LVS ADVISORY

Investment Results	Full Year 2019	Full Year 2020	Year-To-Date 2021	Since Inception[1]
LVS Growth	**-**	**65.1%**	**1.1%**	**66.9%**
Benchmark: S&P 500 Total Return Index	-	*17.8%*	*0.5%*	*18.4%*
LVS Defensive	**9.3%**	**15.5%**	**4.4%**	**31.7%**
Benchmark: S&P Long-Only Merger Arb Index	*6.1%*	*4.7%*	*0.3%*	*11.4%*

Note: results presented gross of advisory fees and net of brokerage commissions. Investment results are as of February 1, 2021.
(1) LVS Defensive was incepted on January 1, 2019. LVS Growth was incepted on January 1, 2020.

February 3, 2021

Dear Partners,

2021 has already started with a flurry of activity and volatility. After a year like 2020, I'd like to think we are mentally prepared to handle just about anything, but we live in a fast-moving world so I will try not to get out over my skis. This month I'd like to discuss some of the investment lessons learned from 2020 and present our investment thesis on Twitter – the most recent addition to the growth portfolio.

Takeaways from 2020

With the benefit of a few weeks to reflect on what played out in 2020, I will look back at the last 12 months as a formative experience.

I have followed the financial markets for over a decade and have well-defined investment tenants, but the market is a complex adaptive system that is constantly evolving and serious investors must commit to a lifetime of learning and continuous improvement to keep up. This is why there will never be a static formula to successful stock market investing. While this fact may frustrate some investors it is also what makes public market investing intellectually appealing.

This is all to say that I learned a lot in 2020 and I wanted to share three of the lessons that will be the most impactful for our investment strategies moving forward.

1. The benefits of a broader investment universe

A universe refers to the list of investments available to an investor. If your universe is the S&P 500, the 500 largest publicly traded American businesses, then you are limited to picking investments from that list. In 2020, we broadened our universe of potential investments in the Defensive portfolio.

The Defensive portfolio was conceived primarily to invest in merger arbitrage. These situations arise when a public company receives an acquisition offer and trades below the deal price presenting an opportunity to earn the spread. This investment strategy really boils down to the idea that our merger investments are successful as long as the mergers are completed, regardless of what happens in the financial markets.

Investing in mergers can earn a dependable high-single-digit to double-digit return stream when the opportunities are abundant; however, the universe of available merger opportunities dried up when the financial markets broke in March 2020. At the same time, the opportunity set in a whole host of other types of investments became too attractive to pass up, so we adapted.

Instead of sitting on cash and waiting for dealmakers to regain confidence, we studied other types of investments that offer similar investment characteristics. In prior updates, I have discussed our incorporation of SPACs into the strategy. We also opportunistically invested in the discounted preferred stock of several businesses with fortress balance sheets.

While it required an intensive level of research to broaden our universe, the effort paid off. Our best-returning investments of 2020 in the Defensive portfolio came from this new pool of opportunities. Today, the opportunity set in merger arbitrage is robust and we have mostly returned to investing in these deals. If and when market conditions present the right opportunities, we now have a few additional tools at our disposal.

2. Focus on the inevitable outcomes

It is a cliché for investment managers to drone on the importance of long-term investing at the expense of short-term uncertainty. But when fear and panic hit the market, everyone puts on blinders and focuses on the next day, let alone the next week.

"Invest in quality businesses with long-term growth tailwinds" is a founding principle to our growth strategy and is a fine idea but it lacks rigor. The experience of 2020 has led me to refine this principle by replacing "long-term growth tailwinds" with "inevitable growth outcomes" to read "invest in quality businesses with inevitable growth outcomes".

Re-framing the characteristic to "inevitable" from "long-term" allows us to ask more pointed questions about the business that can better guide the analytical work:

a. What is the inevitable state of a business?
b. What are the key milestones and challenges along the way?
c. How long will it take to get there?
d. What could the inevitable state of the business be worth?

If the inevitable state of a business cannot be determined with confidence then it speaks to the lack of predictability or understandability of the business and is a sign to pass.

Had we used the framework of inevitability, we could have made better decisions during 2020.

We owned shares of Disney at the start of 2020 as we strongly believed in the strength of the brand, irreplaceability of the assets, and compelling growth opportunity from going direct-to-consumer with Disney Plus. However, we lost conviction in the holding as the Covid-19 pandemic effectively disrupted every aspect of its business. To review, the company had to temporarily close its parks, faced movie theaters possibly permanently closing, lost sports broadcasting revenue, faced a rough TV advertising market, and transitioned to a new CEO. The one business line that wasn't negatively impacted, Disney Plus, was expected to be a cash drain in the near term.

The culmination of all these short-term issues led to folding our hand and selling our Disney shares at depressed prices. We had already sufficiently imagined the inevitability of travel returning and Disney winning in a streaming world but we didn't focus enough on the long-term value of this inevitable outcome and the immense discount to that value the share price represented.

Hindsight is 20/20 but it is always worth evaluating the tape in an effort to continuously improve the decision-making process.

3. The validity of top-down valuation methodologies

This last takeaway is likely the most controversial because it runs contrary to how most analysts are trained in the art of business valuation.

Investment analysts conventionally use a bottom-up valuation methodology which involves projecting a company's earnings into the future by extending the current trends in the business. If a company currently generates $100 million in earnings and has historically grown 10% per year, most would assume the future probably looks like the past and impute next year's earnings at around $110 million.

A top-down valuation methodology involves calculating the total size of an industry, making an assumption for a company's market share, and then running those assumptions through a business's cost structure to calculate earnings. The difference is that a top-down methodology involves making macro assumptions over the size of the industry and market share which often feels much more like guesswork than simply extending a business's historical trends.

A few years ago, a fellow analyst pitched Netflix by noting that although Netflix was trading for an astronomical multiple of current earnings and did not produce positive cash flow, if 20% of the global population outside of the United States subscribed to the service and paid $15 per month, then the stock would be a home run. I thought this valuation method was nonsensical but am now coming around to that approach.

What changed? Well, I do not believe a top-down valuation methodology is appropriate for all companies, but it is worth considering in tech-enabled industries where products can be ordered virtually. The nature of the internet has made it more possible than ever for companies to meet the full potential of their global market opportunity. Companies with strong brands and online distribution can quickly reach customers all around the world in some cases without a need to directly invest in any physical infrastructure. Furthermore, distribution costs (marketing, web hosting, order fulfillment, customer service, etc.) are increasingly becoming variable in nature making it easier for companies to invest in growth on the margin.

Top-down analytical frameworks can be more effective in helping to imagine what a company has the potential to become. In a world ruled by "internet economics", it seems that non-linear growth patterns may become more of the rule than the exception going forward for well-positioned businesses – that is certainly what played out in 2020 as the trends in digital commerce accelerated.

A consequence is that the bottom-up valuation framework with a linear projection methodology may be more prone to error than in the past.

Our Twitter investment thesis: how pressure is creating a diamond

We recently purchased shares in Twitter for the Growth portfolio. Twitter isn't an unknown company that required turning over rocks to find, but we believe it is under-appreciated because a positive inflection in its business resulting from recent investments has been obscured by the weakness in the advertising market created by the Covid-19 pandemic. Additionally, the company is in the early stages of expanding into new product features which could unlock more value from its platform and cause investors to re-rate the stock higher.

The origin story

Twitter was founded in 2006 as a text-based communication tool used internally at the podcasting company Odeo. The product was spun-out into its own company after the team realized its potential to become a social networking website. The initial tipping point came in 2007 at the South By Southwest Conference where hundreds of influential attendees adopted the product.

Twitter's rise coincided with the release of the iPhone and the ubiquity of smartphones. Soon Twitter found its product-market fit as a source of instant news and a global platform for conversation. This helped Twitter carve out its own niche on the internet and stand out from other social networking companies.

Today, Twitter has over 300 million monthly active users which include 20% of all Americans, 85% of the world's heads of state, and over 80% of professional journalists. The company's status as the default platform for transmitting news and other public information has created a strong moat around its ability to attract and retain users on a global scale.

There is a misconception that Twitter's influence is limited to news and politics. Thought leaders across a number of fields also use Twitter to connect with others in their industry. For example, scientists and academics use Twitter to share research ideas and promote studies. In addition, many prominent athletes and celebrities take to Twitter and drive engagement around sports broadcasts and other live events.

Twitter has faced controversies regarding the content on its platform, but despite these issues, the platform's user base has proven to be quite resilient over the years. This will most likely continue to be the case as Twitter has become more than just a website, it has become part of the internet's communications infrastructure.

The need for a turnaround

When Twitter went public in 2013, there was a great deal of excitement that it could reach the heights of internet peers such as Facebook and Google and its stock price initially soared. At the time of IPO, the company experienced sales growth in excess of 100% per year, expanding profit margins, and robust user growth. Within a few years, the story had changed. Total sales and active users stopped growing and the company had not achieved healthy levels of profitability.

(In millions)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	LTM
Total Revenue	$28	$106	$317	$665	$1,403	$2,218	$2,530	$2,443	$3,042	$3,459	$3,435
Growth %		*276.0%*	*198.1%*	*109.8%*	*111.0%*	*58.1%*	*14.0%*	*(3.4%)*	*24.5%*	*13.7%*	*2.2%*
Gross Profit	($15)	$45	$188	$398	$957	$1,489	$1,597	$1,582	$2,077	$2,322	$2,187
Margin %	*(52.7%)*	*41.9%*	*59.4%*	*59.9%*	*68.2%*	*67.1%*	*63.1%*	*64.8%*	*68.3%*	*67.1%*	*63.7%*
Operating Profit	($67)	($127)	($77)	($639)	($539)	($450)	($367)	$39	$459	$366	($72)
Margin %	*(238.6%)*	*(119.9%)*	*(24.3%)*	*(96.1%)*	*(38.4%)*	*(20.3%)*	*(14.5%)*	*1.6%*	*15.1%*	*10.6%*	*(2.1%)*
Monthly Active Users	54	117	185	241	288	305	319	330	321	*N/A*	*N/A*
Growth %		*116.7%*	*58.1%*	*30.3%*	*19.5%*	*5.9%*	*4.6%*	*3.4%*	*(2.7%)*		
Daily Active Users								115	126	152	187
Growth %									*9.6%*	*20.6%*	*29.0%*

Source: Twitter financial statements. Note: Twitter switched from reporting monthly active users to daily active users during 2018.

To make matters worse, the company failed to develop a strong organizational culture. At the top of the organization, Twitter has cycled through multiple CEOs, CFOs, and heads of product since becoming public. This has caused some strategic and operational discontinuity at the company.

When Dick Costolo was CEO (2010 - 2015), he pursued a multi-product strategy and acquired companies including Vine and Periscope that Twitter continued to operate as separate apps. When Jack Dorsey returned to the CEO role he re-focused the company around the core Twitter app and shut down Vine and later shut down Periscope.

Another issue has been the lack of fiscal discipline. Twitter is an internet company selling advertising. In theory, this should be a highly profitable business but the company has barely turned a profit 15 years after its founding.

There are several areas where Twitter can cut costs. First, the company spent $798 million on research and development (23% of revenue) in 2019 alone, yet on its surface, Twitter's product hasn't changed much in years. Second, the company spends several hundred million dollars per year managing its own data centers where it could save money by transitioning its infrastructure to cloud providers such as AWS. Third, its employees make up the vast majority of its cost base and relative to the size of other platforms, Twitter has a larger headcount.

(In millions)	Twitter	Facebook	Snap
2019 Revenue	$3,459	$70,697	$1,716
Y/Y Growth %	13.7%	26.6%	45.3%
2019 R&D	$798	$13,600	$1,003
% Sales	23.1%	19.2%	58.4%
2019 EBITDA	$716	$34,727	($916)
Margin %	20.7%	49.1%	(53.4%)
Capital Expenditures	$541	$15,102	$51
% Sales	15.6%	21.4%	2.9%
Employee Count	4,900	58,604	3,195
Revenue / Employee	$0.71	$1.21	$0.54
Daily Active Users	187	1,820	249

Source: Capital IQ.

It is worth noting that Facebook and Snap have spent heavily on research and development but have delivered much more product innovation. Facebook just released the Oculus Quest 2 hardware system which is the market leader in virtual reality. Snap is still in the early phases of monetization but has been tremendously innovative as will be discussed later. Snap has outsourced its cloud infrastructure to AWS which shows up in lower capital expenditures.

Catalysts for change

If Twitter is a poorly run company, why bother investing it? An underperforming business with no path to improvement usually equates to a poor investment. However, we have a line of sight on several changes happening at Twitter that should catalyze an improvement in its results.

The first major change is happening at the top. Early last year, activist investment firms Silver Lake and Elliott Management took a combined 7% stake in the company and 2 board seats. Silver Lake is a highly reputable technology-focused private equity firm that has been instrumental in turning around many high-profile tech companies including Dell computer when it was taken private in 2014 and Social Finance (SoFi) after its CEO was ousted in 2017. Elliott Management is an activist hedge fund that has unlocked value at many large public companies after taking board seats.

Given how much Twitter has underperformed its peers since IPO, the activists have broad support from Twitter's shareholder base to push for changes that will close the performance gap and unlock value. And there are some clear paths to creating shareholder value including more product innovation, better user monetization, better expense management, and better shareholder governance.

One change many have speculated is the removal of CEO Jack Dorsey. Jack Dorsey co-founded Twitter and was the company's CEO from 2008 to 2010 but stepped away to focus on his other start-up, Square. Dorsey came back to Twitter's CEO role in 2015 to turn around the company after growth slowed. Dorsey receives a lot of criticism because he remains CEO of Square and splits his time between the two companies.

In our view, bringing in a full-time CEO and moving Jack Dorsey to the Chairman role would be a positive move; however, we believe Jack is a positive force at the company and likely can still get the job done in his current capacity. Having co-founded both Twitter and Square, Dorsey is a visionary technologist and a capable leader. He has created an extremely innovative and high-performance culture at Square and is very much in-tune with the operations at Twitter.

Based on our read of employee interviews and conversations with people familiar with the company, we get the sense that Jack Dorsey is well-regarded by employees and has been a stabilizing force after years of cultural and strategic tumult. Dorsey is clear-eyed on the company's long-term goals and is an effective delegator. It should also be noted that Dorsey owns $1 billion worth of Twitter stock and receives no other executive compensation.

While Twitter deserves a CEO who can dedicate their full energy to running the company, we don't believe Dorsey is the primary factor holding Twitter back at this point. Twitter is just a large ship that has taken time to turn. Now, with a highly engaged board to answer to, the company's execution appears to be improving.

Enhancing the existing product

In the years immediately following Jack Dorsey's return to Twitter, the company had to deal with many existing issues surrounding its platform before it could work on new features.

First, the company has been working towards fighting cyberbullying and improving platform health. Many high-profile users have complained about harassment on the platform over the years and several have quit the platform over the issue. Twitter has significantly enhanced its ability to fight bullying by introducing tools that more easily allow users to block and report harassing accounts. It now also employs machine learning algorithms that effectively spot and remove problematic tweets automatically.

Second, in the wake of the 2016 US presidential election, there was an outcry to deal with misinformation on social media platforms, particularly from fake accounts. This became another distraction that required Twitter's investment. The company built tools to better monitor malicious activity, spam, and fake accounts. Since 2016, Twitter has removed millions of accounts tied to the spread of misinformation.

Building tools that foster platform health is no easy task for a global-scale social media platform. Competitors would need to make similar investments or face the same issues that have plagued Twitter. Therefore, these initiatives strengthen Twitter's moat in the long term.

This is all well and good but Twitter is a media business that makes money from advertising. Until recently, the company focused on enhancing the platform experience for users while failing to adequately invest in its products for advertisers. A big part of the problem is that Twitter's codebase wasn't neatly segmented which created a situation where the company couldn't iterate on its advertising product without upsetting the platform somewhere else.

In 2019, Twitter embarked on re-building its advertising codebase in a separate server so that it could enhance the tooling available to advertisers. This project was completed in mid-2020. This has freed up resources and capabilities to create new advertising formats, better targeting, and new analytics dashboards for brands. This includes a new direct response advertising product set to launch in 2021.

Improving the Twitter user experience through promoting a healthier platform and other initiatives should improve user retention and growth. Improving the advertising product should improve the average revenue per user (ARPU) generated by the platform.

(In millions)	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20
Monetizable Daily Active Users	120	122	124	126	134	139	145	152	166	186	187
Y/Y Growth %	*4.0%*	*2.0%*	*2.0%*	*1.0%*	*6.0%*	*4.0%*	*5.0%*	*5.0%*	*9.0%*	*12.0%*	*1.0%*
Advertising ARPU	$4.79	$4.93	$5.24	$6.28	$5.07	$5.23	$4.84	$5.82	$4.11	$3.02	$4.32
Y/Y Growth %	*9.3%*	*9.4%*	*17.6%*	*11.8%*	*5.8%*	*6.2%*	*(7.6%)*	*(7.3%)*	*(19.0%)*	*(42.2%)*	*(10.7%)*
Advertising Revenue	$575	$601	$650	$791	$679	$727	$702	$885	$682	$562	$808
Y/Y Growth %	*21.4%*	*22.9%*	*29.2%*	*22.8%*	*18.1%*	*21.0%*	*8.1%*	*11.8%*	*0.4%*	*(22.7%)*	*15.1%*
Other Revenue	$90	$109	$108	$117	$107	$114	$121	$123	$125	$121	$128
Y/Y Growth %	*20.5%*	*29.2%*	*20.6%*	*34.6%*	*19.7%*	*4.4%*	*12.2%*	*4.5%*	*16.8%*	*6.3%*	*5.2%*

Source: Twitter financial statements.

Heading into 2020 (pre-pandemic), user growth trends were improving, and advertising revenue growth was healthy. The Covid-19 pandemic led to a spike in platform engagement due to people coming to Twitter for news. Advertising spend took a big hit as brands pulled back. Despite the pandemic, Twitter's advertising revenue has held up well (growing 15% in Q3 2020) – potentially an early sign of a positive inflection in the business.

Going forward, user growth trends should stabilize, and advertising ARPU should pick up due to improvements in the advertising tools and macro recovery in advertising spend. This should lead to healthy top-line growth trends in the coming years.

Building new revenue streams

The legacy Twitter business should perform well in the coming years but where the story gets really exciting is the untapped potential of new features expected to roll out.

Twitter controls the world's pre-eminent public communication platform. The platform has created so much value for its global audience that many view it as a public good. At this point in the company's lifecycle, it is somewhat surprising that it has only managed to capture a few billion dollars per year in value through top of the funnel marketing (read: brand awareness advertising).

The opportunity to layer on additional features is so obvious that an entire ecosystem of third-party applications already exists and is minting millions if not billions per year by simply sitting on top of Twitter.

- Premo Social allows Twitter users to charge for access to a private feed. Premo keeps 10% of payment fees
- Substack is a blogging website for managing paid newsletter subscriptions for writers. Many of Substack's creators primarily use Twitter to find their audience. Substack keeps 10% of publisher revenue
- Patreon allows content creators (podcasters, visual artists, YouTubers, etc.) to establish direct relationships with fans for a one-time payment or subscription fee. Creators use social media platforms to promote their Patreon and then funnel exclusive content through the channel. Patreon collects up to 12% of payments
- E-commerce stores powered by companies such as Shopify and Wix are often promoted by popular creators and brands to sell merchandise. Shopify charges sellers up to $300 per month in subscription fees and takes a 3% cut of all transactions
- Tipping content creators is a common practice on platforms such as Reddit (Reddit Gold) and Twitch (keeps 30% of tips). Some Twitter accounts include a CashApp or Venmo account link in their Twitter bio in order to accept monetary tips/donations
- Premium subscriptions could be offered to Twitter users for an ad-free version of the website or for status/verification purposes (blue checkmarks or other classifications)

These are just a few examples of what is already being done to monetize Twitter by other companies or ideas that can be naturally implemented into the way users already interact with the platform. For online creators, brands, and media companies, Twitter often serves as a public face where announcements are made and new content is distributed. Therefore, it makes sense for Twitter to capture some of that value for serving as a central hub and gatekeeper to content ecosystems.

Until recently there was no internal will for the company to pursue these opportunities, but that tune has changed perhaps due to pressure from the activist investors.

During Twitter's Q2 2020 earnings call on July 23, 2020, CEO Jack Dorsey commented:

> *"As you mentioned, there have been a number of ideas over the years. We have focused the majority of our attention on increasing revenue durability, meaning that we have multiple lines of revenue to pull from. But most importantly, we want to make sure that any new line of revenue is complementary to our advertising business. We do think there's a world where subscription is complementary. We think there's a world where commerce is complementary. You can imagine work around helping people manage payrolls as well, that we believe is complementary.*
>
> *…Given the increased speed we're moving at in terms of our development velocity, we're now at a place where we can explore other ideas. And you will likely see some tests this year."*

At a Barclay's investor presentation on December 9, 2020, CFO Ned Segal commented:

> *"When it's the #1 company objective, and Jack stands up at all hands and tells people so, people want to go work on revenue product problems, just as they wanted to go work on health things a few years ago, when we*

declared that the #1 company objective. And it's made a big difference where we've had many tens of people shift over to revenue product because they raised their hand and wanted to go help solve a problem.

And as we improve those, we'll continue to moving all the way down to where you can buy something on Twitter. And it'll take us time to get there. And then there are the non-revenue or the non-advertising-related opportunities, where we think about subscriptions for businesses, we think about subscriptions for consumers, not things that will take away from what people expect to get for free today, but premium services that they would feel good about paying for, that can sit on top of what people are accustomed to getting today."

In addition to these comments, there were job postings over the summer of 2020 on Twitter's website looking for engineers to help build subscription-based products.

Some of the speculation came to fruition in January 2021 when Twitter announced its acquisition of Revue, a platform for managing paid newsletters (similar to Substack described above). Twitter will be charging a 5% cut of publication earnings and will directly integrate Revue into a new newsletter tab on the Twitter website. Needless to say, this feature is a great fit within Twitter.

Given the comments from the executives and engineering work presumably being done, we should expect additional non-advertising revenue products to come in the near future.

And of course, there are some new product wildcards that could be interesting. One such wildcard is an audio layer to Twitter currently in beta testing called Twitter Spaces. The concept is similar to Clubhouse, the hot social media start-up that just achieved unicorn funding status with just 2 million users.

Twitter Spaces allows users to join audio chat rooms where people can talk to each other in real-time or listen to presentations from notable speakers and celebrities in an event format. This could bring an interesting new live dynamic to the Twitter platform around events.

The value of new features

Non-advertising revenue generated by new Twitter features could be substantial but it is just speculation at this point considering that we do not know what will be released aside from paid newsletters. However, it's not difficult to imagine non-advertising revenue streams adding several dollars to user ARPU.

Let's say Twitter enables accounts to offer paid subscriptions to their feed for a 20% cut of the revenue and 5% of daily active users (~10m users) spend on average $10 per month on paid feeds. That could result in ~$240 million in incremental revenue for Twitter (10m users x $10 per month x 12 months x 20% take rate). If the company also launches tipping and commands similar economics, it could uplift another couple hundred million in revenue.

Twitter could generate over $100 million per year in transaction fees if it launches e-commerce capabilities and generates a couple billion in gross merchandise value (GMV) – there is probably over $1 billion in GMV already transacting from stores linked to Twitter profiles. Sellers would probably also buy Twitter ads to promote their products and Twitter storefronts, effectively taking Twitter's advertising product from top of the funnel all the way down to the purchase transaction.

It is not hard to imagine $500 million to $1 billion of incremental revenue potential for Twitter with the successful rollout of new features. For context, Twitter only generated $3.5 billion in total revenue for 2019, so this would be a significant uplift to financial performance.

An overlooked consequence of creating new streams of revenue on Twitter is that it would strengthen the existing platform flywheel by incentivizing creators to more actively use the platform.

For example, it is no secret that successful YouTube creators can earn a lot of money. This fact has inspired millions of people to create content for YouTube in the hopes of successfully monetizing. The abundance of great content on YouTube attracts more viewers to the platform which provides more advertising revenue to pay the creators, setting off a virtuous cycle on the platform.

Making it easy for Twitter users to sell their products or monetize their feed creates more incentive for users to engage and build their following. More content on the platform should result in more eyeballs consuming the content. More users on the platform enhance Twitter's ability to monetize with advertising as well as non-advertising revenue streams. It is counter-intuitive but rolling out non-advertising products should help grow Twitter's advertising revenue too.

Snapchat case study

Taking a step back, Twitter is still in a sort of turnaround situation. User growth and ARPU has re-accelerated since bottoming in 2018 but it remains to be seen if the momentum can be sustained. It is also worth asking what a social media business turnaround looks like. Snapchat provides a good case study.

Snap had a heady IPO in 2017 due to the fast growth of its mobile photo and video sharing platform. However, intense competition from Instagram and other platforms led to a sharp deceleration in user and revenue growth which bottomed in 2019. At the time many proclaimed Snapchat a dying social network and its stock price traded 80% below where it did on the day of its IPO.

(In millions)	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20
Daily Active Users	166	173	178	187	191	188	186	186	190	203	210	218	229	238	249
Y/Y Growth %	*36%*	*21%*	*17%*	*18%*	*15%*	*8%*	*5%*	*0%*	*0%*	*8%*	*13%*	*17%*	*20%*	*17%*	*18%*
Total Revenue	$150	$182	$208	$286	$231	$262	$298	$390	$320	$388	$446	$561	$462	$454	$679
Y/Y Growth %	*286%*	*153%*	*62%*	*72%*	*54%*	*44%*	*43%*	*36%*	*39%*	*48%*	*50%*	*44%*	*44%*	*17%*	*52%*

Source: Snap financial statements.

Snap was able to re-accelerate its growth metrics starting in 2019 due to the release of a steady stream of innovative and engaging new features. It launched augmented reality filters that went viral, ways to play games with friends inside of its core app, and premium video content from celebrities, just to name a few examples.

The public markets have appreciated the Snap turnaround story and now value the company's at nearly $90 billion (double Twitter's market cap) despite generating less revenue and being unprofitable.

The lessons for Twitter are that 1) social media turnarounds are possible and 2) focusing on product innovation is a viable path for boosting growth metrics which could ultimately justify a premium valuation.

The inevitable outcome for Twitter's business and what it could be worth

Using the framework discussed earlier, what is the likely inevitable outcome for Twitter?

It would be nearly impossible for another company to replicate Twitter's function as an information gateway and public forum. Simply put, the public officials, media organizations, and celebrities want to reach the largest audience possible and are not going to contribute to a new text-based publishing platform that doesn't already have the same global reach as Twitter. This is a business moat supported by network effects that capital alone can't breach.

Therefore, Twitter is the inevitable winner in the public communication layer of the internet. What this directly translates to is that Twitter should be able to continue to grow its user base as long as this type of communication is relevant (it appears to be growing more relevant over time). As long as it has a massive global user base, the company should be able to figure out how to better monetize that user base whether it is through online advertising or something else.

While it is easy to establish that Twitter is an important company that should be worth a lot, it is tough to calculate its valuation with precision due to how quickly the business is changing. Generally speaking, I view valuation as more of an art and I like to triangulate between multiple ways of thinking about the asset.

From a bottom-up perspective, Twitter currently has 187 million monetizable daily active users (mDAUs). Twitter has grown mDAUs approximately 15% per year since it introduced the metric. If you assume it can grow mDAUs at a 10% rate over the next decade, then Twitter can reach 485 million mDAUs by 2030 -- this seems reasonable given that Snapchat already has 249 million and Facebook has nearly 2 billion.

In 2019, Twitter's average revenue per user (ARPU) was about $25. There are mix issues to consider: Twitter's US ARPU is 1/3 of Facebook's US ARPU but Twitter's International ARPU is 80% of Facebook's International ARPU. If you assume that overall ARPU can grow 5% per year (likely a conservative assumption), then ARPU could reach $40 by 2030 -- this doesn't explicitly bake in any upside from non-advertising revenue streams. 485 million mDAUs at a $40 ARPU implies that Twitter could hit $19.4 billion in revenue by 2030.

Based on our financial due diligence, we believe Twitter could achieve 30% - 40% free cash flow margin at scale. Assuming Twitter hits a 30% cash flow margin on $19.4 billion in revenue that would equate to $5.8 billion in free cash flow. At a 30x cash flow multiple that would imply a valuation of $175 billion vs. $40 billion today. This implies an 18% IRR over the next decade.

From a top-down perspective, eMarketer estimates the size of the global digital advertising market to be around $264 billion today. The current growth trajectory indicates that the size of the market could exceed $600 billion by 2030 (a 10% CAGR from 2019). Twitter currently has ~1.4% market share of the industry. Given how much progress the company is making towards improving its advertising product and growing its user base, it wouldn't unreasonable for the company to eventually have 3% - 5% market share. If you assume Twitter has 4% share of a $600 billion online advertising market by 2030 that implies $24 billion in annual revenue. Using the assumption of a 30% free cash flow margin and a 30x free cash flow multiple, that implies a business value of $216 billion by 2030 -- a 21% IRR over the next decade.

($ billions)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E
Global Digital Advertising Spend	$70	$80	$92	$107	$125	$149	$179	$217	$252	$264	$310	$354	$390	$424
Growth %		14%	15%	16%	17%	19%	20%	21%	16%	5%	17%	14%	10%	9%
Online Penetration %	19%	21%	23%	26%	30%	33%	38%	43%	47%	52%	54%	57%	59%	61%
Twitter Total Revenue	$0.1	$0.3	$0.7	$1.4	$2.2	$2.5	$2.4	$3.0	$3.5					
Growth %		198%	110%	111%	58%	14%	(3%)	25%	14%					
Market Share %	0.15%	0.40%	0.72%	1.31%	1.77%	1.70%	1.36%	1.40%	1.37%					

Source: eMarketer, Twitter financial statements.

Finally, we can look at Twitter's relative trading multiple compared to its peers for a final valuation gut check. Based on what Wall Street analysts currently expect for 2022E, Twitter trades at a sharp discount to faster-growing peers Snap and Pinterest but a premium to Facebook. If investors become more enthusiastic about Twitter's growth prospects in the near term, the stock could re-rate higher and close the gap with Snap and Pinterest (50% - 150% upside). If investors become more pessimistic, the stock could trade closer to Facebook (25% - 50% downside).

($ in Millions)	Enterprise Value	2022E Revenue	EV / 2022E Revenue	2022E EBITDA	EV / 2022E EBITDA
Facebook	$710,000	$128,000	5.5x	$66,000	10.8x
Pinterest	$44,000	$3,200	13.8x	$754	58.4x
Snap	$87,000	$4,800	18.1x	$1,215	71.6x
Twitter	**$39,500**	**$5,100**	**7.7x**	**$1,665**	**23.7x**

Source: Wall St. Estimates from Capital IQ.

Admittedly, these approaches to valuing Twitter are loose, but it doesn't make much sense to try and engineer false precision with a detailed discounted cash flow (DCF) model. Taking a big picture view, it is obvious that Twitter has enormous potential to grow into a much bigger company and generate healthy profits. It doesn't take heroic assumptions to arrive at significant equity appreciation for shareholders from here.

A quick word on the investment risks

The biggest risk to our Twitter investment thesis is execution. If Jack Dorsey and team do not find a way to continue growing the user base or ramp up monetization, then the investment won't work. We will monitor the company's progress in terms of adding daily active users and improving ARPU in the coming years to measure the success of the company's efforts.

Commentators often ascribe significant political risk to investing in Twitter, but it is really difficult to see exactly how politicians can kill Twitter. There is a misunderstanding of the impact of making drastic changes to the law such as repealing Section 230 in the United States. Contrary to the popular narrative, Section 230 doesn't make a distinction between platforms and publishers and it is not clear that changing that law would significantly alter Twitter's business model.

Given Twitter's resources and pre-existing investments in the health of its platform, it should be well-equip to deal with most any new laws regulating internet platforms. Short of social media getting banned by governments (a possibility in some countries), Twitter's business model should remain intact for the long term.

LVS ADVISORY

Looking ahead

2020 was a testing year for everyone in the investment industry. Having survived the experience in good form, we'd like to think we are wiser for it. Thank you for your continued interest and I look forward to sharing my thoughts again soon.

Best regards,

Luis Sanchez

Luis V. Sanchez CFA

ABOUT LVS ADVISORY

LVS Advisory is a full-service financial advisory firm providing active investment management, financial planning, and institutional investment research services for individuals, families, and institutions. Luis V. Sanchez CFA is the Founder and Managing Partner of LVS Advisory. Luis' professional experience includes working in investment banking, consulting, and investment management. Luis is a licensed Investment Adviser Representative and a CFA Charterholder. LVS Advisory LLC is a Registered Investment Adviser based in New York City.

LEGAL DISCLAIMER

The information and statistical data contained herein have been obtained from sources, which we believe to be reliable, but in no way are warranted by us to accuracy or completeness. We do not undertake to advise you as to any change in figures or our views.

This is not a solicitation of any order to buy or sell. We, any officer, or any member of their families, may have a position in and may from time to time purchase or sell any of the above mentioned or related securities. Past results are no guarantee of future results.

This report includes candid statements and observations regarding investment strategies, individual securities, and economic and market conditions; however, there is no guarantee that these statements, opinions or forecasts will prove to be correct. These comments may also include the expression of opinions that are speculative in nature and should not be relied upon as statements of fact.

LVS Advisory LLC is committed to communicating with our investment partners as candidly as possible because we believe our investors benefit from understanding our investment philosophy, investment process, stock selection methodology and investor temperament. Our views and opinions include "forward-looking statements" which may or may not be accurate over the long term.

You should not place undue reliance on forward-looking statements, which are current as of the date of this report. We disclaim any obligation to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. While we believe we have a reasonable basis for our appraisals and we have confidence in our opinions, actual results may differ materially from those we anticipate.

The information provided in this material should not be considered a recommendation to buy, sell or hold any particular security.