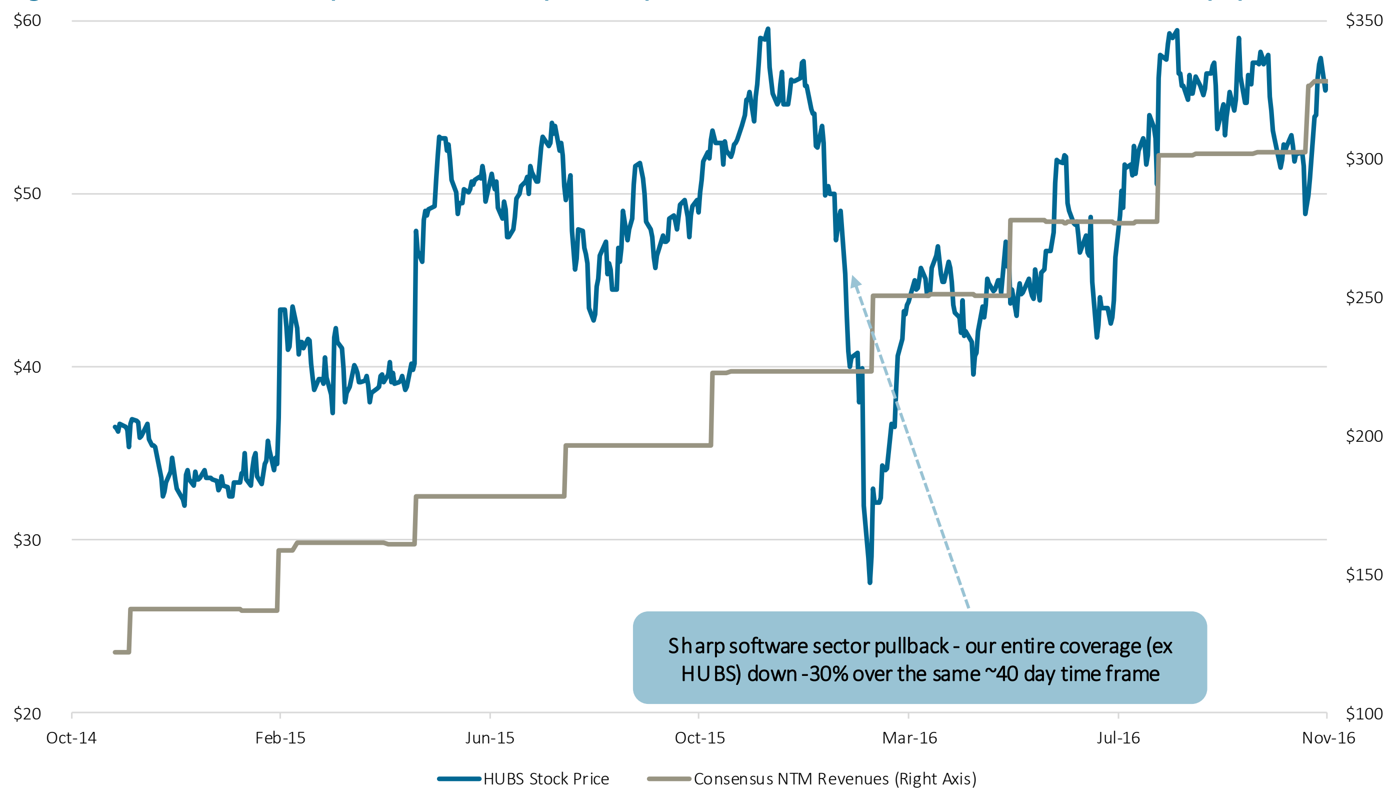
continued beat and raise quarters, unit economic ratios look as if they'll peak in FY16.

Therefore, we temper our own expectations, despite the likely upward revisions in analyst models over the next few quarters. Instead, we take a longer-term view of the business, and see current risk/reward as balanced. We maintain our Neutral rating from our prior coverage of the stock, and leave our estimates largely intact.

A Conversation on Unit Economics

Let's start under the assumption that Street estimates on subscription revenue growth for 2H16 and FY17 are too low. That in itself is normally enough to drive upside in the stock over the long-term, and the HubSpot investment story has generally followed the same principle since going public in October 2014 (with the exception of the sharp sector-wide pullback at the start of the year).

Figure 1: The Stock Generally Rises in Lock-Step With Upward Consensus Estimate Revisions ($mm, except per share)



Source: BTIG, Factset.
Note: Our coverage includes CRM, N, NOW, TEAM, WDAY, CTXS, CVLT, ORCL, RHT, CUDA, CHKP, FEYE, IMPV, PANW, PFPT, QLYS and SYMC.

To date, the model looks to be working. The company has invested significantly in the product and go-to-market model (opex is expected to be ~83% of revenues in FY16), but this has been matched by a revenue CAGR of 52% over the last three years and average revenue per user (ARPU) acceleration. The new CRM and Sales products – along with the long-term opportunity in mid-market/SMB digital marketing – are expected to

perpetuate growth and further boost ARPU as the company scales towards profitability.

However, despite the string of impressive results, the unit economics tell a story of a company that is certainly growing quickly, but is still falls quite short of attaining a sustainable long-term business model. Based on our current estimates for subscription revenue growth – along with basic assumptions around gross margin, customer count, churn and sales and marketing investments – we don't expect HubSpot to reach a customer lifetime value (LTV) to customer acquisition cost (CAC) ratio of 2x until FY18.

Figure 2: Lots of Moving Pieces Leave Little Margin for Error on the Path to Unit Economic Profitability

	For the Year Ended					
	FY13 A	FY14 A	FY15 A	FY16 E	FY17 E	FY18 E
Subscription Revenue	$70.8	$106.3	$167.9	$252.3	$338.2	$434.6
Y/Y Growth	*54.4%*	*50.1%*	*57.9%*	*50.3%*	*34.0%*	*28.5%*
GAAP Cost of Subscription	20.3	24.6	32.3	40.9	51.5	63.5
Subscription Gross Profit	50.5	81.8	135.7	211.4	286.7	371.1
Subscription Gross Margin	*71.4%*	*76.9%*	*80.8%*	*83.8%*	*84.8%*	*85.4%*
Number of Customers	10,111	13,607	18,116	23,066	29,118	36,072
Y/Y Growth	*23.9%*	*34.6%*	*33.1%*	*27.3%*	*26.2%*	*23.9%*
Gross Profit per Avg Customer ($000s)	$5.5	$6.9	$8.6	$10.3	$11.0	$11.4
Y/Y Growth		*24.6%*	*24.1%*	*20.1%*	*7.0%*	*3.6%*
Customer Churn (1)	25%	23%	21%	19%	17%	15%
Customer Lifetime (years)	*4.0*	*4.3*	*4.8*	*5.3*	*5.9*	*6.7*
Customer Lifetime Value ($000s)	**$22.1**	**$30.0**	**$40.7**	**$54.0**	**$64.6**	**$75.9**
Y/Y Growth		***35.4%***	***35.9%***	***32.7%***	***19.6%***	***17.4%***
GAAP Sales & Marketing	$53.2	$78.8	$112.6	$162.4	$212.1	$261.5
Net-New Customers	1,952	3,496	4,509	4,950	6,052	6,954
Customer Acquisition Cost ($000s)	$27.2	$22.5	$25.0	$32.8	$35.0	$37.6
Y/Y Growth		*(17.2%)*	*10.8%*	*31.4%*	*6.8%*	*7.3%*
LTV / CAC Ratio	0.81x	1.33x	1.63x	1.65x	1.84x	2.02x
Y/Y Growth		*63.6%*	*22.6%*	*1.0%*	*12.0%*	*9.5%*
Memo: Y/Y ARPU Growth		*15.6%*	*18.1%*	*15.7%*	*5.8%*	*2.9%*

Source: BTIG, Factset.

(1) Customer churn as of F15 in the "low-20s." We estimate churn was ~25% in F13 and decreases by 2 points annually going forward.

To be fair, there are many moving pieces in this model (as outlined by our assumptions above). However, that simply further emphasis the extent to which the company is walking a tightrope towards profitability. There is very little wiggle room for error, most recently evidenced by the slight miss to customer additions in 2Q results. While the company by no means posted a disappointing result (+29% y/y vs. our estimate of >30% y/y), falling short even by a fraction has the analogous effect of a grain of sand in a complex machine. In this case, keeping all of our other assumptions consistent with our pre-2Q

earnings analysis, the slight reduction in the rate of customer sign-ups actually puts the company on course for a *flat* LTV/CAC ratio in FY16 (vs. 10% growth prior). This pushes the entire timeframe for crossing the 2x threshold out a full year, as our prior analysis assumed HubSpot would cross this mark by FY17.

And assuming the company can't restore customer growth above the 30% mark, this small miss has a ripple effect that puts added pressure on multiple other facets of the business. Either the company needs to drive down churn, reign in sales & marketing spend, improve the subscription gross margin, or show significant subscription revenue upside (through cross-selling the Sales product into the marketing base). On the first, we model a 2% reduction per year, but view this as conservative since the company is "comfortable" with the current low-20s. With respect to improving profitability, the gross margin is already approaching the mid-80s, while the pace of sales and marketing growth gets cut in half beyond FY16 to accommodate management's target of positive FCF in 1H17.

But what about that subscription revenue upside?

But What If Revenue (or ARPU) Goes Up? Understanding Why a Bull Case Doesn't Work

The company's average subscription revenue upside is ~7% since going public, so we'll use this as our baseline assumption. Similarly, we need to factor in the "raise" part of a typical "beat and raise" quarter; on this front, HubSpot's average upside is 5.5%. Using these two assumptions, we can sketch out a preliminary model that estimates what an "upside" revenue case would look like for the remainder of FY16 and FY17. This exercise isn't a call on where numbers are definitively heading, as they imply material gains (4% in FY16, 16% in FY17) to current consensus estimates. Rather, we use it to understand better what actual subscription revenues could look like in the next 18 months based on the company's history of quarterly outperformance (see Figure 3 on next page).

The magnitudes of the aforementioned increases may seem quite large, and at first glance we would agree. Our assumptions imply that HubSpot could add ~$100m in subscription revenue in FY17 in an upside case, effectively mirroring the performance of the FY16 upside case. All in, this scenario would imply ~56% y/y growth for FY16 (a smidge below FY15's 58% y/y result) and ~45% y/y growth in FY17 – a not unreasonable deceleration as the company approaches its first $100m subscription revenue quarter in 4Q17.

Figure 3: An Upside Scenario Could Yield ~$380m in Subscription Revenues in FY17 ($ in millions)

FY16E Upside Revenue Scenario					
	1Q16 A	2Q16 A	3Q16 E	4Q16 E	FY16 E
Actual / Consensus Subscription Revenues	$54.9	$60.9	$66.5	$70.0	$252.4
Upside case					
Standalone Subscription Revenues	54.9	60.9	66.5	70.0	
Estimated Raise (Assumes 5.5% Upside)	--	--	--	3.9	
Pro Forma Consensus Subscription Revenue	54.9	60.9	66.5	73.9	256.2
Estimated Beat (Assumes 7% Upside)	--	--	--	5.2	5.2
Pro Forma Reported Subscription Revenue	$54.9	$60.9	$66.5	$79.0	$261.4
Memo:					
Actual Results Δ vs. Current Consensus	--	--	--	12.9%	3.6%
Current Consensus y/y % Change	57.2%	55.1%	50.8%	41.1	50.3
Pro Forma Consensus y/y % Change	57.2	55.1	50.8	48.8	52.6
Pro Forma Reported y/y % Change	57.2	55.1	50.8	59.3	55.7

FY17E Upside Revenue Scenario					
	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E
Current Consensus Subscription Revenues	$74.0	$79.3	$86.0	$92.4	$331.7
Est. FY17 Raise with 4Q16 Results (Assumes 5% Upside)	3.7	4.0	4.3	4.6	16.6
Pro Forma Consensus After 4Q16 Results	77.7	83.3	90.3	97.0	348.3
Upside case					
Standalone Subscription Revenues	77.7	83.3	90.3	97.0	348.3
Estimated Raise (Assumes 5% Upside)	--	4.2	4.5	4.9	13.5
Pro Forma Consensus Subscription Revenue	77.7	87.4	94.8	101.9	361.8
Estimated Beat (Assumes 5% Upside)	3.9	4.4	4.7	5.1	18.1
Pro Forma Reported Subscription Revenue	$81.6	$91.8	$99.6	$107.0	$379.9
Memo:					
Actual Results Δ vs. Current Consensus	10.3%	15.8%	15.8%	15.8%	14.5%
Current Consensus y/y % Change	34.7	30.2	29.3	32.0	31.4
Pro Forma Consensus y/y % Change	41.4	43.5	42.6	37.9	41.2
Pro Forma Reported y/y % Change	48.5	50.7	49.7	35.4	45.3

Source: BTIG, Factset.
Note: Consensus estimates as of 11/15/2016.

In isolation, these results look impressive. However, it's important to understand their impact in the wider context of the business, specifically within the prior unit economic framework we established. When looked at through this lens, we do notice a fundamental improvement in efficiency, but unfortunately (and somewhat surprisingly), the level of subscription revenue growth called for in our FY17 upside scenario *still* isn't enough to drive an LTV/CAC ratio >2x. In fact, this exercise further highlights the importance of achieving new customer growth consistently above the 30% mark, or of reducing churn below 20%. Pulling either of these levers would drive the unit economics significantly higher than simple increases in subscription revenue/ARPU, thus marking sufficient progress on the path to balanced, profitable growth. However, as we outlined previously, we view either of these as unlikely.

Investors may harp on our relatively dogmatic insistence on measures like customer churn and LTV, signalling instead that ARPU and *dollar* churn/renewal are instead the answer. And in this regard, it's understandable to focus on how the company extracts profitability from its already considerable customer base, rather than focusing on the "need" to continue expanding it. But even looking at unit economics on a "dollar" basis signals that FY16 may be the peak of efficiency for the business model, even assuming that HubSpot achieves our upside case.

The metrics in question instead are more "pure" efficiency related by only measuring the incremental gross profit (CAC ratio) or incremental subscription revenue (magic number) relative to the amount of sales and marketing spending in the prior period. The latter in particular accounts for the ARPU as well in the business, as incremental subscription revenue captures all net-new business as well as up- and cross-sells. Therefore, with fewer moving parts, it offers a more simplistic understanding of what's driving unit economics. Both metrics though paint of a picture that is clearly overspending relative to the value recognized within its customer base.

This is not abnormal for SaaS companies in the middle of scaling their businesses; heavy upfront spending is required to build sufficient traction in the market and acquire a critical mass of customers. Eventually, renewal business (this is where dollar and customer churn come into play) takes on a larger portion of the revenue base. This in turn drives down the cost of customer acquisition (it's always easier to sell to an existing customer than to sign up a new one!), and a virtuous cycle unfolds as the now-seasoned customer cohorts drive predictable revenue, operating income and cash flow growth.

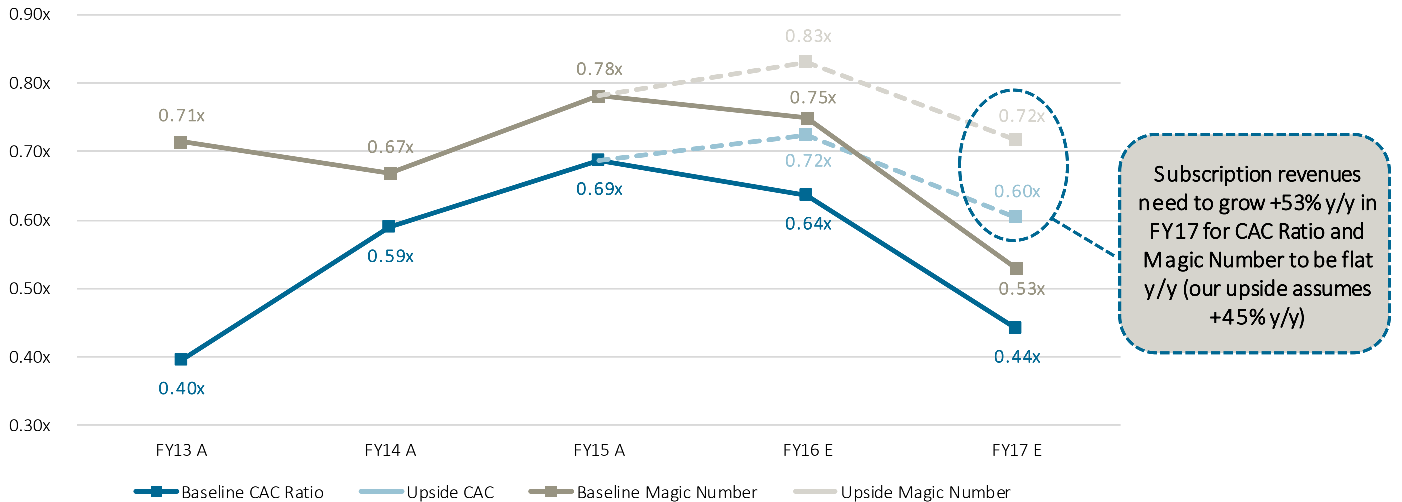
From HubSpot's perspective though, it looks as if the company is pursuing a course of unprofitable growth. Moreover, these trends don't look like they will reverse in the near term, unless the company becomes much more vigilant with respect to its expense growth, or if there's a major inflection in subscription revenue beyond our upside case assumptions. However, similar to our assumptions around customer churn and growth in our earlier example, we view either of these as unlikely near-term. This is particularly true on the case of sales and marketing spending, where HubSpot is still only a fraction of its $30 billion TAM.

To distil this concept further into what's actually required to keep unit economics flat in FY17, we estimate that subscription revenues need to growth +53% y/y (we assume +45%). Note that this growth would be on top of the upside also expected for FY16, which we estimate could be +56% y/y. Therefore, the model today requires minimal deceleration in revenue growth for three straight years (FY15 was +58% y/y) in order to just maintain the current level of efficiency (which we note is still below 1x, implying the company is not yet making a return on its sales and marketing investments).

This gap could be filled over the long-term by greater penetration of the Sales product in the current marketing install base (the company has said it's in the "mid- to high-teens" right now), but it's still a small contributor to revenues at only a ~$10m run rate. In spite of all this, we still see the company achieving its breakeven FCF target in FY17, along with P&L breakeven in FY18. However, we

maintain that the company is walking a tightrope that's fraught with execution risk. Any further slowdown in the level of growth across a host of variables could cause a meaningful setback on its path to profitability.

Figure 4: Subscription Revenues Need to Grow 8 Points Higher Than Our Upside Case to Keep Unit Economics Flat in FY17



Source: BTIG, Factset.

Wait, I Thought You Said Numbers Are Going Up…

They are, but that still doesn't mean there's sufficient upside in the stock at these levels. HubSpot actually trades at a premium to the rest of the on-demand software universe on an EV/Next FY Revenues basis (4.9x vs. peers at 4.1x). This difference is likely down to the fact that consensus estimates for next year are too low, and the multiple falls to almost in line with the group when we factor in our upside revenue estimates. These are two separate ways of saying the same thing: HubSpot looks fairly priced, even assuming the company can add an incremental $100m in subscription revenue next year.

As a way to stress test our assumptions and see if there really *is* room to run in the stock, we assume that the 5x where the stock currently trades based on FY17 consensus estimates is the "right" multiple. When applied to our upside revenue estimates, we get a stock who's "fair value" ends up around $60-61, implying 7% appreciation. However, in light of the lengthy analysis around unit economics earlier in this piece, we view risk/reward as balanced. Instead, we stay on the sidelines.

Figure 5: HubSpot Looks Fairly Priced Even in an Upside Scenario Compared to Small SaaS Peers ($mm, except per share)

		Market	Enterprise	Consensus Revenue		Revenue Growth		EV / Revenues	
Company Name	Price	Cap	Value	This FY	Next FY	This FY	Next FY	This FY	Next FY
Atlassian Corp. Plc Class A	$27.91	$6,073	$5,344	$601	$774	31.5%	28.7%	8.9x	6.9x
Guidewire Software, Inc.	55.96	4,113	3,500	479	544	12.8	13.6	7.3	6.4
athenahealth, Inc.	103.11	4,053	4,285	1,099	1,296	18.8	18.0	3.9	3.3
Shopify, Inc. Class A	39.92	3,550	2,989	381	562	86.1	47.5	7.8	5.3
Medidata Solutions, Inc.	56.65	3,265	3,201	464	553	18.3	19.2	6.9	5.8
Blackbaud, Inc.	65.00	3,093	3,301	731	795	14.6	8.8	4.5	4.2
Twilio, Inc. Class A	34.73	3,026	2,661	268	349	60.6	30.1	9.9	7.6
WageWorks, Inc.	72.35	2,651	2,122	368	475	9.9	29.3	5.8	4.5
LogMeIn, Inc.	99.40	2,533	2,345	335	386	23.5	15.2	7.0	6.1
Paycom Software, Inc.	41.58	2,499	2,405	328	422	45.9	28.6	7.3	5.7
RealPage, Inc.	28.15	2,265	2,161	568	651	21.3	14.6	3.8	3.3
Zendesk, Inc.	22.89	2,182	1,942	311	411	48.9	32.3	6.3	4.7
Cornerstone Ondemand, Inc.	38.36	2,156	2,146	423	489	24.6	15.6	5.1	4.4
Synchronoss Technologies, Inc.	47.33	2,145	2,489	686	818	18.5	19.2	3.6	3.0
Box, Inc. Class A	14.96	1,911	1,782	395	499	30.6	26.2	4.5	3.6
Paylocity Holding Corp.	33.77	1,736	1,652	296	371	28.3	25.4	5.6	4.5
RingCentral, Inc. Class A	23.30	1,715	1,571	377	468	27.2	24.2	4.2	3.4
NIC Inc.	24.40	1,610	1,459	316	337	8.1	6.6	4.6	4.3
8x8, Inc.	14.90	1,349	1,223	253	297	21.0	17.3	4.8	4.1
Cvent, Inc.	30.50	1,297	1,115	228	263	21.4	15.5	4.9	4.2
Q2 Holdings, Inc.	30.20	1,212	1,110	149	193	37.2	29.0	7.4	5.8
SPS Commerce, Inc.	65.47	1,119	1,010	193	227	21.8	17.8	5.2	4.4
Callidus Software Inc.	16.80	1,066	788	205	243	18.6	18.4	3.8	3.2
Bottomline Technologies (de), Inc.	24.29	984	967	348	374	1.4	7.4	2.8	2.6
MINDBODY, Inc. Class A	20.80	845	761	139	179	37.2	28.9	5.5	4.2
Benefitfocus, Inc.	27.95	827	844	234	281	26.3	20.1	3.6	3.0
Five9, Inc.	15.21	807	789	160	186	23.8	16.7	4.9	4.2
PROS Holdings, Inc.	25.25	771	768	151	160	(10.0)	5.4	5.1	4.8
Web.com Group, Inc.	15.05	765	1,428	728	753	33.9	3.5	2.0	1.9
AppFolio Inc Class A	21.48	724	704	105	136	39.8	30.1	6.7	5.2
IntraLinks Holdings, Inc.	11.10	641	664	299	325	8.1	9.0	2.2	2.0
Workiva, Inc. Class A	14.80	610	571	178	209	22.3	17.6	3.2	2.7
Instructure, Inc.	18.75	530	443	110	149	50.4	35.6	4.0	3.0
					Mean	26.7%	20.5%	5.3x	4.3x
					Median	23.5	18.4	4.9	4.2
HubSpot, Inc.	$56.30	$2,005	$1,880	$269	$350	47.7%	30.3%	7.0x	5.4x
HubSpot, Inc. - Upside Case	56.30	2,005	1,880	278	402	53.0	44.4	6.8	4.7
HubSpot, Inc. - Upside Valuation	60.32	2,135	2,010	278	402	53.0	44.4	7.2	5.0

Incremental Stock Upside: 7.1%

1. HubSpot looks expensive on an EV/Next FY Revenues basis compared to small SaaS peers, but consensus estimates likely too low
2. Even in our upside revenues scenario though, the stock looks fairly valued
3. Assuming 5x EV/Revenues is the "right" multiple, there's still an insufficient amount of stock appreciation under upside scenario given tough unit economics - unfavorable risk/reward

Source: BTIG, Factset.
Note: Includes publicly traded SaaS companies with $500m to $5 billion in enterprise value. Excludes companies where acquisition pending. Market data as of 11/15/2016

Financial Position

As of the company's most recent quarter end, HubSpot has $114m in cash and short term securities and no debt. We see no material risks to the company's liquidity/funding position.

Valuation

In light of where the stock is trading and the risks around the business model, we rate HubSpot Neutral. BTIG does not provide price targets on Neutral-rated stocks.

Hubspot BTIG Est. Summary	Dec-17	Dec-18	Dec-19
($ in millions, except per share)	FY17 E	FY18 E	FY19 E
Revenue	$357.8	$457.2	$557.9
Billings	393.5	496.9	596.3
Operating income	(10.4)	4.8	17.0
EPS	(0.31)	0.09	0.38
FCF	(3.0)	15.8	25.6
Capex	26.8	32.0	36.3
Year over year growth			
Revenue	*33.2%*	*27.8%*	*22.0%*
Billings	*31.6*	*26.3*	*20.0*
Operating income	*nm*	*nm*	*250.1*
EPS	*nm*	*nm*	*325.2*
FCF	*nm*	*nm*	*62.0*

Valuation Summary	FY17 E	FY18 E	FY19 E
EV/Revenues	5.3x	4.1x	3.4x
EV/FCF	nm	118.9	73.4

Source: BTIG, Company Filings.
Note: Market data as of 11/15/2016.

Risks

Despite strong top-line growth, the company still generates net losses, and its business model looks inefficient based on unit economics. HubSpot is also focused on the mid-market, where customer churn is typically higher and ASPs are lower. Competition also remains tough with ORCL, CRM and MKTO all notable competitors in the sales and marketing automation space. Finally, expectations are high that the company can continue to show industry leading growth. As a result, any miss to Street expectations would more adversely affect HubSpot than others.

HubSpot, Inc. Income Statement

Hubspot, Inc. Income Statement				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17		
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Non-GAAP Income Statement														
Subscription	$70.8	$106.3	$167.9	$54.9	$60.9	$66.5	$70.0	$252.3	$74.2	$79.8	$89.1	$95.1	$338.2	$434.6
Professional Services and other	6.8	9.6	14.0	4.0	4.1	4.1	4.2	16.4	4.7	4.8	5.0	5.1	19.6	22.6
Total Net Revenues	77.6	115.9	181.9	59.0	65.0	70.6	74.2	268.7	78.9	84.6	94.1	100.2	357.8	457.2
Subscription	20.1	24.3	31.9	8.8	9.8	10.5	11.2	40.3	11.8	12.0	13.1	14.1	51.0	62.9
Professional Services and other	8.5	10.9	14.4	4.7	4.7	4.7	6.2	20.3	5.9	6.3	7.1	7.5	26.8	34.3
Non-GAAP Gross Profit	**49.0**	**80.6**	**135.7**	**45.4**	**50.4**	**55.4**	**56.8**	**208.0**	**61.1**	**66.3**	**74.0**	**78.6**	**280.0**	**360.0**
Non-GAAP Operating Expenses														
R&D	14.3	19.4	26.1	8.0	9.0	9.8	9.8	36.6	10.8	11.7	13.0	11.2	46.7	55.2
Sales & Marketing	52.0	73.2	105.0	32.8	35.7	37.7	43.4	149.5	43.8	47.3	53.1	53.6	197.8	246.0
General & Administrative	13.4	20.1	29.6	8.2	8.3	9.1	10.8	36.4	10.2	9.9	12.2	13.5	45.8	54.0
Total Non-GAAP Operating Expenses	79.6	112.7	160.8	49.0	52.9	56.6	63.9	222.5	64.8	68.9	78.3	78.4	290.4	355.2
Non-GAAP Operating income	(30.6)	(32.1)	(25.1)	(3.6)	(2.5)	(1.2)	(7.1)	(14.5)	(3.7)	(2.6)	(4.3)	0.2	(10.4)	4.8
(+) Depreciation and Amortization	1.8	0.1	7.3	2.2	3.0	2.8	2.5	10.5	2.9	3.9	3.8	3.4	14.0	17.9
Non-GAAP EBITDA	(28.8)	(32.0)	(17.7)	(1.4)	0.5	1.5	(4.6)	(4.0)	(0.8)	1.3	(0.5)	3.6	3.6	22.8
Interest income (expense), net	0.0	(0.3)	0.2	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.1	0.1	0.5	0.5
Other income	(0.0)	0.5	0.6	(0.3)	(0.2)	(0.4)	(0.4)	(1.3)	(0.3)	(0.2)	(0.4)	(0.4)	(1.3)	(1.3)
Non-GAAP Earnings Bef.Taxes	(30.7)	(31.8)	(24.2)	(3.8)	(2.6)	(1.5)	(7.4)	(15.3)	(3.9)	(2.7)	(4.5)	(0.0)	(11.2)	4.1
Provision for Income Taxes	-	0.1	(0.4)	(0.1)	0.1	(0.3)	(0.1)	(0.5)	(0.1)	0.1	(0.3)	(0.1)	(0.5)	(0.6)
Non-GAAP Tax Rate	-	(0.3%)	1.7%	1.4%	(2.3%)	22.1%	2.0%	3.1%	1.3%	(2.2%)	7.2%	397.3%	4.2%	(14.6%)
Preferred Stock Accretion	-	(0.3)	-	-	-	-	-	-	-	-	-	-	-	-
Non-GAAP Net Income [1]	($30.7)	($32.0)	($24.7)	($3.9)	($2.6)	($1.8)	($7.5)	($15.8)	($3.9)	($2.7)	($4.9)	($0.2)	($11.6)	$3.5
Non-GAAP EPS	($6.53)	($2.77)	($0.74)	($0.11)	($0.07)	($0.05)	($0.21)	($0.45)	($0.11)	($0.07)	($0.13)	($0.00)	($0.31)	$0.09
Avg. Diluted Shares Outstanding	4.7	11.6	33.2	34.7	35.0	35.4	35.8	35.2	36.3	36.8	37.3	37.8	37.0	39.0

(1) Non-GAAP excludes: amortization, restructuring, impairments, settlements, and stock-based comp.

Income Statement Ratios														
Revenue Analysis:														
Subscription	91.2%	91.8%	92.3%	93.2%	93.8%	94.2%	94.3%	93.9%	94.0%	94.3%	94.7%	94.9%	94.5%	95.1%
Professional Services and other	8.8%	8.2%	7.7%	6.8%	6.2%	5.8%	5.7%	6.1%	6.0%	5.7%	5.3%	5.1%	5.5%	4.9%
Expense Analysis:														
Subscription	25.9%	21.0%	17.5%	14.9%	15.1%	14.9%	15.1%	15.0%	15.0%	14.1%	13.9%	14.1%	14.3%	13.8%
Professional Services and other	11.0%	9.4%	7.9%	8.0%	7.3%	6.7%	8.3%	7.6%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
Non-GAAP Gross Margin	63.1%	69.6%	74.6%	77.0%	77.6%	78.4%	76.6%	77.4%	77.5%	78.4%	78.6%	78.4%	78.2%	78.7%
R&D	18.5%	16.8%	14.4%	13.6%	13.9%	13.8%	13.2%	13.6%	13.6%	13.9%	13.8%	11.2%	13.1%	12.1%
Sales & Marketing	66.9%	63.2%	57.7%	55.6%	54.9%	53.4%	58.5%	55.7%	55.6%	55.9%	56.4%	53.5%	55.3%	53.8%
General & Administrative	17.2%	17.3%	16.3%	13.9%	12.7%	12.9%	14.5%	13.5%	12.9%	11.7%	12.9%	13.5%	12.8%	11.8%
Margin Analysis:														
Gross Margin	63.1%	69.6%	74.6%	77.0%	77.6%	78.4%	76.6%	77.4%	77.5%	78.4%	78.6%	78.4%	78.2%	78.7%
Operating Margin	**(39.5%)**	**(27.7%)**	**(13.8%)**	**(6.1%)**	**(3.9%)**	**(1.8%)**	**(9.6%)**	**(5.4%)**	**(4.7%)**	**(3.1%)**	**(4.6%)**	**0.2%**	**(2.9%)**	**1.1%**
EBITDA Margin	(37.1%)	(27.6%)	(9.7%)	(2.4%)	0.7%	2.2%	(6.2%)	(1.5%)	(1.0%)	1.5%	(0.5%)	3.6%	1.0%	5.0%
Tax Rate	-	(0.3%)	1.7%	1.4%	(2.3%)	22.1%	2.0%	3.1%	1.3%	(2.2%)	7.2%	397.3%	4.2%	(14.6%)
Net Margin	(39.5%)	(27.6%)	(13.5%)	(6.6%)	(4.0%)	(2.5%)	(10.1%)	(5.9%)	(5.0%)	(3.1%)	(5.2%)	(0.2%)	(3.3%)	0.8%
Q/Q Growth Rates:														
Appliance				*10.7%*	*10.9%*	*9.2%*	*5.2%*		*6.0%*	*7.6%*	*11.7%*	*6.8%*		
Subscription				*14.7%*	*0.8%*	*0.6%*	*2.8%*		*11.9%*	*2.1%*	*4.2%*	*2.0%*		
Total Revenue				***11.0%***	***10.2%***	***8.6%***	***5.1%***		***6.3%***	***7.3%***	***11.2%***	***6.5%***		
Gross Profit				*13.9%*	*11.0%*	*9.9%*	*2.6%*		*7.6%*	*8.5%*	*11.6%*	*6.2%*		
Non-GAAP Operating Income				***(18.2%)***	***(29.7%)***	***(51.2%)***	***476.0%***		***(48.4%)***	***(28.2%)***	***63.0%***	***(104.7%)***		
Net Income				*(7.4%)*	*(34.1%)*	*(29.9%)*	*317.0%*		*(47.6%)*	*(32.6%)*	*83.3%*	*(96.2%)*		
Y/Y Growth Rates:														
Appliance	*54.4%*	*50.1%*	*57.9%*	*57.2%*	*55.1%*	*50.8%*	*41.0%*	*50.3%*	*35.0%*	*31.0%*	*34.0%*	*36.0%*	*34.0%*	*28.5%*
Subscription	*18.9%*	*40.2%*	*46.7%*	*24.7%*	*10.6%*	*12.8%*	*19.7%*	*16.7%*	*16.8%*	*18.3%*	*22.4%*	*21.4%*	*19.8%*	*15.3%*
Total Revenue	***50.4%***	***49.3%***	***57.0%***	***54.5%***	***51.3%***	***48.0%***	***39.6%***	***47.7%***	***33.8%***	***30.2%***	***33.3%***	***35.2%***	***33.2%***	***27.8%***
Gross Profit	*40.5%*	*64.5%*	*68.3%*	*62.0%*	*56.9%*	*55.3%*	*42.4%*	*53.3%*	*34.5%*	*31.5%*	*33.6%*	*38.4%*	*34.6%*	*28.6%*
R&D	*45.5%*	*35.7%*	*34.4%*	*37.1%*	*37.9%*	*48.8%*	*36.5%*	*40.1%*	*33.8%*	*30.2%*	*33.3%*	*14.7%*	*27.7%*	*18.2%*
Sales & Marketing	*51.7%*	*40.9%*	*43.5%*	*50.1%*	*47.3%*	*26.6%*	*48.6%*	*42.4%*	*33.8%*	*32.6%*	*40.8%*	*23.6%*	*32.3%*	*24.4%*
General & Administrative	*90.3%*	*50.5%*	*47.6%*	*24.8%*	*17.3%*	*13.2%*	*35.4%*	*22.7%*	*24.2%*	*20.0%*	*33.3%*	*25.9%*	*26.0%*	*17.7%*
Total Non-GAAP Operating Expenses	*55.8%*	*41.5%*	*42.6%*	*43.0%*	*40.1%*	*27.5%*	*44.3%*	*38.4%*	*32.1%*	*30.2%*	*38.3%*	*22.6%*	*30.5%*	*22.3%*
Non-GAAP Operating Income	***88.8%***	***4.8%***	***(21.9%)***	***(42.3%)***	***(55.2%)***	***(85.9%)***	***61.5%***	***(42.2%)***	***1.9%***	***4.0%***	***247.7%***	***(102.8%)***	***(28.2%)***	***(146.5%)***
Non-GAAP Net Income	*88.5%*	*4.5%*	*(23.0%)*	*(31.6%)*	*(55.1%)*	*(80.0%)*	*78.3%*	*(36.0%)*	*0.9%*	*3.2%*	*170.1%*	*(97.5%)*	*(26.3%)*	*(130.0%)*
Non-GAAP EPS	*71.1%*	*(57.6%)*	*(73.2%)*	*(37.6%)*	*(57.4%)*	*(80.9%)*	*70.2%*	*(39.7%)*	*(3.6%)*	*(1.7%)*	*156.3%*	*(97.6%)*	*(29.9%)*	*(128.5%)*

Source: BTIG, Company Filings.

HubSpot, Inc. Balance Sheet

Hubspot, Inc. Balance Sheet				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17		
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Assets														
Cash & Cash Equivalents	$12.6	$123.7	$55.6	$53.0	$58.7	$61.4	$56.5	$56.5	$61.5	$65.2	$56.0	$53.6	$53.6	$69.4
Marketable securities	-	-	49.0	54.6	58.8	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6
Accounts Receivable	7.2	14.3	25.1	25.1	25.6	30.4	35.6	35.6	33.1	33.1	40.2	47.3	47.3	58.2
Deferred Commission Expense	4.0	6.0	8.1	8.5	8.1	8.2	10.4	10.4	11.3	10.6	10.9	14.0	14.0	17.5
Restricted Cash	0.3	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Prepaid Hosting Costs	3.0	1.8	3.0	2.5	1.2	1.2	4.0	4.0	3.3	1.5	1.6	5.0	5.0	6.1
Prepaid Expenses and other current assets	1.6	3.5	4.9	8.0	9.2	10.2	8.0	8.0	8.3	8.6	8.6	8.9	8.9	9.8
Total Current Assets	**28.7**	**149.5**	**145.8**	**151.7**	**161.7**	**164.1**	**167.0**	**167.0**	**170.0**	**171.5**	**169.9**	**181.3**	**181.3**	**213.4**
Long Term Investments	-	11.4	40.6	35.1	30.5	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7
PP&E, net	7.2	-	18.2	26.9	28.0	29.0	31.7	31.7	34.7	37.1	40.3	44.4	44.4	58.3
Capitalized Software Development Costs, net	3.5	4.4	4.7	5.1	5.0	5.8	5.2	5.2	6.8	6.5	7.8	7.0	7.0	8.7
Restricted Cash	1.6	-	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Other assets	0.1	0.1	1.0	0.9	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Intangible assets	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill	9.3	9.3	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
Total Assets	**$50.6**	**$174.9**	**$220.4**	**$230.0**	**$236.5**	**$247.8**	**$252.8**	**$252.8**	**$260.3**	**$263.9**	**$266.8**	**$281.6**	**$281.6**	**$329.3**
Liabilities														
Accounts payable	$2.5	$2.8	$2.6	$2.7	$2.7	$3.0	$3.4	$3.4	$3.5	$3.4	$4.0	$4.2	$4.2	$5.1
Accrued compensation costs	5.1	7.7	11.4	8.9	$11.4	$10.3	$11.1	11.1	$11.9	$14.9	$13.7	$15.0	15.0	18.7
Other accrued expenses	7.2	8.0	12.3	15.0	15.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
Capital Lease Obligations	0.1	0.1	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Deferred Rent	-	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Deferred Revenues	24.7	40.8	64.4	73.3	76.5	83.3	94.6	94.6	105.1	108.5	116.6	130.0	130.0	169.3
Total Current Liabilities	**39.5**	**59.4**	**91.3**	**100.7**	**107.0**	**115.0**	**127.5**	**127.5**	**138.9**	**145.2**	**152.6**	**167.7**	**167.7**	**211.5**
Capital Lease Obligations, net	0.2	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Revolving Line of Credit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LT Deferred Rent	2.5	4.2	6.3	7.4	8.2	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
LT Deferred Revenues	0.2	0.5	0.7	0.7	0.7	0.9	0.9	0.9	1.0	1.0	1.3	1.2	1.2	1.5
Other LT Liabilities	-	-	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
-	**42.5**	**64.2**	**98.7**	**109.0**	**116.1**	**125.6**	**138.1**	**138.1**	**149.6**	**155.9**	**163.6**	**178.6**	**178.6**	**222.8**
Redeemable Preferred Stock	101.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Stockholders' equity	**(93.2)**	**110.7**	**121.7**	**121.0**	**120.5**	**122.2**	**114.7**	**114.7**	**110.7**	**108.1**	**103.2**	**103.0**	**103.0**	**106.5**
Total Liabilities + Stockholder's Equity	**$50.6**	**$174.9**	**$220.4**	**$230.0**	**$236.5**	**$247.8**	**$252.8**	**$252.8**	**$260.3**	**$263.9**	**$266.8**	**$281.6**	**$281.6**	**$329.3**
% Change Y/Y														
Cash and Cash Equivalents	(69.2%)	878.6%	(15.5%)	(20.9%)	7.0%	9.1%	4.3%	4.3%	5.9%	0.2%	(4.8%)	(2.7%)	(2.7%)	14.9%
Receivables	38.0%	97.6%	76.2%	62.2%	58.1%	54.0%	41.5%	41.5%	32.0%	29.0%	32.0%	33.0%	33.0%	23.0%
Deferred Revenue	55.5%	65.8%	57.7%	57.4%	53.6%	53.2%	46.6%	46.6%	43.5%	41.8%	39.9%	37.4%	37.4%	30.2%
Balance Sheet Summary														
Current Ratio	0.7x	2.5x	1.6x	1.5x	1.5x	1.4x	1.3x	1.3x	1.2x	1.2x	1.1x	1.1x	1.1x	1.0x
Book Value Per Share	($19.87)	$9.57	$3.66	$3.49	$3.44	$3.45	$3.20	$3.25	$3.05	$2.94	$2.77	$2.73	$2.78	$2.73
Cash Per Share	2.69	10.70	3.15	3.10	3.35	3.22	3.05	3.10	3.14	3.20	2.91	2.81	2.86	3.12
Net Cash Per Share	2.63	10.69	3.12	3.08	3.33	3.19	3.02	3.07	3.11	3.17	2.88	2.78	2.84	3.10
Return On Equity (LTM)	39.2%	(367.1%)	(21.2%)	-18.4%	-16.2%	-10.3%	-13.2%	(13.3%)	-13.5%	-14.0%	-17.4%	-10.9%	(10.7%)	3.3%
Return on Assets (LTM)	(52.8%)	(28.4%)	(12.5%)	-10.5%	-8.8%	-5.3%	-6.5%	(6.7%)	-6.3%	-6.2%	-7.3%	-4.3%	(4.4%)	1.1%
Working Capital, net	$3.6	$9.8	$19.3	$21.9	$19.6	$25.4	$31.4	$31.4	$29.0	$25.4	$33.4	$42.1	$42.1	$51.8
Avg. Diluted Shares Outstanding	4.7	11.6	33.2	34.7	35.0	35.4	35.8	35.2	36.3	36.8	37.3	37.8	37.0	39.0
Model Assumptions														
DSO (excluding deferred revenue)	33.9	44.9	50.4	38.8	36.0	39.3	43.8	48.3	38.3	35.7	39.0	43.1	48.3	46.4
DSO (billings)	na	39.4	44.6	33.8	34.3	35.8	38.0	43.4	33.8	34.3	35.8	38.0	43.9	42.7
Hosting Costs (% of COGS)	10.3%	5.0%	17.6%	18.7%	8.4%	8.1%	23.0%	17.1%	18.7%	8.4%	8.1%	23.0%	18.0%	
Deferred Commission Expense (% of Revenue)	5.1%	5.2%	4.5%	14.3%	12.5%	11.6%	14.0%	3.9%	14.3%	12.5%	11.6%	14.0%	3.9%	
Accounts Payable Days (off COGS)	32.5	29.0	20.4	18.0	16.9	18.0	17.8	20.4	18.0	16.9	18.0	17.8	19.9	19.3
LT Deferred Costs (% of Revenue)	4.5%	3.8%	1.5%	8.6%	7.7%	8.3%	7.0%	1.3%	8.6%	7.7%	8.3%	7.0%	1.3%	1.2%
Accrued Expenses (as % of Revenue)	6.5%	6.6%	6.2%	15.1%	17.6%	14.6%	15.0%	4.1%	15.1%	17.6%	14.6%	15.0%	4.2%	4.1%

Source: BTIG, Company Filings.

BTIG

HubSpot, Inc. Cash Flow Statement

Hubspot, Inc. Cash Flow Statement				Mar-16	Jun-16	Sep-16	Dec-16		Mar-17	Jun-17	Sep-17	Dec-17		
($ in millions, except per share)	FY13 A	FY14 A	FY15 A	1Q16 A	2Q16 A	3Q16 A	4Q16 E	FY16 E	1Q17 E	2Q17 E	3Q17 E	4Q17 E	FY17 E	FY18 E
Cash flows from operations:														
Net income (loss)	($34.3)	($48.5)	($46.1)	($10.2)	($11.1)	($10.5)	($7.5)	($39.2)	($3.9)	($2.7)	($4.9)	($0.2)	($11.6)	$3.5
Depreciation and amortization	4.5	5.7	7.3	2.2	3.0	2.8	2.5	10.5	2.9	3.9	3.8	3.4	14.1	18.1
Stock-based comp	3.5	16.4	21.3	6.2	8.5	8.7	-	23.4	-	-	-	-	-	-
Non-cash interest expense														
Provision for deferred income taxes	-	(0.1)	(0.1)	0.0	(0.2)	-	-	(0.2)	-	-	-	-	-	-
Provision for doubtful accounts	0.5	0.5	0.9	-	-	-	-	-	-	-	-	-	-	-
Amortization of bond premiums	-	-	0.7	0.2	0.2	0.1	-	0.5	-	-	-	-	-	-
Non-cash rent expense	0.9	0.3	1.8	1.1	0.8	0.7	-	2.7	-	-	-	-	-	-
Unrealized currency translation	-	(0.2)	(0.3)	(0.3)	0.2	(0.1)	-	(0.1)	-	-	-	-	-	-
Changes in operating assets & liabilities			-					-					-	-
Accounts receivable, net	(2.5)	(7.7)	(12.2)	0.3	(0.7)	(4.8)	(5.1)	(10.3)	2.5	0.0	(7.1)	(7.1)	(11.7)	(10.9)
Prepaid expense and other current assets	(3.4)	(0.7)	(3.4)	(2.4)	(0.2)	(0.8)	(0.6)	(4.0)	0.4	1.5	(0.1)	(3.6)	(1.9)	(2.0)
Deferred commission expense	(1.2)	(2.0)	(2.1)	(0.3)	0.3	(0.1)	(2.2)	(2.3)	(0.9)	0.7	(0.4)	(3.1)	(3.7)	(3.4)
Accounts payable	(1.2)	0.3	(0.5)	(0.8)	1.1	0.4	0.4	1.1	0.1	(0.1)	0.6	0.3	0.8	0.9
Accrued expenses	4.3	4.7	7.1	(1.2)	3.1	1.8	0.8	4.6	0.8	3.0	(1.2)	1.3	3.9	3.7
Restricted cash	(0.1)	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Deferred rent	0.3	1.5	0.4	(0.0)	(0.0)	(0.0)	-	(0.1)	-	-	-	-	-	-
Deferred revenue	8.8	17.1	24.7	8.2	3.6	6.9	11.2	30.0	10.6	3.4	8.4	13.3	35.7	39.7
Net Cash from Operations	**($19.8)**	**($12.8)**	**($0.4)**	**$3.2**	**$8.6**	**$5.3**	**($0.4)**	**$16.7**	**$12.5**	**$9.7**	**($0.8)**	**$4.3**	**$25.7**	**$49.5**
Cash flows from investing:														
Purchases of investments	-	-	(113.6)	(9.0)	(12.1)	(23.2)	-	(44.3)	-	-	-	-	-	-
Maturities of Investments	-	-	23.0	8.9	12.5	22.0	-	43.4	-	-	-	-	-	-
Capital expenditures	(4.4)	(7.3)	(8.4)	(6.6)	(4.6)	(2.1)	(5.2)	(18.5)	(5.9)	(6.3)	(7.1)	(7.5)	(26.8)	(32.0)
Capitalization of Software Dev Costs	(3.4)	(4.6)	(4.3)	(1.4)	(1.1)	(1.7)	0.6	(3.5)	(1.6)	0.3	(1.3)	0.8	(1.8)	(1.7)
Business combinations / Acqusition of Business	-	-	(0.6)	-	-	-	-	-	-	-	-	-	-	-
Acquisition Intangible Assets	(0.2)	(0.1)	-	-	-	-	-	-	-	-	-	-	-	-
Restricted Cash	(1.2)	1.5	(0.2)	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash from Investing	**($9.2)**	**($10.5)**	**($104.1)**	**($8.2)**	**($5.4)**	**($4.9)**	**($4.5)**	**($23.0)**	**($7.5)**	**($6.0)**	**($8.3)**	**($6.7)**	**($28.7)**	**($33.7)**
Cash flows from financings:														
Proceeds from issuance of common stock, net of	-	$132.8	$34.1	-	-	-	-	-	-	-	-	-	-	-
Proceeds from exercise of options	$0.6	$1.4	$0.6	-	-	-	-	-	-	-	-	-	-	-
Payment of Offering Costs	-	($2.0)	($0.4)	-	-	-	-	-	-	-	-	-	-	-
Employee Taxes Paid / Settlements of Stock Rewards		-	($8.6)	($1.0)	($0.4)	($0.5)	-	($1.8)	-	-	-	-	-	-
Proceeds related to issuance of common stock under stock plans		$2.4	$11.5	3.0	$3.2	$3.0	-	$9.1	-	-	-	-	-	-
Proceeds from drawn-down line of credit	-	$18.0	-	-	-	-	-	-	-	-	-	-	-	-
Payments on line of credit	-	($18.0)	-	-	-	-	-	-	-	-	-	-	-	-
Repayments of capital lease obligations	(0.1)	($0.1)	($0.2)	(0.1)	($0.2)	($0.2)	-	(0.5)	-	-	-	-	-	-
Net Cash from Financings	**$0.5**	**$134.4**	**$36.9**	**$1.9**	**$2.6**	**$2.3**	**-**	**$6.8**	**-**	**-**	**-**	**-**	**-**	**-**
Foreign Currency Impact	0.0	(0.4)	(0.6)	0.5	(0.2)	0.1	-	0.4	-	-	-	-	-	-
Net Increase / Decrease in Cash	**($28.5)**	**$110.8**	**($68.1)**	**($2.6)**	**$5.6**	**$2.8**	**($4.9)**	**$1.0**	**$4.9**	**$3.7**	**($9.2)**	**($2.4)**	**($3.0)**	**$15.8**
Free Cash Flow	**($36.8)**	**($24.7)**	**($13.2)**	**($4.9)**	**$2.9**	**$1.5**	**($4.9)**	**($5.3)**	**$4.9**	**$3.7**	**($9.2)**	**($2.4)**	**($3.0)**	**$15.8**
as a % of revenues	(47.4%)	(21.3%)	(7.2%)	(8.3%)	4.5%	(62.9%)	(19.0%)	(2.0%)	91.7%	104.5%	37.1%	81.0%	(0.8%)	3.5%
as a % of billings	#DIV/0!	(18.6%)	(6.4%)	(7.2%)	4.3%	2.0%	(5.7%)	(1.8%)	5.5%	4.2%	(9.0%)	(2.1%)	(0.8%)	3.2%
q/q % change				2.1%	(160.0%)	(47.9%)	(420.8%)		2.6%	(24.8%)	(347.7%)	(73.5%)		
y/y % change	95.2%	(33.0%)	(46.6%)	87.6%	637.9%	(124.8%)	2.4%	(59.5%)	(200.7%)	26.2%	(700.0%)	(50.4%)	(44.2%)	(630.4%)

Source: BTIG, Company Filings.

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BTIG Covered Companies Mentioned in this Report

ADOBE SYSTEMS, INC. (ADBE, Neutral, $N/A PT; Current Price: $103.66; Analyst: Abhinav Kapur)

APPLE, INC. (AAPL, Buy, $133.00 PT; Current Price: $107.11; Analyst: Walter Piecyk)

BAZAARVOICE, INC. (BV, Buy, $8.00 PT; Current Price: $4.80; Analyst: Abhinav Kapur)

CHANNELADVISOR CORPORATION (ECOM, Neutral, $N/A PT; Current Price: $13.65; Analyst: Abhinav Kapur)

FACEBOOK, INC. (FB, Neutral, $N/A PT; Current Price: $117.20; Analyst: Richard Greenfield)

HUBSPOT, INC. (HUBS, Neutral, $N/A PT; Current Price: $56.30; Analyst: Abhinav Kapur)

ORACLE CORPORATION (ORCL, Buy, $47.00 PT; Current Price: $39.17; Analyst: Joel Fishbein)

SALESFORCE.COM, INC. (CRM, Buy, $100.00 PT; Current Price: $74.02; Analyst: Joel Fishbein)

SHOPIFY, INC. (SHOP, Buy, $55.00 PT; Current Price: $39.92; Analyst: Abhinav Kapur)

THE HOME DEPOT, INC. (HD, Buy, $155.00 PT; Current Price: $124.40; Analyst: Alan Rifkin)

TWITTER, INC. (TWTR, Neutral, $N/A PT; Current Price: $18.98; Analyst: Richard Greenfield)

WORKDAY, INC. (WDAY, Buy, $97.00 PT; Current Price: $81.41; Analyst: Joel Fishbein)

Note: Market data as of 11/15/2016.

Appendix: Analyst Certification and Other Important Disclosures

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I, Abhinav Kapur, hereby certify that the views about the companies and securities discussed in this report are accurately expressed and that I have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report.

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About BTIG

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Our team of seasoned industry experts provide end-to-end solutions for a diverse global client base. As we look to unlock value and propel growth for clients, we are consistently capturing market share year after year. With a commitment to excellence, we are proud of our rich history of designing solutions that help our clients achieve their objectives.