Connolly Network Insight

November/December 2017 Update

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The Big Four - 3Q17 Results

The Big Four continued their success for yet another quarter, collectively generating revenues of $135 billion and net income of over $22 billion. Apple continued to improve its growth rates and Facebook, hitting a $10 billion quarterly revenue run rate, continued to grow aggressively in both revenues and profits.

The Big Four's collective market cap grew by another $110 billion in the quarter, continuing to fuel their dominant market positions, continued growth, and expansion into new businesses.

Company	3Q17 Revenue	Growth Rate (YOY)	3Q17 Net Income	Growth Rate (YOY)	Market Cap
Apple*	$52.6B	12%	$10.7B	18.9%	$796B
Amazon	$43.4B	34%	$0.3B	Flat	$462B
Alphabet	$27.8B	24%	$6.7B	31%	$665B
Facebook	$10.3B	47%	$4.7B	79%	$496B
	$134.7B		**$22.4B**		**$2.42 Trillion**

*Apple is F4Q17

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

Apple

Apple had a record fourth quarter, with revenue growth returning to double digits at 12% and net income growth of a stellar 19%. They continue to do an outstanding job of monetizing their installed base, with service revenues of $8.5 billion, and excellent growth in their Apple Music and Apple Watch businesses.

The major emphasis this call was on upcoming AR iPhone experiences, enabled by their new A11 Bionic chip, years in the making, with a deep learning based neural network built in. This means more than ever, tight hardware/software integration is essential for these types of advanced services.

On the video side, they rolled out a new Apple-TV device, and are using it to stake out a leading position in 4K video. Apple also continues to build their video team, hiring executives from Hulu and Legendary Entertainment.

No questions were raised by analysts on video topics.

Amazon

Amazon had a good quarter with revenues up 34%. Net income was flat, but free cash flow, their mantra, was down 10%. Their cloud business, AWS, continued to drive the financials, with $1.2B of operating income on revenues of $4.6B. The international retail business still runs at a loss as significant investments for this segment are made.

The Echo product family was expanded, and Alexa, their digital butler, grew in power and reach, with 25,000 skills and "tens of millions" of Alexa-enabled products purchased by consumers. One of these skills enables full control of Frontier Communications FiOS Quantum TV.

NFL Thursday Night Football on Amazon Prime Video had 7.1 million views in 187 countries over the first four games.

Much of the analysts' discussion centered around the Whole Foods purchase, potential entry into healthcare, and international expansion. When asked to comment on the importance of video and their expected future investments, however, the answer was very telling. Amazon is "very bullish on video" and expect to see continued increase in investment, not necessarily because of its intrinsic value, but rather because of its positive effect on the Amazon Prime

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base. It was stated that video helps obtain new Prime customers, retain Prime customers, and increase engagement and spending rates overall of Prime customers.

This is what makes Amazon so dangerous to competitors in the video space. Unlike say Netflix who lives or dies by video, Amazon uses video to further their broader business goals and hence they will be much more willing to be aggressive in video if it helps their overall business. With a truly global video footprint in over 200 countries, Amazon needs to be closely watched by anyone with a stake in the video market (See #4 below).

Facebook

Facebook had another outstanding quarter with revenue growth of 45% and net income growth of 71%. Mobile ads represented 88% of total ad revenue. Price per ad increased 35% and number of ad impressions increased by 10%.

Mr. Zuckerberg stressed the seriousness of security, fake users, and malicious use of their systems, and pledged to spend significantly more resources to combat and remedy this. He then gave a summary of key drivers in all three planning domains (3/5/10 years).

Over the next three years "the biggest trend in our products will be the growth of video". This includes both the sharing of video and consumption of professional video content. For the five year horizon, he sees monetization of messaging, consumer focused Marketplace, and Workplace for corporations as the main priorities. In the ten year horizon, advances in AI and AR/VR were highlighted as the focus.

They still see their strength as bringing the social interactivity to experiencing video, even as they plan to spend significant sums on professional content. Getting at the significant pot of Pay-TV advertising dollars is clearly in their sights .

Unlike last quarter, when many of the questions in the Q&A period were on the monetization of Messenger, the two dominant topics on this call were security and video. With the launch of the Watch tab in the Facebook app, their assault on video competitors had finally begun in earnest. I believe their next steps will emerge over the next year or so as they sense the pulse of their two billion strong user community.

Alphabet

Alphabet had a "terrific quarter", per their CFO, with revenues up 24% and net income up 33%. Mobile search and programatic ads were flagged as highlights as well as "substantial growth in Other Revenues from Cloud, Play, and Hardware".

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The overall premise driving the company, per CEO Sundar Pichai, is the shift from mobile-first to machine-learning based systems, thanks to their long standing investments in artificial intelligence. Machine learning smarts in Google Photos are used by 500 million users, as are AI based contextual capabilities built into Google Maps, used by over a billion people. Sundar also spoke of the need to improve their security and fraud prevention systems.

YouTube gets 100 million hours of watch time in the living room every day, up 70% YOY. YouTube TV, having had it's coming out party as major sponsor of the World Series, is now available in 50 metro areas, covering over two thirds of US households. Success was highlighted again for their 6-second bumper video ads, with new clients like Bayer, Ben & Jerry's, Louis Vuitton and Volvo using them.

The roll out of a second generation of "Made by Google" products, built with AI at the core, was also highlighted.

The Q&A was a mix of questions across key issues. From a video perspective, it was noted that their advertisers concerns re placement on YouTube was largely behind them and that YouTube TV was being positioned as an intuitive, easy to use experience as a differentiator.

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Pay-TV Update - Defense or Offense?

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 third quarter of 2017 continued to see cord cutting with the top seven operators, covering over 90 million homes, losing 913K subs, offset by (much lower margin) vMVPD gains of 409K subs, for a net loss of 504K subs. Seventy percent of the gross subs lost came from satellite and telco providers, who have no choice but to lead the transition to a streamed offering, and hence are playing offense. The MSOs, riding the continued success of their data offerings, will likely be much less aggressive in changing platforms. Verizon reportedly cancelled plans to revamp Fios TV as an all IP offering, so it will likely continue to erode. Smaller MSOs and Telcos lost roughly another five hundred thousand subs.

In December Barclays downgraded the entire U.S. cable and satellite communications industry to neutral, after four bullish years.

The MSOs continued to grow their broadband business, the jewel in their crown, but their growth rate slowed in the third quarter, partly due to FTTH deployments by telcos such as AT&T, which committed to deploy fiber to over 12 million homes as a condition of its DirecTV purchase. Verizon has announced plans to offer fixed 5G based residential broadband in late 2018, but seems alone in betting on the viability of this offering.

National advertising for both broadcast and cable is down about 3% overall for 2017, through November. Price increases and subscription levels are partially offsetting this for some players, but the outlook overall is that of “running hard to stay in the game”.

One of the principle threats to the traditional Pay-TV advertising business comes from Snapchat, whose stronghold with millennials, and video based structure lends itself to luring advertisers in search of the millennial audience to its platform. Some of the more innovative content players have been trying this channel out, with mixed results to date. CNN pulled their news programs “The Update” after only four months citing difficulty with monetization prospects. NBC seems happy with their two Snapchat shows - E! News and NBC News. Meanwhile, ESPN launched SportsCenter in November, trying to expand their reach. In my view Snapchat is facing an existential threat from Facebook, and will be unlikely to weather the onslaught. Twitter also continues to try and leverage its base for video advertising revenue, with an “always on” news channel launched by Bloomberg Media.

Local broadcasters such as Gray Television seemed to fare well with increases in national advertising and retransmission consent revenues. The ATSC 3.0 standard for next generation over-the-air television broadcasting was approved by the FCC, opening up a long term opportunity for the bigger broadcasters to bring their own OTT offerings to market.

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Comcast had a good third quarter, with revenues up 5.8% and adjusted eps growth of 26.8%. On the NBCUniversal side, theme parks and movies are growing and profitable. Broadcast and cable networks saw flat to down advertising, offset by growth in distribution and retransmission fees. On the cable side, 134K video subs were lost, and advertising revenue was down, but overall revenue growth was maintained by strong performance in high speed data and business services.

Mediacom, having embarked on a data and business services focused strategy, saw 3.8% revenue growth, with half of total revenues in 3Q now being non-video based. They completed their DOCSIS 3.1 rollout, which should enable more revenue growth on the data side.

Cable ONE, pursuing a similar strategy, saw flat third quarter revenues, excluding contributions from their New Wave acquisition. Adjusted net income, however, increased by 18.8%. Residential data and business services represented 59% of their total 3Q revenues, excluding NewWave, whose ratio was 49% of revenues from non-video services.

Disney saw their 3Q operating income for media networks fall 12% on lower advertising revenue coupled with higher costs of sports content. Revenues decreased 3% to $5.5B in the segment. Broadcasting revenues was down 11% on lower advertising revenue, while cable networks, including ESPN were flat, with contractual price increases offsetting increased sports costs, and lower advertising revenue. About 150 positions were eliminated at ESPN in November.

Disney is clearly shifting to offense in their quest to migrate to a streaming world. Investments in BAMTech and Hulu, severing their Netflix connection, and the Fox asset purchase all set them up to accelerate the transition. Interestingly, however, with ESPN, they have no choice but to continue to defend the existing Pay-TV model, given huge contractual commitments for the next few years for content, continued pressure on their dominance by Fox Sports1, and, despite subscriber loss, being the most valuable content channel in the Pay-TV world by a large margin. Getting the timing right for the shift from defense to offense for this crown jewel in their business will be a huge factor in the ultimate success of Disney's business.

21st Century Fox Inc. had revenue growth of 7.6% and profit growth of 4%, with strength in its cable networks offset weakness at its film studio and local TV stations.

Smaller content players are under continued pressure, as distributors either drop them or move them "up-tier" and the vMVPD operators leave them out of their "skinny bundles". Companies that lack sports presence, like Discovery and Viacom, are having to reposition their strategy to get their content in front of users. A number of these companies have banded together to offer an "entertainment" OTT system called Philo (see #3 below).

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We're still seeing then 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.

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Streaming Video - Growing Relevance

Streaming video is clearly the long term end point for all successful players, but the key issues are the timing of this transition, and who emerges from the current ecosystem as winners or losers in this long term shift. It's useful to consider streaming players in two broad categories - OTT providers, and vMVPD ("skinny bundle") providers. Over time this distinction will blur, but the best way to think of these categories right now as outside attackers (replace traditional Pay-TV with something entirely new) and inside defenders (evolve the Pay-TV model to keep it successful).

There are over two hundred streaming services available in the U.S. per Parks Associates. 69% of U.S. broadband households subscribe to at least one OTT service, and 50% of these take more than one service. The dominant player by far is Netflix. In 3Q17 they had revenues of $3.0B, up 30% YoY, and net income of $130M, up 150% YoY. They ended the quarter with 52.8 million subscribers in the U.S. Most Pay-TV distributors have integrated Netflix access into their offering, with Verizon being the latest to do so.

I'm not personally a long term optimist for Netflix' future success. They have huge and constantly growing content costs ($7B estimated for 2017), resulting in low operating margins (7.9%), and future content obligations of $17B. Most significantly, they are competing worldwide with Amazon Prime Video, who is aggressive on price, stepping up their own content spend, and will use video to leverage gains in Prime membership to drive their retail business. Google is also a competitor, and longer term, Apple and Facebook will join in. Beating all four of these guys, in spite of Netflix' current dominant position, will be difficult at best. So what do I see for Netflix down the road? In spite of aggressively growing their worldwide customer base, I don't see their current model improving with further scale. I see Netflix as therefore having to come up with a way to grow revenue per user significantly, or be acquired by someone with broader video ambitions. HBO, for example, spends a smaller percentage of revenue on content, and generates significantly higher profits, as it complements its traditional distribution model with direct-to-consumer HBO Now.

The next biggest players, by most estimates, are Amazon Video and Hulu, although neither discloses subscriber numbers, followed by MLB.TV. Amazon Video is a big threat to everyone (see #4 below), while Hulu is making the shift to add a vMVPD offering. Everyone else is in the the market development phase, with a number just hitting the two million sub mark (HBO Now, CBS All Access, Showtime, and Sling TV). CBS is aggressively embracing the streaming model, augmenting it's two successful launches with ad-supported news and sports offerings.

The biggest potential disruption in the streaming space is Disneys announced decision to begin streaming content directly to consumers starting in 2018. They have always relied on a distributer, be that movie theaters, Pay-TV providers, or OTT players such as Netflix. As video has steadily declined over the past three years as an overall profit contributor, they have

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decided to cut out the middle man to improve margins. Acquiring control of BAMTech, and severing their future ties with Netflix post-2019, are major moves, clearly indicating Disney's intention to enter the streaming space. A subscription only service is planned for the entertainment service, while an Ad-driven model would apply to the sports service, which will offer complementary content to that of ESPN.

Speaking of sports, Verizon in December signed a $2B+ five year deal to stream various NFL games on its mobile network, Yahoo, Yahoo sports, and go90 mobile platforms. It no longer has mobile exclusivity. ESPN and NBCUniversal also inked deals in December with the NFL. Despite concerns of overall ratings drops for the season, the NFL continues to extract huge value from its brand.

One of the ongoing trends for the streaming space is the increasing consumption on the big screen. The market for devices connecting these TVs is very competitive, with Roku, Google, Amazon and Apple all gaining a significant stare of the market. Internet connected TVs themselves have suffered from a lack of standards, allowing these separate streaming devices to emerge as the preferred method of connection by most consumers. Competitive jostling have kept services off each others devices, but this seems to be abating over time.

Turning now to the vMVPD segment, expected to have 4 million subscribers in the U.S. by year end, there was a flurry of activity in the last two months of the year.

DirecTV Now, critical to AT&T's long term migration path, passed the one million sub mark in December, and a 2.0 release will likely roll out in early 2018, with cloud DVR, Pay-per-view, 4K, a better interface, and more simultaneous streams.

Sling-TV was estimated to have passed the two million sub mark, but the drop rate in satellite customers continues to pound Dish.

YouTube TV, while not disclosing subscriber counts, launched a major marketing campaign as a major sponsor of the World Series. They added 34 markets in December, bring their total availability to 84 markets.

A potentially significant competitor emerged with T-Mobile's announced acquisition of Denver-based Layer3 TV. This service is currently a fat Pay-TV bundle, with over 250 HD channels, priced around $100, and using a dedicated backbone and a proprietary set top box. It's rolling out in five markets. It's not clear, however, just how T-Mobile's wireless assists play into creating sustainable advantage in this highly competitive, low margin space. Making the all-IP service available on both home connections and wireless connections, using the Layer3 TV delicate backbone, could perhaps give them an edge in the wireless space, at least in the short run.

One of the key competitive battles for successful launch of a vMVPD service is the availability of local broadcast feeds in each market. The negotiation challenge behind this issue was a key reason Apple chose not to enter the Pay-TV space two years ago. Hulu announced in December that it had signed 492 local stations, giving it a commanding lead. As of this date,

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YouTube TV had 302 stations, DIrecTV had 219, and Vue had 203 stations. Sling TV has no deal with CBS, and has not really played in the local space, choosing instead to have low price drive its success.

The shift to streamed video, whether OTT or vMVPD models, which in turn strains the existing Pay-TV bundle, is putting lots of pressure on some of the smaller and mid-tier content channels to adapt to this new world. A group of these providers have banded together to offer an “entertainment focussed” offering called Philo, with 35 channels for $16.95 per month, and nine more optional channels for an additional $4 per month. Members/investors in this group are Scripps, Discovery, A&E, AMC, and Viacom. The service launched in November. Time will tell what type of audience will sign up with no sports, news, or broadcast networks. Philo may have to add some of this capability going forward, which would then put them in the same margin dilemma as the other players in this space. If the deep pocketed players choose to ride out the turmoil, a shakeout will be inevitable.

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The Growing Video Reach of Amazon

Amazon is first and foremost a low-cost, high volume, global retailer, and uses a number of strategic means to further their performance as such. Video is one of these means, making them a fierce competitor to anyone in the video space. As a retailer they have been in the video space since the beginning of digital video, as a major seller of DVDs and Blurays, and more recently selling and/or renting digital video downloads. Coupled with music, they now use video streaming to add value to their Prime program, which delivers a range of services, including free 2-day shipping of goods, for a $99 per year subscription. This program has been a huge success for them, driving increased loyalty and significantly increased spending per member (See #1 above). This fact should not be overlooked - video is a MEANS to drive the END of retailing success.

Having said that, they are embedding deeper and deeper into the video space. They are the number one competitor to Netflix, competing with lower price in over two hundred countries, and spending $4.5 Billion in 2017 on video content (which is less than 4% of their operating expenses). In addition to their own content, they have been striking exclusive first window deals, such as that with AMC Studios for use across 28 countries. They entered the competitive sports streaming segment, striking a deal with the NFL for Thursday Night Football, offering these games in 187 countries. Amazon has been also been partnering with Samsung on the HDR10+ standard, and announced in December that the entire Amazon Prime Video HDR catalog is being updated to HDR10+.

They are also in the IP video streaming device space, with almost 30% market share in the U.S. for their Amazon Fire-TV products. They are the dominant provider of digital butlers in the home, with Echo/Alexa providing voice control of a growing number of OTT apps such as CBS, NBC, Hulu, Showtime and PlayStation Vue. Alexa can also completely control Frontier Communications' FiOS TV Quantum TV service. As the battle for control of consumer homes intensifies, having this video control in their ecosystem strengthens Amazon's hand even further. They have denied rumors of an ad supported SVOD launch in the U.S., but could easily jump into this space. Through its Amazon Channels feature, other OTT offerings such as Sports Illustrated TV and Acorn TV are available.

So in summary Amazon has many fingers in the video pie, all of which are designed to further their success in their main business of retailing. Expect them to keep aggressively improving and growing their video offerings for this reason. Anyone who misses this point does so at their peril.

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