09/30/2020 - Roku, Inc. (ROKU): Creating The Operating System For All TVs

Why You Should Care About ROKU: The ROKU bull thesis revolves around the company's flywheel effect between brand advertisers, streaming services and consumers. More channels and streaming services on the platform drives more consumers (eyeballs). These eyeballs in turn increase the value for brand advertisers to spend money on the platform.

Finally, more advertisers and eyeballs drive more channels/SVOD services to join the platform. The cycle repeats.

Now more than ever people are cutting the cord on cable. Roughly 32% of US households don't have traditional pay TV. And since COVID-19 pulled forward **a ton** of pent-up demand, we think this shift is **permanent.**

Yet most investors are stuck in the belief that ROKU is "just a hardware company". While investors debate hardware sales trends, the *real* growth driver is the company's platform and ability to distribute SVOD to millions of homes.

Why Roku?

Most TVs nowadays come with their own built-in OS housing all the SVOD (streaming-video-on-demand) options a consumer could want. If that's the case, why should consumers choose Roku? And why should they choose Roku over Apple TV or Amazon Fire Stick?

Let's tackle the first question: **why choose Roku over a Smart TV?**

Roku is an operating system built for TV streaming. Smart TVs are commoditized hardware whose SVOD apps are designed to capture customers, not create value. One way to see this is Netflix's 2019 software update. In 2019, Netflix announced a software update that would render Samsung and Vizio's Smart TV services obsolete. Consumers also faced issues with the Disney+ release.

That's the biggest problem. Rely on a Smart TV OS and pay the price when your favorite streaming service updates its software. This shouldn't surprise consumers. **Buying a Smart TV without an external streaming device (or built-in streaming-specific software) is a bet that the TV manufacturer's internal streaming team is better than the entire Roku army of engineers.**

Given the choice, consumers would rather pay a lower price for a new streaming device than a higher price for a new TV. But consumers don't have to make that choice. Whether it's Roku, Apple TV, or Amazon Fire Stick, software updates are a feature, not a bug. Streaming devices are **built** for exactly that purpose.

COPYRIGHT 2020 MACRO OPS — ALL RIGHTS RESERVED // DO NOT DISTRIBUTE

That said, consumers *can* have the best of both worlds if they choose Roku. Which brings us to our second big question: **why Roku over Apple TV or Amazon Fire Stick?**

Roku vs. Competitors

It's best if we invert this question and see why consumers *wouldn't* choose Roku.

There's a few reasons consumers would opt for Apple TV or Amazon Fire Stick:

- Already ingrained in the OS ecosystem (Apple TV)
- Has multiple Alexa home devices and prefers seamless integration (Amazon Fire Stick)
- Prefers higher-quality sound (Amazon Fire Stick)
- Can't get enough Amazon or Apple products in your life (Apple TV / Amazon Fire Stick)

Reasons for *not* choosing Roku fall under one category: you're a diehard Amazon or Apple fan.

Things like Apple integration or Alexa-voiced capabilities are specific benefits to people that *already* enjoy those products. When it comes to the *act* of streaming, Roku beats both competitors. They have the largest library of content. But more importantly, they're content-independent. Apple pushes its own content. Amazon peddles its own products and content. There's a clear motive behind the two competitors' streaming services: **buy our other stuff**.

Scour the internet for reviews between competitors and you find a clear winner: **Roku.**

SmartHome declared Roku the winner in its head-to-head battle against Amazon Fire Stick. Their reasons included ease of use, content quality, installation, and smart features.

TechRadar joined the Roku fanfare, saying in a product review (emphasis mine):

> *"Roku is our all-around favorite streaming video player platform. It might be basic by some people's standards, but* ***it knows how to sniff out content from any of the major streaming services and can play nice with everything.*** *It offers 4K and HDR streaming and the hardware is pretty future-proof."*

Finally, Roku gives you more for your money. Roku offers the largest selection of content between streaming and live TV, yet it's less than the Fire Stick or Apple TV box.

To review, here are the main reasons Roku presents a better value proposition for consumers:

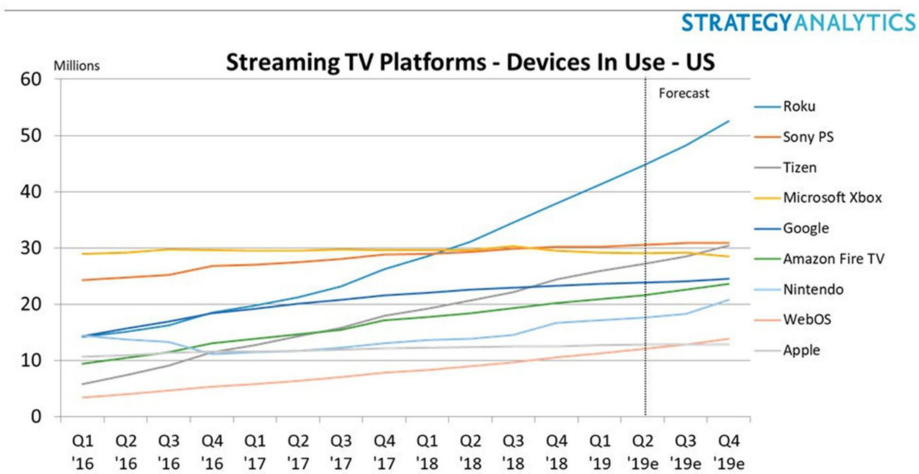
- **Content-agnostic:** Roku doesn't peddle a particular streamer or service (you can run AppleTV *and* Amazon Prime on Roku)
- **Cost-Advantage:** Cheaper (and faster) to set-up Roku than its competitors
- **Largest Content Selection:** Live TV, HBO, Hulu, Netflix, Disney+, you name it. Roku's platform integrates with nearly every streaming service and offers ad-based live TV with over a thousand channels

COPYRIGHT 2020 MACRO OPS — ALL RIGHTS RESERVED // DO NOT DISTRIBUTE

- **Built For TV:** Roku is the only company 100% dedicated to making the best content distribution product on the market. Apple and Amazon have separate "arms" working on their products. But they're after-thoughts to each company's main mission.

Does Roku Have A Moat/Competitive Advantage?

Roku's moat hinges on its ability to grow its user base while becoming the go-to operating system for content distribution. The company has the largest share of users on its platform compared to its competitors (see below):



The more users it has on its platform, the higher the platform's value to streaming services (like NFLX and HBO). This encourages more streaming services to integrate on the platform. That domino hits advertisers, which now see increased value in buying ads on Roku's platform.

Here's Roku's moat in five sentences: **More users beget more streaming services. Which begets more advertising dollars. Which begets more streaming services. Which begets more users.**

Yet the above flywheel isn't the most exciting part about Roku's potential competitive advantage. Like we mentioned earlier, Roku wants to be the go-to operating system for content distribution on TV. This is where we think Roku can create the widest moat possible. The company's already the OS for TCL televisions (you can check out some of the products here).

We can imagine a world where *all* TVs come with Roku's content distribution platform. After all, Roku is the only content-agnostic distributor of streaming services and live TV. That's not an unreasonable assumption (if Roku gets there, of course).

In a *Recode Media* podcast interview, Roku founder Anthony Wood described Roku as the next logical step in TV operating systems. I'm paraphrasing his quote, but it went something like this (emphasis mine):

> *"Windows tried importing their operating system onto phones and it didn't work. iOS and Android made software for phones. Every hardware platform has its specific operating system (computers, mobile phones, etc.). TV will be no different."*

COPYRIGHT 2020 MACRO OPS — ALL RIGHTS RESERVED // DO NOT DISTRIBUTE

Roku can get there because it's 100% focused on becoming the go-to operating system. Apple and Amazon aren't trying to win that game. They're trying to win customers' wallet share. Roku wants the platform. They want to be *Windows* and *iOS* and *Android*.

That's Wood's end game. It's not selling hardware. It's not competing against Amazon and Apple TV. It's about ingraining its software into the backend of *all* TV content distribution to create the stickiest service possible.

Roku has long-term compounding potential if they grow their user base and become the go-to TV distribution operating system. In that world, you're invading hundreds of millions of homes and TVs. And that's only in America. The company's barely scratched the surface of its international growth capabilities. At a current 40M+ account base, there's ***plenty*** of growth ahead.

Pre-Mortem: It's 2029 And We're Wrong … Why?

There's three main drivers in the ROKU bull thesis:

1. Active account growth
2. ARPU Growth
3. Full integration of TV OS market

If any of those metrics stall (or worse, reverse) it'll put downward pressure on Roku's ability to take market share and become the dominant TV operating system. This could happen a few ways:

- ROKU becomes obsessed with low-margin periphery equipment (see: Roku speakers) at the expense of higher-margin service revenue
- Amazon *or* Apple TV adopts a content-agnostic distribution approach (this scares us the most because of both companies' *massive* user bases)
- Streaming services recognize their importance to Roku's customer value proposition and demand a lower revenue share agreement
- Smart TV OS technology gets *way* better and competes with Roku's TV-first distribution software
- Roku fails to integrate with TV manufacturers and doesn't get their tech into Smart TVs

Alright … those are the most pressing questions about the ROKU thesis. Let's dive deeper into the business to see how it makes money, its competitive positioning and how we're thinking about valuation.

ROKU: Not Content, Not Hardware ... OS & Distribution

ROKU isn't a hardware company. Nor will it produce its own content like Netflix ROKU is an operating system like Microsoft is to PCs and iOS/Android for cell phones. And like any operating system, ROKU aims to be the *number one* place for streaming services to distribute their content to viewers.

Think of ROKU as a buffet. There's plenty of options to choose from and you're not tied down to any particular cuisine type. But at this buffet, the restaurant doesn't cook the food. Other restaurants cook the food and then pay the buffet for a spot at the table.

COPYRIGHT 2020 MACRO OPS — ALL RIGHTS RESERVED // DO NOT DISTRIBUTE

That's ROKU.

ROKU provides a platform for consumers to watch their favorite shows, movies and streaming services all in one place. They don't cook the food themselves, but they serve it to you fresh.

The bet here is that one day, *all* TVs will have *some* operating system for streaming services and content. ROKU's betting on itself and it's working. The company has over 40M US households on the platform and a growing lead in the streaming platform market.

It's worth stressing that ROKU isn't trying to pick a side in the battle for content delivery and streaming. They don't care what streaming service you choose. All they care about is that you use their platform to find and watch *that* streaming service.

Why Consumers Switch To ROKU

The value proposition from the consumer's standpoint is simple. You pay less for more content. ROKU users save on average $75/month from cutting cable. And what can consumers do with that additional $75/month? Pay for streaming services, of course!

I saw a ton of "you can get all this for $x!" tweets when Disney announced their streaming service. One of them stuck with me. In short, the tweet itemized the number of streaming services $75/month could get you:

- Netflix: $12.99
- HBO Max: $14.99
- Disney+, ESPN+ and Hulu: $12.99
- Peacock Premium: $9.99
- Amazon Prime: $12.99
- Showtime: $10.99

Oh, and you get 1,000s of ad-supported TV channels for free on top. It's not a tough sell to consumers. So how does the company *actually* make money?

How ROKU Makes Money

ROKU breaks down their revenue into two sources:

1. **Player**
    a. Streaming boxes
    b. Streaming sticks
2. **Platform**
    a. Ad-supported TV
    b. Content Distribution
    c. Home-Screen Ad Space

COPYRIGHT 2020 MACRO OPS — ALL RIGHTS RESERVED // DO NOT DISTRIBUTE

The purpose of ROKU's player sales is to acquire customers. The company charges $30-$100 for various players and streaming devices and barely makes a profit.

For example, in Q2 ROKU generated $8M in gross profit from $111.3M in revenue (7% margin). Over time the margin should compress to roughly 0% as devices commoditize and ROKU focuses on its platform revenue.

The bulk of the company's revenue comes from its platform segment. We don't know how much each segment specifically makes, but collectively Platform generated $244M in Q2 revenue and $138M in gross profit (56%).

Stepping back, ROKU generated $1.1B in 2019 revenue. 67% (or $737M) of that came from their platform advertising channel.

Platform Revenue: ROKU's Future

ROKU's ad-based revenue percentage should grow over time as ROKU focuses more on its advertising monetization and margin compression in hardware sales. We're seeing signs of this already with ROKU's $150M acquisition of DataXU.

Here's *Digiday's* take on DataXU (emphasis mine):

> *"[DataXU] provides tools for advertisers to **programmatically buy ads across connected TV, addressable TV and online**. Dataxu also operates an identity and data management platform that combines advertisers' own data and data from third-party sources to build a device graph that enables it to track how individuals are exposed to ads across different platforms."*

It's clear ROKU wants to make its advertising platform a larger, more profitable part of its operations. Here's another way they make money off the platform.

Content Distribution & Licensing: Turning Competitors Into Partners

ROKU wants to be the operating system for streaming services to deliver content to consumers. By doing that, they've turned companies (NFLX, AMZN, HULU, etc.) that look like competition into partners. And both parties benefit.

That's why the rise of streaming and content production is actually a *tailwind* for ROKU. Each incremental streaming option raises the value of the platform for the consumer. In turn, new streaming services will want to be on ROKU's platform to reach those consumers. And they'll pay a lot for it.

Another way ROKU makes money from its platform is via Licensing Agreements with content providers. If a customer signs up for a Netflix account through the ROKU platform, ROKU gets a piece of that revenue. And they do that with every single content provider. Finally, ROKU generates revenue through Home Screen Ad-Space placements. Disney+, for example, paid ROKU a lot of money to place a Home-Screen Ad during its initial launch.

COPYRIGHT 2020 MACRO OPS — ALL RIGHTS RESERVED // DO NOT DISTRIBUTE

ROKU's TAM: Capturing The $160B Ad Spend Market

2019 saw [$167B in global TV ad spend](). Looking out ten years, we can see a world where global TV ad spend reaches $200B (roughly 2%/year). As we mentioned earlier, video streaming (AVOD) should get the bulk of that ad spending as more people cut the cord.

Let's assume in ten years streaming accounts for 80% of the global TV ad spend. We don't think this is unreasonable given COVID-19's rapid acceleration of this trend. 80% of $200B gets us a $160B addressable market.

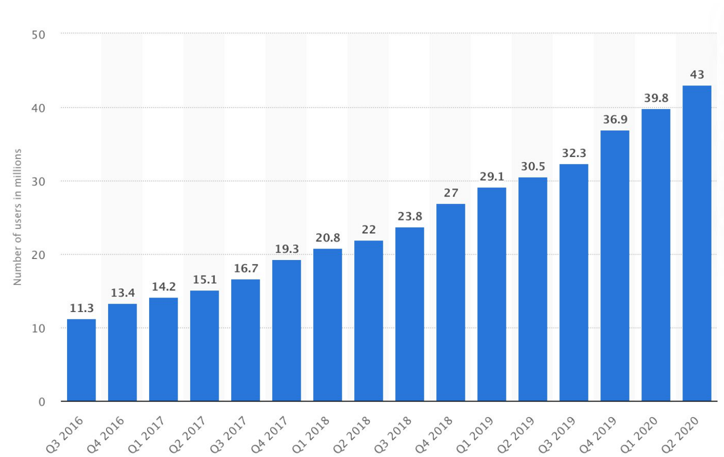
What percentage of the pie can ROKU capture? It's the leading streaming platform on the market with its user-base growing 40%+ YoY. 8-10% seems appropriate. At that rate, ROKU would generate roughly $14B (0.80x EV). We can further assume that 70-80% of those revenues will come from their Platform segment (which already does 67% of revenues).

That would get us $10.5B in Platform revenue with 60% gross margins for $6.3M in gross profit.

But there's another way to think about ROKU's 10YR market forecast: ARPU and Active Account Growth

Valuing ROKU: Active Accounts & ARPU

ROKU has over 43M active accounts on its platform (graph on right) growing roughly 70% per-year.



We can back into a valuation by forecasting active account growth and average revenue per user (ARPU).

In our model we're assuming 20% 10YR average active household growth and 12.60% 10YR average ARPU growth.

Under these conditions, ROKU would have 210M active accounts with an ARPU of $58.54. That gets us a total of ~$13B. About $3B less than our TAM estimate above.

We can then estimate the company's Platform revenues by projecting revenue split into the future. Platform currently represents 70% of the company's revenues. By 2029 ROKU should generate 85% of its revenue from its Platform segment.

If that happens, ROKU would do $8.6B in Platform revenue by 2029. Platform revenue is higher margin and should command a stronger sales multiple in public markets. The company should generate roughly 20% operating margin at scale over the next ten years. That gets us ~$1.55B in operating income in 2029.

COPYRIGHT 2020 MACRO OPS — ALL RIGHTS RESERVED // DO NOT DISTRIBUTE

Even at 6x Platform revenue sales the company would be worth roughly $52B.

At the end of the day there's two main drivers to our bullish ROKU thesis: **active accounts and ARPU**. As long as the company executes on growing these two drivers, long-term investors should be rewarded.

Risks: ARPU Compression, Stalled Active Account Growth and AMZN

ROKU stalling in ARPU and active account growth would cast serious doubts on the company's long-term ability to compound capital and gain market share.

There's also the threat that other companies (AMZN w/ Fire Stick and CMCSA w/ TiVo) will take market share by providing OTT free streaming services. Finally, TV manufacturers could cut out ROKU from their final product development. This would reduce the company's ability to acquire customers.

COPYRIGHT 2020 MACRO OPS — ALL RIGHTS RESERVED // DO NOT DISTRIBUTE