Connolly Network Insight

July/August 2017 Update

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The Big Four - 2Q17 Results

The Big Four continued their success for yet another quarter, collectively generating revenues of $119 billion and net income of over $19 billion. Apple continued to improve its growth rates and Facebook continued to grow aggressively in both revenues and profits.

The Big Four's collective market cap grew by another $150 billion in the quarter, continuing to provide the resources needed to aggressively expand their respective business reach.

Company	1Q17 Revenue	Growth Rate (YOY)	!Q17 Net Income	Growth Rate (YOY)	Market Cap
Apple*	$45.4B	7%	$8.7B	11.8%	$751B
Amazon	$38.0B	25%	$0.2B	<77%>	$476B
Alphabet	$26.9B	21%	$6.3B**	28%	$641B
Facebook	$9.3B	45%	3.9B	71%	$436B
	$118.7B		**$19.1B**		**$2.31 Trillion**

*Apple is F2Q17

**Excluding EU Fine

Following are highlights from their earnings calls with emphasis on their plans to enter the Pay-TV space:

Apple

Apple continued its return to positive growth, with revenue growth of 7% and net income growth of 11.8%. Their services business grew an impressive 22% and on a stand alone basis would be a Fortune 100 company. China was the number one app store market, with $2.2 billion of sales. Apple made a number of moves to strengthen their business in China, including VPN app removal, and a Data Center in Guizhou to meet local security requirements. The first “made in India” iPhones also began shipping. All eyes are now on the next iPhone release in the tenth anniversary year of the first iPhone (one trillion dollars ago!)

Apple remains cautious about entering the streaming video space, as they continue growing and learning in the streaming music space, with Apple Music subscribers now at 27 million. They hired two senior execs from Sony and announced a billion dollar original content fund. One rumor still has them buying Disney, if a cash repatriation holiday comes to pass, which would put them squarely in the big leagues for Pay-TV.

Amazon

Amazon had another strong quarter with revenues up 25%. Although net income was down 77%, free cash flow, their mantra, was up 26%. Their cloud business, AWS, generated twice the operating income of their North American retail business despite being one fifth of the size. The international retail business still runs at a loss as significant investments for this segment are made.

The Echo Show was introduced, adding video capability to their “Digital Butler” product family. Calling and messaging, including video calling, was added to Echo as well.

Continued investment in original video content was made, with the first of eighteen Indian Amazon Originals premiered, and sixteen Emmy nominations received.

In the UK, Germany and Austria, Amazon Channels (a V-MVPD type product) was launched, allowing Prime members to subscribe to a wide range of live and on-demand TV channels.

Facebook

Facebook had another outstanding quarter with revenue growth of 45% and net income growth of 71%. Mobile ads represented 87% of total ad revenue. Again this quarter, price per ad and number of ad impressions both grew impressively.

Mr. Zuckerberg gave a summary of key drivers in all three planning domains (3/5/10 years). For the three year horizon he sees the growth and evolution of Stories (both Instagram and WhatsApp have 250 million Stories users), and the use of AI investments to improve all core services including the news feed. Stories is very successfully blunting the threat of Snapchat. Over the five year horizon, he sees the "Video First" focus paying off with a video optimized Facebook app, and a business ecosystem built around Messenger and WhatsApp. In the ten year horizon, he sees the blossoming of AR/VR and the addition of the "next billion" internet users, via initiatives such as the Aquila drone.

Video ad revenue at this point is still seen by Facebook as complementary to Pay-TV ads, rather than as a replacement, but longer term, the feeling is that the advertisers will "follow the eyeballs" as social media-based video grows. Like Google, Facebook sees the six second video ad as ideal for mobile viewing. They also launched their "Watch" app to present video content to their users.

Many of the questions in the Q&A period were on the monetization of Messenger. Finally, Mr. Zuckerberg felt compelled to point out that, the importance of Messenger notwithstanding, video was by far the bigger opportunity for them.

Alphabet

Alphabet continued to deliver high growth across the globe in both revenues and profitability this quarter. Once again, mobile search, YouTube, and programmatic ads were flagged as highlights. There are now two billion monthly active Android devices in use, and a staggering 82 billion apps were downloaded in the last year from Google Play.

YouTube now has 1.5 billion monthly viewers, with average viewing time of 60 minutes per day. The fastest growing screen for YouTube was highlighted as the living room screen. Not much was said about YouTube TV, other than that ten new markets were launched. Success was highlighted for their 6-second bumper video ads, with companies like L'Oreal, Hasbro, and Clinique using them.

CEO Sundar Pichai highlighted that Google "continues to lead the shift to AI-driven computing. We're working to make this incredible technology available to everyone around the world. It's our focus on infusing our products and platforms with the power of machine learning and AI that's driving our success."

Google Assistant, for example, launched last year and is already available on 100 million devices. Seventy home automation partners are signed up for Google Home, their digital butler. Google Maps, YouTube, Gmail and Photos have all had significant AI-driven upgrades. In my opinion, their long standing investments in AI/Deep Learning, driving significant improvements in performance over their stable of billion user services, will make them even more formidable as time goes on.

Most analysts' questions centered around search, advertising, and cloud. The only video discussion in this quarter's Q&A centered around YouTube video ad effectiveness.

Pay-TV Update - Jostling for Position

The Pay-TV industry in the US is driven by both consumer subscription spending, and advertising spending. Therefore, the two ongoing points to consider are subscriber growth/ cord cutting/shaving and advertising growth or decline.

The second quarter of 2017 saw the same level of cord cutting as the previous quarter. Linear Pay-TV was down 2.7% year-over-year, with the bulk of the losses coming from telcos, satellite, and smaller MSOs.

Advertising was a mixed bag, with some gains and some losses amongst national broadcasters, local broadcasters, and cable channels. The “upfronts” were relatively strong this year with 7% growth overall, boding well for future ad performance.

Comcast had another solid quarter, adding 115,000 net new customers and increasing revenue per customer by 2.2% to $153 per month. Their bet on a leadership focus with X1 continues to pay off and they are clearly moving to an “aggregator of aggregators” model to maintain leadership in the home.

Consolidation in the industry continued with Discovery Communications acquiring Scripps Networks for $11.9 billion, at the expense of Viacom, who lost out, and Sinclair Broadcast Group acquiring Tribune Media for $3.9 billion. These consolidations moves are indicative of the pressure being felt by fringe channels in a new world of leaner cable packages and streamed “Skinny bundles.”

Netflix, the dominant OTT player, had a solid quarter, with good growth both domestically and internationally, but their content costs and future commitments to pay for content remain problematic, in my view.

The Virtual MVPD services continue to slowly ramp, with AT&T reporting, for example, a user base of 500,000 as of July.

Disney, feeling pressure on its broadcast and cable networks, is cutting 10% of staff at its television division and moving more aggressively towards a transition to a streamed IP world. Controlling interest was acquired in MLBAM Tech, bringing streaming technology in-house, as a prelude to Disney prepping both sports and entertainment offerings direct to consumers in 2018 and 2019. They are still strongly protecting ESPN via the existing pay-TV channels, with the streaming sports offering focusing on alternative sports. They are also ending their partnership with Netflix for movies, pulling this capability back inside their own streaming offerings over the next two years.

Turner Networks continues to bet on sports, launching a UEFA football service next year, paying $180 million for a three-year deal. Amazon struck a deal with the NFL, paying $50 million for 10 Thursday night football games globally, a 10 X price jump from last year's Twitter deal.

For many of the smaller channels, a threat is growing that they will get squeezed out of the existing Pay-TV bundle, and/or not make it into the emerging “skinny” streaming bundles. The remaining option for this content is a direct to consumer play and we are starting to see these. Philo, for example, is a $20 per month service with channels from Discovery, Viacom, A&E, and Scripps, with no sports, news, or broadcast channels. Is there room for this offering? How many subs will be needed for a successful business? Time will tell.

What we’re seeing then is an industry under pressure, with the big players jostling for position as consumers more fully embrace the streaming video world. There will clearly be winners and losers, and doing nothing is not a viable strategy for anyone. Timing of change is critical, as the bigger players need time to pivot. The good news is that the bigger players realize this, and the shifts are already underway.

Digital Butlers - The Race for PCHP Dominance

In 2011, Apple introduced a new feature for its iPhones called Siri, giving its users a voice-based interface for a variety of queries and tasks. Voice interface had been promised for many years as one of the benefits of artificial intelligence, and yet progress to date had been very slow, and Siri was a novel feature when first introduced. The recent advent of neural network-based, deep learning systems has dramatically improved the ability to interface conversationally with users. Microsoft rolled out a system called Cortana for its Windows-based PCs in 2014 and Google jumped on board with Google Assistant in early 2016. These three systems provided a value-add capability for the very large installed base of their respective companies' devices, i.e., smartphones and computers.

Amazon decided to get in on this market in late 2015, but lacking the massive installed base of devices of the other three, took a different route, introducing a Home Speaker device called Echo with a system software capability called Alexa. At introduction time, many thought this would be a niche market at best but consumers thought otherwise, purchasing over 11 million devices to date and causing the other three of the Big Four to sit up and pay attention. Although music is a major part of the service offering, many other services are folding into the system.

Google introduced a competing device called Google Home earlier this year, and Apple introduced their own device, HomePod, to roll out before year's end. Facebook are rumored to be a readying a similar device for introduction early next year. Microsoft are partnering with Harman Kardon to roll out a device called Invoke by year's end, and Samsung is developing a device called Vega for introduction in 2018.

So what began as a niche market play has become a major consumer battleground. Why all the fuss? Here's why - all of these companies are driving towards the same goal, that of persistent, contextual, hyper personalization (PCHP) services for their users. To achieve this they require an enormous amount of data in terms of both number of users and knowledge per user to drive their deep learning systems. By providing a very convenient and ever broadening array of day-to-day services for people in their homes, an ever increasing bond of reliance, convenience, and hopefully, loyalty will ensue. This is why I call these devices "Digital Butlers." If they do their job effectively, they are unobtrusive, attentive and proactive in providing for the needs of their clients. They develop over time a deep knowledge of the whims, preferences and needs of the people they serve.

Driving the competition further is the recognition that whoever gets there first gains significant advantage since most people don't really require more then one Butler. Having used Amazon's Echo and Echo Dot in our home for the past six months, these devices have become more and more valuable, even though I've been an Apple loyalist since day one.

To continue to add value, each of these players is aggressively pursuing embedment of their intelligence in other consumer devices, and partnership with other consumer services companies in an attempt to be the butler of choice. Devices such as appliances, home security, and lighting are all candidates for inclusion in the service that is offered. Alexa, for example, has over 20,000 skills which can be applied to each user to customize the ideal set of capabilities. Partnerships such as Google/Walmart for shopping are also emerging.

Since these are learning systems, they will continue to become more personalized and more valuable as usage of the devices increases. This puts them in a position to own the customers' mindset over time. For example, as video migrates to a completely IP-based delivery, the digital butler devices become either a complementary partner, or existential threat to set top terminals. Pay-TV providers need to decide whether to join the butler universe by embedding its intelligence in their devices, or to ignore them to their extreme peril, at least in my opinion.

Expect to see a lot of activity and resulting press over the next year or so as these systems battle for the hearts and minds of the consuming public. By then, we'll see the winners and losers start to emerge.

Music Update - Big Four Steamroller

The recorded music business had been a growing and profitable concern from its advent in the late 1940s through the end of the 1990s. Several migrations in play-back technology took place from vinyl to cassette tapes to compact discs and an oligopoly of large record labels controlled the industry.

All this changed dramatically with the advent of digital piracy in the late 1990s and in short order, industry revenues were cut in half. In 2003, Apple “re-legalized” the digital music industry with the introduction of the iPod, iTunes and the digital sale of individual songs. Since then, the industry has been relatively flat as it migrated from analog sales to digital sales to advertising-based streaming and finally to subscription-based streaming. The streaming market is currently growing at the expense of analog and digital sales, with streaming representing roughly half of the total revenues. Last year showed more promise for the future with growth picking up. Global revenues for 2016 were $15.7B, up 5.6%, with US revenues at $7.7B, up 11%.

Let's take a look at two things here - first the business model of the streaming companies and second the impact of the Big Four on this industry.

The first major streaming company was Pandora, which introduced “personalized Internet radio” in 2005 in the US, the UK and Australia. They currently have 250 million registered users of which 81 million are active, with 80% of these being mobile users. Their main offering is ad-based with only about 4 million users having shifted over to a subscription basis. The main issue with Pandora is that after 12 hard years of building a large subscriber base they are still generating a significant net loss and it's not clear how this will turn around. They have recently had a major investment by Sirius XM satellite radio, who may well be poised to take them over, but it's not clear to me how this combination becomes a stronger player.

Contrasting with Pandora, the second major streaming player is Spotify, founded in 2008, which has aggressively moved from an ad-based offering to a subscription offering with 48 million of their 126 million users paying $10 a month for an ad-free library of 40 million songs. Once again, however, in spite of 10 years of concerted effort and growth they lost nearly $600 million last year on revenues of $3.1 billion. Interestingly, as Spotify prepares for a possible IPO, they are emphasizing the potential of ad revenue, not subscriptions, for future growth. This highlights, in my mind, the overall weakness of the business model for pure streaming players.

A third streaming player is iHeartRadio, whose parent, iHeartMedia, owns almost 900 radio stations reaching 270 million people. Their approach to the business is to tie streaming capability with access to a large universe of radio stations, but this does not appear to have fared any better and they may not survive a recent leveraged buyout.

So what we see is an industry which is shifting toward a streaming model driven by companies which are unprofitable. To see how we got to this point and complete the view of the music industry, we need to look to the second question which is the role of the Big Four in this market. Unlike the three major streaming companies, the Big Four have a highly profitable position in this market.

Starting with physical sales, Amazon is a major player here, offering CDs as well as digital sales and streaming services. Along with Walmart and other big box players like Target and MediaPlay, they dominate physical sales, which are diminishing in the US but still play a strong role in other countries such as Germany. Traditional music stores have been driven to extinction.

For digital sales, Apple is king. Having made the market, they have sold over 55 billion songs, to date, on iTunes, representing at least $30 Billion in profits. Amazon and Google are also major players in the digital song sales space. One of the reasons the Hollywood studios have been so fearful of a video deal with Apple is, in fac,t a result of the music market experience, where Apple reaped the lion's share of total industry profits for several years.

Google also extracts major advertising profits via its YouTube service, for which music is a major subset. Alphabet doesn't break out YouTube numbers, but profits are clearly several billion dollars per year.

So on the music sales side, both physical and digital, the Big Four are dominant players, in a very real sense owning the industry.

With consumers now embracing streaming at the expense of sales, Google, Amazon, and Apple have all jumped into the streaming game, which makes the outlook for the original streamers reviewed above even more bleak. Google has launched a subscription service, but has not, to date, had a major impact. Given their huge advertising revenues, this is not very troublesome. Amazon began by giving away a subset (2 million songs) of music as an added perk of their Amazon Prime shipping service. Subsequent to the launch of Echo/Alexa, however, they are aggressively promoting a fully featured subscription service globally, and are significantly undercutting competitors' prices. Finally, Apple has launched a subscription based service, Apple Music, and already has 27 million subscribers. Given that this represents less than five percent of their active iOS base, they clearly have a lot of room to grow. They are also launching a home device, HomePod, to compete with Amazon's Echo and Google's Home product, all of which will stimulate demand for subscription music streaming at the expense of other competitors. Finally, Apple are touting "40 million songs on your wrist" for the untethered Series 3 Apple Watch.

In summary, an industry which was badly wounded by digital piracy has stabilized at a significantly smaller size, with smaller streaming innovators failing to lead a profitable resurgence in growth, but instead being steamrolled by the size and power of the Big Four.