



The Disruption Bubble

The attached piece describes a dangerous precedent that has evolved in today's stock market. In the past, companies that were not yet profitable but had a new innovative business model to take share from existing business largely waited until there were modest profits to go public. In today's market, there are many companies coming to market that don't have profits and trade at extremely high price to sales ratios. The success of companies like Amazon and Netflix that have largely pursued profitless growth models has investors excited new companies are going to be the next "disruptor" and garner huge stock returns. To be a true disruptor, a business needs to have something really unique and special. The current environment seems to have a lot of companies that are presumed to be disruptors but in reality are just competitors. While some will go on to greatness, most will prove to be bad stock investments.



The Disruption Bubble

In May of 1997, Amazon went public with a split-adjusted price around \$1.50. Its 1997 revenue was about \$148 million. Its market cap at the end of 1997 was \$1.45 billion, a 10x sales ratio, not all that much different from a lot of high growth stocks today. The market cap actually grew to \$26 billion in 1999 before dropping to below \$5 billion in 2001. From that point, Amazon's market cap went on an incredible run that was marked by strong sales growth and minimal profitability. Today, Amazon has a market cap of \$900 billion. Whether the current market capitalization is justified or not remains to be seen but even if the stock were quite a bit lower the returns investors would have had over the previous two decades are incredible.

Amazon saw a massive total retail addressable market, more recently how and where computing is performed and set out to disrupt those industries by being early, charging very low prices and investing all money back into growth so profits were minimal or even negative in some years. Amazon has undoubtedly disrupted retail as we know it and possibly will do so for computing.

Netflix went public in May of 2002 at a split-adjusted stock price close to \$1. Its market cap was close to \$250 million at the end of the 2002 and its 2002 revenue was about \$150 million. Netflix pursued revenue growth with profitability for many of its early years and by the end of 2011, it had a market cap of \$3.8 billion with almost \$200 million in free cash flow, a very reasonable 20x free cash flow multiple. It wasn't until 2012 when Netflix made a big pivot and decided it needed to aggressively invest cash in subscriber acquisition and content and started a trend of increasingly generating negative free cash flow only to see its stock soar while doing so.

Netflix, like Amazon, had set out to disrupt the massive TV viewership industry. It found similar success by being early, charging very low prices and investing any cash flow (even using the debt markets) aggressively back into the business.

Amazon and Netflix shared some common attributes. Both were early disruptors to massive industries, priced their services and goods very competitively and invested all cash for growth. Almost all industries get disrupted over time. That is progress toward presumably a better way that leads to a higher standard of living. But the precedent set by these two companies and some others is perhaps leading to a dangerous investing environment whereas many companies are presumed to find success pursuing profitless growth models.

I recently read an article about bubbles and there was talk about the late 90's internet bubble, the late 2000's housing bubble and this gentleman called the current stock market environment the disruption bubble. That name really resonated with me. Some of the best growth stock companies of today have very good sales growth (unlike 20 years ago when many internet companies did not have good sales growth), competitively price their services and have minimal profitability. There is an assumption that these companies with newer competitive offerings for various industries can beat out existing players by aggressively investing in the business, whether through operating expenditures or capital expenditures, and then over time will be able to raise price and/or cut costs and will have incredible operating leverage. The problem is this profitless disruptor business model is spreading very fast and is attracting many companies who don't necessarily have a big head start on each other. The profitless disruptor business model is also setting its sights on industries that are not nearly as large as what Amazon or Netflix was and is going after. The line between true disruptors and a pack of competitors seems to be blurring. When everyone is competing to become the disruptor, the companies are not disruptors anymore, they are just competitors with similar business models. The 2019 IPO market seems to be driving home the point.



Cloud software has become somewhat of the poster child for the disruptor business model. Cloud software is generally easier to maintain and deliver and provides many benefits for end users and because of that when companies create clever software programs that are priced competitively in the market, there is strong growth. Most of these companies believe they have something special so they spend heavily on selling and marketing in an attempt to get the software in front of as many people as possible. Because profits are non-existent a number of different valuation approaches are popping up to give some semblance of rational valuations to these companies. There are approaches that take a subscription and treat it like an annuity, whereas revenue is guaranteed to come in each and every year but the costs to acquire the subscribers are only born by the upfront investment in selling expenses. That makes companies driving user counts look very valuable but SAAS (Software as a Service) applications are not life-long guaranteed income. With many competitors offering competing products, an assumption SG&A costs won't have to reoccur to keep the subscription when renewals come seems a little dubious.

There is this crazy Rule of 40 methodology that has popped up where a company's sales growth and non-gaap operating margin are added and numbers above 40 indicate value but below 40 do not. One problem with that approach is a company's valuation is based on how the business is to perform over many years, not one year of sales growth. The law of large numbers will most definitely force a company's growth rate down. Secondly, stock compensation is a real cost and a very high one for many of these companies and can't just be ignored as if it doesn't exist. Additionally, when SAAS companies turn to the Mergers & Acquisitions market using stock as currency to fund acquisitions, revenue growth can be sustained while share counts continue to increase. When stock analysts do try to put price to free cash flow type valuations on many of these companies, the free cash flow calculation treats stock comp and unearned revenue as if they are just as valuable as earnings, which is certainly not the case.

The ability to create cloud software is available to any software company and all the traditional software companies either have cloud software offerings already or will soon have them. While the IAAS (Infrastructure as a Service) market may become only a few major players over time and the PAAS (Platform as a Service) market will get whittled down over time as well, it seems the SAAS market will have competition for many years to come. A company is not a disruptor if there are plenty of other competitors offering similar software and the claim is that your product is "best-in-class". The unified communications market is a good solid growth market with a large solid Total Addressable Market (TAM), but not an enormous one. There are all sorts of companies bringing new SAAS offerings to win in this market that claim to be better than others. Even if that is the case, the margin of superiority is likely not that large and can be closed in future iterations of competing software.

Zoom Video, a company with clever videoconferencing software, is broadening its reach into other areas of unified communications beyond videoconferencing, but it will face plenty of competition as it does so. Additionally, even in its core videoconferencing solution, the TAM is not that large so even if it were to take lots of share from Cisco Webex, GoToMeeting, Microsoft, etc. it would have a hard time earning enough to justify the valuation. Reviews generally state the Zoom videoconferencing solution is a little better than a GoToMeeting with some clever new features but there doesn't appear to be features that competitors can't mimic in some form on future iterations. When an investor factors in dilutive stock options and restrictive stock, Zoom Video trades at about 50x 2019 projected sales, an incredibly high valuation. This is a company competing in an industry where the number of competitors is growing, not shrinking.

10x sales used to be somewhat of a valuation metric for some cloud software companies. At that level, an investor could possibly see a large TAM, a best-in-class software product, perhaps a PAAS platform that could attract some additional dollars and pull the trigger feeling pretty good about the investment. Stocks trading at 10x sales in 2019 are becoming the "cheap" SAAS companies in 2019. There a multitude of companies trading at over 20x sales now. Shopify



is another good example of a company trading at a very high valuation, over 30x sales, which requires a massive leap of faith to invest in. Shopify provides an ecosystem of software tools that enables small merchants to sell online that is touted to transform the way merchants can sell their goods. It is an e-commerce platform in a nutshell, not incredibly different than what Oracle has with Demandware, Adobe is building, Amazon and Ebay already have or some of the multitude of vendor direct programs that are being rolled out at traditional retailers. The point is it has plenty of competition coming from many angles that will limit its TAM. If you create a platform for others to use, it better have strong brand power, something very unique or else it is just competing with other platforms and that is not really disruption. Shopify seems to know this. Therefore, it has now committed to build out a fulfillment network for its merchants in an attempt to differentiate itself and perhaps win over disgruntled Amazon sellers.

Software companies are many of today's "disruptors" but disruption is spreading elsewhere. Uber and Lyft both went public in 2019. Both are pursuing a profitless growth model. Transportation, as we know it, likely will be disrupted but anyone who believes these are the only two companies that will compete for this business is silly. Why is Uber investing lots of money into its self-driving vehicle effort? Because it is clear the cost of running self-driving vehicles will someday be far cheaper than paying drivers year in year out. And the car companies are the ones who will manufacture these self-driving vehicles. They have a clear incentive to run transportation networks themselves and not hand over the business to Uber. Beyond Meat has been another strong IPO this year. It trades at about 40x sales and unlike high gross margin software companies has gross margins in the 20's. 40x sales for a company with gross margins in the 20's is extremely high. While scale will help with that gross margin, Beyond Meat will also need to lower prices to really drive the market, offsetting some scale benefits. Impossible Foods, Tyson, Kellogg and others are all investing and looking to disrupt the meat industry. While I believe there is plenty of room for disruption here, it is clear Beyond Meat does not have a huge early lead on competitors. Having an early lead on competitors is Amazon years ago or Netflix years ago or even an Intuitive Surgical in robotic surgery or Illumina in gene sequencing. That is true disruption that leads to strong sustainable growth.

Airbnb is another large valuation company rumored to go public later this year. While Airbnb is the clear leader in the platform for home rental industry, Marriot is launching a home rentals competitor. Booking.com has already entered the market. It really is not that sophisticated to create a software platform for home rentals. This speaks to the fact that large established companies are not going to be disrupted without a big fight. And that speaks to price wars. One thing the internet is great at is letting you quickly find the lowest price for certain items and services. Disruption that can easily be matched by established companies is not really disruption that wins. It is competition and leads to lower prices that is bad for all companies involved.

The electricity markets are a good example of disruption with minimal profits. The plummeting cost of solar and wind have not led to outsized profits for solar and wind companies. Stocks have largely been poor performers in the past decade after much hype in the previous decade. The winner of this industry has been the utilities who buy wholesale power at low prices.

Over the years, we have heard about how Apple is going to enter an industry and disrupt it and Apple really hasn't entered into any new bold markets yet because it seems Apple is finding it harder than perceived to break through. Of any company out there Apple has the most capital to invest to compete and yet it is fairly prudent. Apple is ramping up its spending on content for video services but this is if anything a late defensive move. Netflix, Disney, Apple, Amazon, AT&T, CBS, etc. all are increasing spending on streaming content. This market is quickly turning from Netflix disruption to everyone competition.



Every time there is a rumor about Amazon entering a new market, competing stocks seem to sell off but we really haven't seen Amazon venture into places like healthcare, at least not in a meaningful way. Its Whole Foods acquisition has so far not lived up to expectations as Walmart and others are competing very well in groceries. Google has for years been allocating money to various initiatives like smartphones, fiber, health care, self-driving. Nothing has really taken off and gotten the scale to compete profitably. Waymo is the initiative with the best shot and we will see how that turns out over the next few years but any lead Waymo has over competition is slim.

To be a successful disruptor, it requires something uniquely novel in which a company has a big lead over competition and is able to price competitively (i.e. Apple smartphones). And with that competitive pricing and/or really novel idea, the competition begins to fade away over time. I see more and more companies entering the cloud software market than leaving. I see more and more companies with their sights on transportation as a service. I see plenty of companies entering the plant-based meat industry. Even in the advertising industry, while Facebook and Google have competed very aggressively and arguably are trampling much of the competition, there seems to be many new internet platforms whose business model will rely on advertising dollars. Where will all the ad dollars come from? There could be meaningful price compression in internet advertising in upcoming years.

A lot of investors will look at the S&P 500 and think it is overvalued at 19x earnings and a ~1.9% dividend yield.¹ What investors don't seem to realize is as many of the disruptor businesses make it into the S&P 500, there will be a built in gravitational pull toward higher valuation, more technology and lower dividend yield. The S&P 500 should largely be a representation of the 500 largest market capitalization companies in the US but there is a catch. To be included, a company must have positive reported earnings in the most recent quarter as well as over the four most recent quarters. The large profitless growth companies are not included because they don't have positive earnings. They are included in the Russell 1000 Growth index, an index trading closer to 27x earnings with a 1.1% dividend yield but not the S&P 500. The smallest companies in the S&P 500 index tend to have market capitalizations close to 5 billion. Nordstrom, for example, has a market capitalization close to 5 billion with a 4.6% yield.² While removing a company like Nordstrom won't have any meaningful impact on the S&P 500, replacing it with a company like Uber with close to a 65 billion market cap would have a modest impact because when Uber does have 4 quarters of earnings it likely will have a P/E ratio that is very high and won't pay a dividend. One company even the size of Uber wouldn't make much of a difference but as Workday (45-50 billion market cap), ServiceNow (50-55 billion market cap), Veeva (25-26 billion market cap), etc. all presumably get to the point of having modest profitability, they are going to be included in the S&P 500. When more and more of these companies get included, it will pull up the earnings multiple and create additional risk as the S&P 500 becomes even more heavily weighted toward the information and technology sectors.

Time will tell if many of these newer technology companies can continue to grow at exceptional rates for many years to come. If so they are true disruptors and perhaps we are not in a "disruption bubble". I suspect only a handful will go on to greatness and there could be some painful losses in some of the very high price to sales companies in today's market.

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¹ bloomberg

² bloomberg



Terminology:

Software as a Service (SAAS) – Widely viewed as software programs run in cloud environments that charge recurring fees to use the service. This is different than traditional licensed software that is typically purchased with a large upfront license fee and modest annual maintenance fees.

Platform as a Service (PAAS) – A software backbone that enables other software companies to build SAAS applications on top of the software platform. Some of the largest cloud software companies such as Salesforce offer SAAS application but also make money by selling service to a PAAS platform used by other software companies.

Infrastructure as a Service (IAAS) - These are the cloud providers that assemble the hardware equipment and charge users to use the servers and storage provided by the company. Amazon and Microsoft are the two dominant players in this space but companies like Google and IBM also offer services.

TAM – Total Addressable Market.

Market Cap - The stock price x the number of shares outstanding.

Price to Sales - The market cap of a company divided by the annual sales. A 10 billion market cap company with 1 billion in annual sales would have a 10x Price to Sale.

Price to Earnings - The stock price divided by annual earnings per share. The lower the multiple the quicker a company can earn what an investor pays for the investment.