MOI GLOBAL

PayPal and Roku: Improving Unit Economics in Large Markets

Elliot Turner of RGA Investment Advisors presented his in-depth investment theses on PayPal Holdings (US: PYPL) and Roku (US: ROKU) at Best Ideas 2019.

Thesis Summaries:

PayPal Holdings and Roku both benefit from improving unit economics and large, growing total addressable markets. Each company benefits from an open-ecosystem that favors customer choice and smooth user experience.

PayPal suffers from an over-emphasis on take rate and too little appreciation for the virtuous cycle flowing around increasing user engagement. Improving unit economics at PayPal will drive higher out-year margins supporting a DCF-driven price target upwards of $120 per share.

Since Roku's IPO, too many analysts have viewed the company as a hardware company and have failed to appreciate the business model evolution to an advertising platform. At a price around 3x 2020 platform sales and 2020 expected growth upwards of 40% y/y with a long runway of operating leverage, the company offers investors rapid growth at a reasonable price.

The following transcript has been edited for space and clarity.

I have learned so much from the community. I like trying to do my part to give a little back, but I get so much more out than I put in. Thank you again for all the hard work you put into making this happen.

Let me start by trying to give a sense of our long-term orientation. PayPal and Roku, which are the focus of this presentation, bring to seven the number of ideas I have shared at Manual of Ideas conferences since 2015. Collectively, these seven ideas add up to just shy of half of our portfolio, and we haven't sold a single share of those companies. In fact, we own more of most of them than at the time of the respective presentations. We have a GARP bias and low turnover.

I first presented PayPal at Wide-Moat Investing Summit in 2015. While I've always tried to present new ideas, I felt a strong impulse to go back to the well on this one. This is the Best Ideas Conference, after all, and this is my very best idea, as well as our largest position. Roku was a stock I followed with interest, but it became a best idea during the month of December.

In 2015, I used a quote by Kant to preface the PayPal section of my eBay presentation, and I'd like to use it again as it works well for both PayPal and Roku. Kant said the following: "Act in such a way that you treat humanity, whether in your own person or in the person of any other, never merely as a means to an end, but always at the same time as an end." PayPal was formerly a means to an end within eBay, namely driving volume. It wasn't about PayPal itself as a payments platform. Today, it's finally treated as an end, and it has a core mission and a mandate to fulfill it. As for Roku, it is competing against a bunch of players whose TV strategy is secondary to their own essence, Amazon being a key example. Meanwhile, at Roku, connected TV is its DNA, and that fact alone I find advantageous.

I think it makes some sense having PayPal and Roku in the same presentation. Even though both ideas were inspired independently of one another, they share some traits that support their growth and differentiate their offerings from the competition's. They each have improving unit economics driven by accelerating engagement. One of the things I really like is that both have a huge addressable market to sell into. They have secular tailwinds driving both growth in their actual addressable markets and share they're capturing there. Something that differentiates them from competitors is that each is an open ecosystem, so they partner with many players on both sides of their respective industries. Customers have a choice when they engage with these brands, and there's a really smooth user experience. There's also a virtuous cycle connecting all of the above.

After more than three years of independence, PayPal has forged a unique identity. CEO Dan Schulman, who started just before the separation, has been the visionary at the wheel. He has a unique background in both mobile and payments, so he was the perfect choice to run the company. The Economist recently called him a "re-founder" for having uniquely reformulated and repositioned PayPal as a fresh new company, almost as if it was founded again from scratch, starting at the point of split from eBay. Schulman recognized early on that what really differentiates PayPal from the other payment competitors is its being a two-sided network with a direct relationship on both sides. PayPal owns the customer relationship in a way that makes even Visa and Mastercard envious.

Central to Schulman's strategy has been empowering consumer choices and emphasizing partnership with the many players in the payments ecosystem. As part of eBay, PayPal had a major problem it had to attack – the user experience had been really clunky. It was hardly a platform, it wasn't scalable, and it wasn't open. The tech reformation started with the acquisition of Braintree, and current PayPal COO Bill Ready has been instrumental in driving this initiative. Without the technological improvement, the many partnerships would have been much tougher to forge. Besides having tech stack issues, PayPal had taken an antagonistic stance toward the credit card networks by steering payments to ACH, which are higher margin for PayPal but problematic in the eyes of the networks. Charlie Scharf, then CEO of Visa, called PayPal a frenemy and threatened to go nuclear. Scharf recognized the risk to Visa itself by PayPal owning the customer relationship and having a degree of power in influencing how consumers behave. PayPal was effectively making some volume that could have gone to Visa and Mastercard go elsewhere. It wasn't easy, but Schulman plowed ahead with his vision in an attempt to change this. Visa opened the floodgates for partnership throughout the payment landscape once it was done.

Partnership was something Schulman hung his hat on, but it wasn't always perceived well by the investment community. As soon as he was able to turn Visa from frenemy to partner, the stock suffered its worst day as a public company. The investment community had quickly pivoted their concern from viewing Visa as the foremost threat to fearing what take rate would look like. It became an obsession. It also happened to result in my first-time quote in The Wall Street Journal. While everyone was getting bearish on PayPal, I was counting on the Visa relationship becoming an important driver of improving engagement down the line and engagement itself being more deterministic to the company's future worth than take rate. The article appeared in July 2016, so this fear about take rate is not new; we still hear about it all the time today.

The foremost concern arising out the Visa deal was the high margin ACH volume on PayPal would shift to a lower margin credit card transaction, and in the process, this would squeeze PayPal's transaction level margin. After the fact, it became really clear in PayPal's communication that ahead of pursuing this partnership path and forging the deal with Visa,

the company tested out what choice would look like on the consumer side to analyze and project exactly how funding selections would change and to get a good idea of what its margin would look like. As a result, the company had a clear thesis on what the future funding mix would look like and a thesis on engagement.

Importantly, the obsession with take rate ignores the history of the payment industry, which has been about shrinking take rate. If we look at American Express's and Visa's historical take rate equivalent, the trend is obvious – tit trends lower over time. If this is true, how do the platforms make up for it? The answer is that as take rates decline, these platforms are able to increase scale on both the merchant and consumer side, and consumers engage with the platform with ever greater frequency. This is a compounding force on the economics of the business. These are two-sided networks, after all. One might ask if could you invest in American Express in the 1960s knowing what take rate would do from then on. Even though Visa wasn't public, would you theoretically invest in the company in 1980 knowing what would happen with take rate? Knowing what these companies have done and what their valuations are today, the answer is obvious.

There are certain specific beneficiaries of the shift towards choice and partnership, account growth being one of the obvious early beneficiaries. It is influenced both by bringing in new users and making sure that new and existing users don't churn off once they start. PayPal had been on the receiving end of considerable frustration from customers who found it too hard to select their preferred credit card as a default option. These people often gave up on the platform, becoming a headwind to net user growth. With choice enabled by partnership, it all changed. Account growth, which was trending down into the split in 2015, jumped in 2016. This jump happened alongside choice and accelerated with it.

I think this is the beginning of a period of higher sustained growth in active users. The experience has gotten so much better from a consumer perspective, and there are new partnerships, including with issuers offering their own, self-funded customers incentives to add credit cards to their PayPal wallet. There's also an emerging push to give liquidity to credit card rewards. PayPal is uniquely positioned to make this happen. For example, JPMorgan Chase (through its Chase cards) and American Express will be letting their own users spend their reward points through the PayPal platform. This is helpful to Chase and American Express because these rewards are building up as a liability on their balance sheets, and they want to increase their velocity. PayPal is the one able to make it happen.

The other beneficiary of choice is engagement. Its growth appeared to slow in 2015, but this is also a reflection of the rapid increase in new accounts – it takes time for the new accounts to rise to the level of engagement of existing users. It's habit-forming but not instantly so. Engagement has been growing swiftly, all things considered, and growth and engagement re-accelerated this year. Since 2012, the typical user has gone from engaging with PayPal less than twice a month to more than three times a month now, and you can expect this trend to continue.

In some ways, you can simplify the entire thesis to the idea that so long as engagement is growing, the stock should go up. It's really that simple, and I've been thinking about it along those lines. Engagement is the reflection of the mindshare PayPal has with its users. It's a direct reflection of the network effects in the business. When engagement is rising, users are expressing the fact that PayPal's service is more valuable and useful to them. The more engaged the userbase is, the more merchants want to accept PayPal on their sites, and the more sites that accept PayPal, the more users can engage in a virtuous cycle. This is a crucial feedback loop within the two-sided network. User engagement also exposes the platform to

peers who don't yet have accounts. Peer-to-peer payments and transfers are a critical component in this strategy. When friends want to send money to one another and don't have cash or the change necessary, they'll ask if you have a PayPal account. If the one owed money wants to get it, they have no choice but to download the app, so this has been a good driver of new users.

Besides choice as a driver of engagement, another one was the big improvement in PayPal's tech stack, which was empowered by the acquisition of Braintree. In addition, PayPal's fraud detection prowess was a crucial enabler of this technological advancement. What we're talking about here is the PayPal button and One Touch. One Touch, as the name suggests, makes it possible for users to log in once on a device and check out with just one touch forever after. One Touch combined with the PayPal Checkout Button has become central to the company's ethos. The leadership has literally started defining itself as selling conversion to merchants. PayPal can seize this high ground because its conversion rate is nearly 90% compared to 50% or less for competitors. As a result, One Touch and the PayPal Button have been a big success in the merchant community for how it levels the playing field with Amazon's one-click checkout. The Checkout Button itself is the value PayPal delivers to merchants and supports a good chunk of the margin they earn. These one-touch checkouts earn a much higher margin than the typical checkout over any other kind of PayPal transaction.

Regarding the unit economics of the business, customer acquisition costs have fallen two years in a row and should continue to do so as the network effects take hold. With all the obsession with take rate, there hasn't been enough creativity thinking about what PayPal looks like down the line, for example, what the lifetime value of customers would look like if engagement were to double from here. This is important in a few ways. First, there are already extremely engaged cohorts that are valuable to PayPal right now, and they represent large chunks of the user base. Second, when you double the engagement, lifetime values go up 3.5x, so there's a multiplier at work here. That's some nice margin leverage. When I look through analyst reports, I see some of these assumptions supporting topline growth, but what I don't see is the analyst community buying into any operating leverage coming with it. Meanwhile, the company has been increasingly confident in the past year in forecasting operating margin leverage down the line. It has earned some trust with the funding mix results since the Visa acquisition, yet analysts are still a little reluctant to buy into the operating leverage thesis.

In 2015, I was told by many PayPal skeptics that my estimates were a little too aggressive, but in reality, they weren't aggressive enough. This is not to say the future will be as kind as the past, but it does show that when companies are executing well, they tend to outdo what most of us expect. Importantly, PayPal has three revenue levers and one delever. The levers are new customer accounts, engagement (viewed as transaction per customer account), and the dollars per transaction. The last one is interesting for how it protects us, investors, against inflation. When the cost of goods and services rises in the economy, PayPal generates more revenue, and its cost base doesn't go up accordingly. I assumed dollars per transaction would rise at about the Fed's inflation target. The one revenue delever is the take rate. Adding it all up, the three levers minus the one delever result in a revenue growth rate around 20% annualized for the next few years.

If PayPal meets our expectations or even falls a little short, we think the stock can easily compound in the upper teens for years to come. One of the more exciting opportunities to mention is pay with Venmo going commercial, but I'd rather think of that as gravy on top and not embed any expectations. eBay is also perceived as a big risk considering it opted to ditch

PayPal for Adyen, but we are increasingly comfortable knowing that eBay growth has slowed dramatically in the last year, and merchants on eBay are clamoring for the PayPal button to remain a checkout option. Both eBay's and PayPal's management teams have acknowledged this reality. eBay has no choice but to oblige, and word is it will keep PayPal central to the checkout experience and a big part for the foreseeable future. Clearly, One Touch has been a big part of that. One key driver of upside will come in the form of margin leverage. The analyst community is yet to buy into it. We view that similarly to how the Visa pact was greeted at the time, but eventually, they'll come around.

One other thing is the sale of the consumer credit portfolio to Synchrony. This resulted in cash proceeds of nearly $7 billion and an ongoing relationship where PayPal gets a little piece of the revenue from every bit of consumer credit sold to Synchrony. This equipped the company with a cash stash to make acquisitions which fill strategic holes. One such acquisition is iZettle for in-store payments and to fill a need in Europe, and this puts PayPal in competition with Square for in-store payments. Another one I really like was Hyperwallet for marketplace payouts to merchants with a specialty in cross border, which fits nicely with the push to help marketplaces in all elements of payments, so both payments from consumers to merchants and from platforms to the merchants themselves.

With our more ambitious margin assumptions, the DCF supports price targets at around $150, which compares to analyst consensus estimates of $100. Obviously, we're looking for a good degree of upside here. At the very least, we view PayPal as a compounder and think its shares should compound at the rate of free cash flow growth at around 20% annualized or more for the next five years.

Let's now shift gears to Roku. This one is for those who subscribe to the idea that volatility is not risk – so far in 2019, the stock is yet to have a range of less than 10% in any one day, which makes it somewhat challenging to nail down any market cap or enterprise value-based metrics. That said, I think the volatility is the market's way of reflecting just how wide the range of potential outcomes is here.

I have a weird infatuation with companies which have a great product that resonates with consumers but don't necessarily have a profitable approach to it from day one. It takes them a long time to figure out how to make money along the way. When they do, that's when I like thinking about them as an investment. A little history here might be helpful. Anthony Wood, the founder of Roku, is a serial entrepreneur. The name Roku translates to six in Japanese in honor of this being the sixth company Wood has founded. Roku itself is also an appealing, unique sounding name, already synonymous in some circles with streaming web-based content on a TV.

The money Wood used to bootstrap Roku was earned from the sale of a TV-attached box which was an early TiVo competitor called Replay TV. He learned a lot in the process of building a TV box. Since he bootstrapped much of early Roku before having to take venture capital or strategic investors (including the likes of Fox and Sky), Wood was able to maintain a high degree of ownership – just shy of 25% of the outstanding shares today and over 40% of the voting control.

Roku's ties to streaming run deep. Think how synonymous Netflix is with streaming itself. Interestingly, Wood was working at Netflix when he was getting into developing what we now know as Roku. In fact, its first name was The Netflix Player by Roku, and it was effectively owned as part of Netflix. Within Netflix, it was called Project Griffin, and Reed Hastings squashed the idea of launching a hardware box at the last minute because he feared the

company would be put in conflict with some of its licensing partners, like Apple (whose Apple TV was used for streaming Netflix), Sony (whose PlayStation was one of the early distribution channels for Netflix), and Microsoft (which used Xbox similarly in early distribution for Netflix). Just before launch, Roku and the team were told the box wouldn't be going live, and they were spun out into Wood's corporate Roku entity. The rest, as they say, is history, both for Netflix and Roku.

Many people still think of Roku as a hardware company because, after all, it does sell hardware, and that hardware has the Roku name on it. In reality, hardware sales are a means to drive placement of the platform. When new users create Roku accounts, they add things like their telephone number and payment information, which are data that enhance ROI for advertisers.

Roku monetizes the platform in several ways. One is by taking a royalty on subscriptions commenced through the platform. Since Roku has payment credentials, someone who wants to subscribe to Netflix can do so fairly simply via Roku itself. Roku gets a cut of that user's monthly payment to Netflix so long as that subscription remains active. It also takes royalty on purchases through apps on the Roku platform. For example, if you buy Frozen on Amazon over your Roku device, Roku takes a cut at Amazon's expense.

The second and more important way the platform is monetized is through ads. Roku has two main kinds of ads. The first are audience-building ads where, for example, a channel like Showtime can buy space on the home screen to try and get a viewer to watch a show like Homeland. Second, on a variety of apps within the platform, including the Roku channel, Roku places ads within the viewable content, much like you see on linear TV although at a much lower ad load. Once a household has an active account, the platform side has several levers to drive revenue growth. Every day, there's more content available to stream on the platform, and this makes the average household more and more likely to consume video on Roku. The ad side is still pretty new, both technologically and with big advertisers. As a result, some inventory continues to go unfulfilled. Between better tech and advertisers committing more budget, this will no longer be the case in time. Heading into 2019, Roku first sold inventory in industry upfronts, which are quite a big deal. It's standing up there with pretty much every channel (CBS, Fox, ABC, etc.) and selling some of its inventory in advance, which should have a strong effect in 2019. Also, Roku has some unique inventory, and it is able to add a layer of data that's just not possible on linear TV. This has already resulted in average CPMs around $30. In moments of scarcity, for example, with more live TV being streamed over Roku devices, there could be great room for even better rates down the line.

The platform has been driving growth on every KPI. Active accounts are growing swiftly with no deceleration, though we assume some in our forecast for 2019. ARPU is growing quickly, with some recent deceleration though the base is still very low. We're only talking about $17 on a trailing 12-month basis per active user as of the third quarter of 2018. It should be seasonally higher in the fourth quarter, but this is pretty low compared to the other ad platforms. It's especially low when you consider the level of engagement and completion rate. We don't include hours streamed in our forecast for 2019, because the number is growing very fast, and it's too challenging to do so. But similarly to engagement with PayPal, hours streamed is growing at over 1.5x the rate of active accounts. In other words, every single day, people are using their Roku devices to watch video content more than they were the day before. This has a powerful compounding effect on the demand for Roku devices and the topline the company can generate.

Connected TV led by Roku boasts industry-leading completion rates. Viewers on Roku

immerse in content more than they do on other video platforms. Connected TV completion rates are clocking in at around 95% compared to 80% for tablets and around 70% for desktops. Targeting helps completion in digital media compared to linear, but there's clearly something special about CTV beyond targeting that gets meaningfully better completion rates.

Why is completion so good? In my opinion, a big driver is how tasteful the Roku ad load is. Ads are 15- to 30-second spots with no pre-rolls – those annoying things that lock you in before you get to watch the content – and at 1/4 the frequency of linear TV. They're also uniquely tailored, which helps. Roku has a big lead moving in this direction. When the rest of the industry was focused on selling subscriptions for streaming, Roku was focused on building an advertising platform. It's estimated that 87% of requests for CTV ads happen on Roku devices. Recognizing its lead and seeing its thesis play out, the company took steps to put in place a data overlay to make it better for advertisers and provided them with all the key metrics to judge attribution and know their ROI. When I talk to people in the industry, they say that Roku is as good, if not better, than everyone out there at sharing some of this data. One of the biggest critiques you hear about Facebook and Google is that while they boast great ROIs, they don't necessarily give the right metrics for attribution. They also don't enable third parties to attribute, while Roku has signed on both Nielsen and Comscore and has worked with many partners to facilitate good attribution. As a result, large advertisers' test budgets are turning into real budgets that are always on. This is becoming a recurring expense at advertisers and a recurring revenue stream at Roku.

Everyone online is obsessed with walled gardens, and for Facebook and Google, being a walled garden has enabled them to hold firm and not give some attribution despite the pressure. Roku is trying to be a little different on that front though it aims to be a walled garden. It prioritizes the user experience first and foremost. Because of its targeting capabilities, Roku brings into video some advertisers that otherwise might not be able to do so. The long tail can figure out what they want to target and go for it on this platform. That's quite an effective way to grow the TAM compared to the linear share capture alone. The best evidence of advertisers getting ROI is that spending budgets on Roku keep surging.

One more recent development is Roku's shift towards building a moat around its walled garden. Some publishers sell their own inventory on apps, like Hulu, so Roku hasn't monetized those ads other than unfilled inventory Hulu itself couldn't sell. Recently, Roku changed its terms to no longer let publishers access the IP address of the viewer. Without the IP address, a lot of crucial data, such as geolocation, can't be accessed. In order to access this data for a publisher, Roku now must get paid even on inventory it doesn't control. The publishers have to go along with this because Roku is how many people watch their content today.

The addressable market on the ad side is pretty big – around $70 billion is spent on TV in the US alone. Digital advertising is growing much quicker than advertising on linear TV, which isn't growing at all, maybe even shrinking a bit these days as much of that share moves to CTV. Ads on Roku have been growing much quicker than digital itself. While this sounds great, budgets have been slower to move to connected TV than hours viewed although they inevitably will. It begs the question why all TV won't eventually be watched through a connected device. It's better both for advertisers and users. This opens up the potential for TV ad spend addressable market to go up because, when you think about it, the move from linear to CTV, the data overlay, and the opportunity to target should greatly improve ROIs while also bringing more long tail advertisers into the playing field. Those things aren't captured by thinking about TAM in this way.

Currently, two clear leaders are emerging in CTV in the operating system market: Roku and Amazon. Google and Apple are also around. Google's Chromecast capabilities are built into a lot of TVs, but its offering is really different. Roku has a big lead in advertising, but it was reported recently that Amazon is going to push ahead with an ad-supported offering of its own. While 87% of CTV ads today are on Roku, it doesn't necessarily mean this share will be as high going forward though it will continue to grow nicely.

The second key addressable market to think about is the household side. Today, 1/3 of adults in the US are reachable on internet-connected devices for TV type viewing, according to Nielsen. There are 126 million households in the US, and 27 million households already had Roku in 2018, just a fraction of those being international accounts. It's important to stress that Roku speaks in terms of households – its active accounts is not the number of unique users, nor is it the number of devices sold because more and more households are buying more than one Roku. This has been one pillar supporting the growth in stream per account, and it also serves to keep churn low and increase the value of the existing customer base.

One interesting aside about the Roku stick and something it's done to change what a household means for video viewing is that people who love their Roku devices have started traveling with them when they go on vacation. Every hotel or Airbnb place now has Wi-Fi capabilities, so you could bring your Roku, connect it to the Wi-Fi, and have all your channels available to watch exactly as you would at home. This is something new, interesting, and really easy because the stick is the size of the USB dongle.

Competition is always a concern. Amazon is a major competitor to just about everyone these days in just about every industry. Alongside Amazon, Google and Apple are also playing in this area. I think Roku has a few advantages. It's the first mover here, so the existing scale is ahead of the competition, both in terms of the number of households and the number of ads they serve. I also think the technology is superior. I've tried both Firestick and the Roku side by side, and the Roku offers a far better user experience.

Getting back to my quote from Kant, CTV is not a means to an end for Roku. It's literally its essence and its very existence. For the competition, CTV is one of many strategic initiatives competing for resources with other areas. While they do have considerable resources to dedicate, it's one pillar in a multi-pronged strategy. For Roku, it's everything. If you think back to Facebook in its very early days, everyone was worried that something like Google Plus could kill it. It's very different to have something be your end all-be all versus something being one other strategy. When it's your end all-be all, you tend to be more creative and more attune to what developments could actually make a difference.

One of the most important differentiators is that Roku is an open platform. Its competitors also compete with one another. YouTube has been off the Amazon Fire TV, and Amazon Prime has been off of Google's Chromecast offerings. Roku is the only platform where you could get everything, and it lets you access all the content you want. Quite recently, fears arose when Apple stated that its movies would be available for viewing on Samsung devices, much as the Roku channel is. People were worried this might be another prong of competition for Roku. The next day, Antony Wood suggested that perhaps Apple would eventually appear on Roku devices as well. I think that's inevitably going to happen. If you want to have the maximum choice from a user's perspective, much like in the case of PayPal, then Roku is the obvious one for you.

Roku's user experience is much better than all the others. It's faster, higher quality, and simpler to use. Another thing which helps is that large retailers love selling Roku-powered

TVs because they move well, they're high quality, and selling Roku helps beat Amazon in a key area. If you're Walmart or Costco, which sell a whole lot of TVs, why would you ever want to help Amazon in this area? You're going to do what you can to empower Roku here. They're putting their money where their mouth is. Walmart had special promotions for Roku, so much so that BTIG media analyst Rich Greenfield thinks Roku will inevitably be bought by Walmart.

TV manufacturers deserve special mention for how they strengthen Roku's hand against the competition. They're a key part of its edge, and Roku plays a key role in empowering TV manufacturers. Its software is built to run on low-cost TVs, so the manufacturers themselves can get the same picture quality with cheaper hardware components. This is a big driver of Roku's appeal to manufacturers and retailers, and something customers love because they get a cheaper TV with the same quality. Roku's hardware is increasingly the TV itself, though the company also sells streaming sticks. One in four TVs sold today are powered by Roku. The advantage it also offers manufacturers is made most clear by the example of TCL, which rose from 24th in the US TV market just a few years ago to number three in 2018. A Washington Post hardware reviewer recently called the Roku-powered TCL "the best deal on a premium TV I've ever seen." It was able to win these accolades despite costing half as much – $600 for TCL Roku TV versus $1,299 for a Samsung of the same size. Why wouldn't a customer opt for the Roku?

Something Wood has mused about is that, theoretically, Roku could lower the price of its hardware to have about a 6% gross margin on the hardware side of things, which could go to zero or even negative given the platform value. However, it has found market resonance with its price today. It is already cheaper than the competition, so there's no price pressure, and the purchase price serves as a form of commitment from the purchaser. This commitment is similar to someone becoming a Costco or Amazon Prime member. The psychological force behind commitment is a real phenomenon, and it's very strong. If this is a platform company, why all the talks about the hardware? I think it's because we're looking at a SaaS-like company, but you don't need to subscribe or think about canceling. Switching costs are high. With a TV, you're putting screws into your wall and placing a heavy piece of equipment on it. As a result, Roku should have much lower churn than any comparable streaming company. I know people who subscribe to Netflix, binge-watch their favorite show and cancel within a month. You can't do that with Roku, and the likelihood of churn goes down even more because of it. Many houses are adding a second, even a third Roku device.

This brings us to The Roku Channel (TRC), which was first launched in October 2017 and has come a long way since. It's already a top five viewed channel on Roku. At first, TRC was only available on Roku, but the company reached an agreement with Samsung to offer it on Samsung smart TVs. Roku then enabled web-based login to stream from a computer or tablet. Soon, you'll be able to stream TRC from the Roku mobile app. What's interesting is that these moves have untethered TRC from the hardware itself. In doing so, Roku has created a way for people without the device to engage with what the company has to offer. It has also made it possible for those who already enjoy TRC on Roku to take it with them wherever they go. TRC has been a great platform for the company to experiment with ad formats and apply machine learning for content suggestions to users. It's becoming increasingly a central hub to the entire Roku experience, and I've heard suggestions it will be the home screen soon, maybe by the end of the year. It's also potentially becoming a modern aggregator and bundler of content. Roku has just said it would make subscription channels like Showtime subscribable and payable through TRC. Users will get one simple monthly bill. Remember, billing information already is stored in every Roku account. Amazon has something similar, and it has done it with great success. Considering Roku has already done

well driving subs for content providers, this has a good chance of succeeding too. The better TRC does in all of its initiatives, the better content Roku is able to get on the platform, and the better content on the platform, the more people will want to watch TRC, so it's another virtuous cycle at work here.

In terms of the unit economics, the hard part to figure out is where ARPU will go over the coming years. We expect decent growth in this number. The main driver will come from more hours watched, a larger share of those hours going to TRC, which is monetized at higher rates than other channels, better CPMs, and more subscriptions sold through the platform. The platform itself is very capital-lean, with most of the investment flowing through OpEx, R&D in particular. For the purposes of this study, I take half of R&D to be growth investment. In doing this, I'm looking to figure out two things. First, what's the actual cash flow the platform could generate per user were it not aggressively investing in growth? Just as an aside on this investment in growth, when the company announced its intent to be EBITDA-breakeven next year despite about $15 million of EBITDA this year, the stock took a pummeling in the fourth quarter of 2018. It was one of those times when investors were looking for companies not necessarily to drive as much topline but to give growth. The second thing I'm looking for here is to get an idea of when incremental margins will inflect to become positive. It's likely that Roku will be EBITDA-positive this year. The company suggested as much, though it wants to be conservative in how it approaches its financial guidance.

In year 0, we have a negative number in our model. That's customer acquisition cost, which is offset with the gross margin on the player sales. This is how the company views it, as a form of negative customer acquisition cost, and it's the way we approach valuing the business. We ascribe no value to the hardware revenue stream; we don't view it as the sum of the parts, as some analysts do, and focus instead on valuing just the platform. This is where the hardware value comes into play, and the IRRs here are really attractive. If you take our expectation for 37 million households by the end of 2019 and multiply it by the LTV for each user, you get $1.7 billion of expected value off of next year's user base. That's a nice baseline to think about because it presumes no growth and no retention of any users beyond year 5. We don't have enough history to make clean assumptions about churn and customer lifespan, but thinking about how long the average TV lasts, you can get a ballpark sense. Many think the average TV lasts five to seven years at its first placement and often gets moved to the next, so using five years as a baseline for customer lifespan seems fair in this situation.

What's the path to $1 billion in platform revenues? It will take 40 million active accounts and an ARPU of $25. Remember, $17-plus was the number at the end of the third quarter in 2018, and it'll be decently higher in the fourth quarter. Both these numbers – 40 million active accounts and $25 ARPU – are 50% growth from today's levels on each respective KPI. The question to me is not if but when the company reach these numbers, and it looks increasingly likely this will happen in 2020.

What does $1 billion in platform sales look like for Roku? We can use 10% for the WACC and 4% or 5% for growth to figure out what net margin the market is implying. At the beginning of 2019, the company was trading at 3x the 2020 expected platform sales. The math's a little different right now but not that far off. Using that 3x number, we can then think about the embedded expectations the stock price is handicapping against. For Roku to work well from here, you need any one of the following to happen: greater than 40 million households, ARPU of over $25, a net margin above 20%, or terminal growth beyond 2020. For context on margins, even a company like Twitter, which everyone looks at as struggling and is a stock

we own, has given the Street a long-term EBITDA margin target of 40% to 45%. If you translate that to net at a 25% tax rate, you're looking at 30% net margins longer term. Now, the margin number is the one least likely to happen in the near term, so the company maintains its insistence on investing in growth, but we think it's highly likely it hits the numbers put out on households and ARPU by 2020. Meanwhile, the stock is suggesting that if any one of these numbers is checked off, we'll have a good investment on our hands.

Since player sales don't really go towards the bottom line, the most relevant comparison between Roku and its peers is enterprise value to gross profit. Looking at the peer group, which includes large and small platforms, all with pretty good growth, it's clear that Roku stacks up favorably. According to consensus estimates from Bloomberg, Roku has the highest expected growth rate but below average EV/gross profit every year from 2018 through to 2020. The discount gets steeper the farther out you go. Notably, while many growth stocks had a rough fourth quarter in 2018, the declines were met with lowered analyst expectations. That's what you'd expect to happen, but Roku's pummeling came alongside rising estimates. The extent of the decline was something I haven't seen while expectations were moving upwards, but that just plays into our hands and is exactly why the opportunity exists today.

The strategic value is pretty big too. There are many potentially interested acquirers in diverse related industries, from Comcast to Walmart, Google, and Disney. I'd never premise a thesis on acquisition alone, but it's important to consider what this asset means for the ecosystem. If you think about Disney launching its own streaming platform, viewing Netflix as its ultimate competitor, something like Roku would be quite the strategic asset on several fronts. The obvious one is that Roku could enhance Disney's ability to distribute and generate subscriptions on its own services, but the less obvious is how Disney would be able to get data on users' Netflix viewing habits. Roku would be a Trojan horse of sorts, which Is an interesting scenario to think about. Comcast already has an existing relationship whereby customers could forego a set-top box and access its channels through Roku instead. It does charge a little for this, but it's less than half the price of a set-top box. Sky, which Comcast is acquiring, already has an ownership stake in Roku and a relationship for the digital distribution of its content in Europe.

I think it's interesting to contrast Hulu with Roku. Disney recently pegged Hulu's valuation at $9.25 billion. Hulu apparently ended 2018 with 25 million users, so we're in the same ballpark here. We don't know ARPU or churn at Hulu, though it's likely both are higher than at Roku. Hulu is burning money rather swiftly, spending over $2.5 billion on content alone per year. That's before R&D necessary to build a modern streaming service. It is clearly far more expensive to run than something like Roku, which is capital-lean. Hulu does compare favorably in that it earns almost 5x the advertising revenue of Roku today, but in some ways, I'd like to view this more as helpful in how it provides a nice idea of where Roku can be.

Looking ahead, it's hard forecasting a company that is growing so fast in such a dynamic industry, but it's interesting to think about where it can be in 2022. In the worst case, with a meaningful deceleration in ARPU and net new active growth, I think it should be able to hit pretty soon, especially on the ARPU side. Roku could end up with over $2 billion in platform revenues. This is going to be a high-margin, capital-lean, highly recurring revenue base. The question is how much you would pay for it. At 5x the lowest revenue estimate in one scenario, this will be a $10 billion market cap, which will be a 23% annualized return over the four years heading to 2022. Time will tell, but there's room to fall short and end up with great results, just as there's room to excel and turn it into something truly special. I lean heavily toward something truly special happening with Roku.

The following are excerpts of the Q&A session with Elliot Turner:

Q: A question on Roku, tying back to your comment that there hasn't been a day where the stock hasn't moved around 10% or more. To some extent, it's understandable why because this really does have a very interesting future. I'm just wondering if there's any kind of a short thesis on it out there or any vocal investors who disagree with the story.

A: One recent move was inspired by Citron Research, which has played both sides of Roku. It has put out short hit pieces when the stock was in the 60s and called it the future of streaming when the stock was in the mid-30s. I think Citron's sentiment changes with the wind – it just put out a tweet suggestive that it was short the stock, then rescinded it and said it was actually not short it, just not long it anymore. But the short thesis I've seen out there on Roku is that at the end of the day, it can't escape being a hardware company. The platform is going to have a hard time monetizing. Most of the hours viewed happened on Netflix, where Roku doesn't have any right to sell ads, and that the competition is going to come on pretty heavy from the likes of Amazon, Google, and Apple, and everyone aiming to get into this area.

One of the points I'd emphasize is that these devices are in people's homes already, and the clearest evidence of it is both the sales of the players themselves on the hardware side and the hours viewed. Many of these homes have more than one or two. My home has four Roku devices between two sticks and two TCL TVs powered by Roku. You're not going to replace every single TV at once, and even if you replace one, you're not going to turn off Roku, so I think there are some things that really keep Roku sticky with its existing user base. The competition for these devices will happen more around the margin.

About the instructor:

Elliot Turner is a co-founder and managing director at RGA Investment Advisors, LLC. RGA Investment Advisors runs a long-term, low turnover, growth at a reasonable price investment strategy seeking out global opportunities. Elliot focuses on discovering and analyzing long-term, high quality investment opportunities and strategic portfolio management. Prior to joining RGA, Elliot managed portfolios at at AustinWeston Asset Management LLC, Chimera Securities and T3 Capital. Elliot holds the Chartered Financial Analyst (CFA) designation as well as a Juris Doctor from Brooklyn Law School.. He also holds a Bachelor of Arts degree from Emory University where he double majored in Political Science and Philosophy.