

TVisNext Why Investors Are Getting the Media Industry Wrong

Gary Brode

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Preface

Changes in technology have destroyed the profitability of multiple industries in recent years, including the newspaper and music businesses. In the media space, the next business that will be reinvented by technology is television. The profitability of owning TV networks is being undermined by digital video recorders, internet-enabled on-demand viewing, Netflix, Hulu, YouTube, and piracy/theft. Further, amateur content is taking up an increasing portion of viewers' attention.

Consumption of network and cable content is taking place in ways that allow viewers to circumvent high monthly cable bills, avoid watching commercials, or both. Every single one of these changes represents a move to a revenue model that is less profitable than the one currently enjoyed by TV networks. It is only a matter of time before the revenue and profitability of the networks begins to fall.

Introduction

At a recent investment conference, a well-regarded hedge fund manager gave a compelling presentation in favor of investing in Viacom, a media company with multiple TV networks. With the propensity to generate large amounts of free cash flow and superior returns on capital, advertisingdriven media companies have long been thought of as great businesses for investment. Not surprisingly, the lists of current shareholders in a number of major media companies are littered with well-known institutional investors and successful hedge funds. Even Warren Buffett is famous for, among other things, investing in ABC (which was then merged with Capital Cities and acquired by Disney), DirectTV, Liberty Media, Viacom, and many newspaper companies.

The dramatic and accelerating evolution of technology is, however, quickly turning the prospects of investing in a historically great business into something more akin to sleeping on top of a ticking time bomb. You don't know when it's going to go off, but sooner or later, it will. Owners of these businesses are underestimating the probability that the move toward commercial-free, commercial-skipping, and commercial-light alternatives will cause cash flow to plummet instead of grow.

Yes, the threat to the traditional advertising-driven model has been around for almost 40 years, and investors have heard it all before. So perhaps they have been conditioned to ignore the risk. But today, we are at a point where demographic and technological forces are coming together to create a worrisome trend. The decline is likely to follow a parabolic path. It might be a number of years before the traditional model implodes, but the demographic shifts are seismic and unavoidable. The Summer Olympics and the presidential election will act as insulation over the next couple of quarters, but long-term, the business of selling a TV audience to advertisers 30 seconds at a time is dying.

Over the past 10 years, there has been a generational change in how we view media. If you're in your 40s or older, you remember a time when people would gather at a specific time to watch a network TV show, and would sit through the commercials, or at least leave them on while they visited the kitchen. If you have children, that experience is foreign to them. We now live in an on-demand world where we watch the shows we want on our schedule, not the networks'. DVR technology is ubiquitous and many of these devices have 30-second skip buttons. The choice of that time increment is not accidental, and is designed to help the viewer avoid commercials. Time-shifting and commercial-skipping have become the norm for television watching, and both reduce the value of owning a network.

The force of these new technologies has already been felt in other industries. From 1999 to 2011, newspaper ad sales and sales of recorded music each fell by over 50% in nominal dollars. Adjusting for inflation, the carnage was even worse. The specific issues that affected these industries will be explored later in this report, but the key finding was that business models that were once highly profitable due to an ability to bundle content to customers became unprofitable when technology enabled consumers to choose individual pieces of content, or to receive content for free. As TV viewers start to watch more shows in an on-demand format, it will become increasingly more difficult to charge those viewers for channels they don't want, or to get them to watch advertisements they can avoid.

This graph of inflation-adjusted newspaper ad expenditures shows the story well. The industry is now operating with advertising revenue at a level last seen in 1950. Even the growth in online advertising has barely made a dent in the decline.

Annual Newspaper Ad Expenditures - Adjusted For Inflation

50 Years of Growth Wiped Out in 10

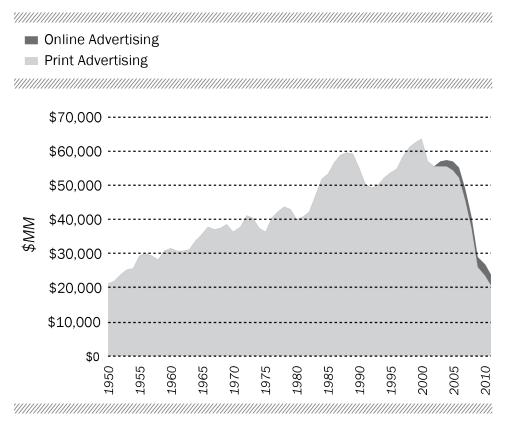


Figure 1 // Sources: Newspaper Association of America; Bureau of Labor Statistics

The timing is instructive as well. In its early years, the internet was a text-based medium as is the newspaper business. There was still approximately a decade of growth before the news business moved online and ad revenue plummeted. The internet has become a rich media experience featuring streaming video. This is a threat to the media companies and internet technology is about to do to the TV business what it did to the newspaper business in the last decade. TV is next.

A few years ago, I had dinner with a senior executive at CBS. When I asked her if she was concerned about the ability of a growing number of DVR owners to skip commercials, she seemed flummoxed and irritated. She snapped that if people skipped the commercials, the network would no longer be able to fund great shows like *Two and a Half Men*. I think she vastly overrated the importance of *Two and a Half Men* to an evolving audience, and in general, overestimated the willingness of the American public to watch commercials just because it was CBS's business model.

The Case for Owning Viacom

Some of the language in this section may be a little technical for nonprofessional investors, who may choose to skip to the next section. The general idea is that smart people think they see value in media companies. This chapter explains their thinking. The rest of this book explains why I think they're too optimistic.

The long case for Viacom is simple. As of this writing, the stock is trading at a little under 10x next year's projected earnings and a slightly lower multiple of free cash flow. Viacom says that it intends to spend \$20 billion over the next five years in dividends and stock buybacks. This is an incredible 80% of the current \$25 billion market capitalization of the company. Citicorp estimates Viacom's free cash flow at \$2.5 billion in 2012, \$2.6 billion in 2013, and \$2.9 billion in 2014. Investors do not expect free cash flow to reach \$20 billion over the next five years rather, they expect that as the company grows its EBITDA, it will be able to add leverage. It will then use the additional cash proceeds to reach its dividend and buyback goals. A secondary, less important part of the long thesis is that some investors believe that recent ratings declines at Nickelodeon network are overstated due to increased online viewing. Additionally, some investors think part of the ratings decline is temporary and related to typical fluctuations in viewership over time. Others are more concerned that SpongeBob SquarePants which has been on the air for 13 years and makes up approximately 40% of Nickelodeon's programming is getting tired and losing its audience.

In general, this has the makings of a solid investment thesis. The fact that media companies have tended to produce weak returns for shareholders doesn't mean they will continue to do so in the future. Buying growing businesses at a single-digit multiple of earnings and free cash flow where management is buying back large amounts of stock tends to be a good way to make money. In addition, if Viacom continues to grow operating earnings, the financial engineering of increasing leverage to fund stock buybacks is likely to improve shareholder returns. Viacom is a handy example of the current media company long thesis, but is not the only one. Shareholders of other media companies, including CBS and Time Warner, own those stocks for similar reasons.

There is one problem with this line of thinking. It depends on the media companies to continue to grow their earnings and free cash flow. The opposite is more likely to happen. Technology and demographics are combining to reduce the profitability of owning a TV network. With the exception of AMC Networks, which gets almost all of its revenue from television, all of the other companies examined in this report get between 40% and 60% of their revenue from TV. Even small changes in the profitability of these businesses will have significant effects on these companies. With so many media firms adding debt to fund stock buybacks, any reduction in profitability could be disastrous. Over the next few chapters, I will outline the relevant history and the specific challenges that are changing the entire industry.

How the Television Industry Works

The Current Model

Today's media companies are large, complicated organizations that are involved in a wide range of businesses. For the purposes of this analysis, I am focused on the threats to the current model that involve developing and buying content, then collecting fees from broadcasting that content. These fees come from selling advertising time on the shows they broadcast as well as money the networks receive from cable and satellite companies to deliver programming to their customers, called affiliate fees. The affiliate fees are typically passed through to the viewer, and are a big reason why your cable bill is as high as it is. The media companies take advantage of their popular networks to create bundles, which contain less attractive content. For example, Viacom might tell cable companies that if they want to carry MTV and Nickelodeon, they also have to carry VH1 or MTV2. Disney can use ESPN and the Disney Network to pressure satellite providers to carry less popular networks like ESPN Classic.

As a result, customers are finding themselves with \$100 monthly cable bills for hundreds of channels of programming that they will never watch. Even the act of sitting in front of the TV to see "what's on" has gotten ridiculous -- to scroll through a 500-channel program guide takes longer than the half-hour show they would have watched. Faced with high prices for unwatched programming combined with 16 minutes per hour of commercials on network TV, viewers are changing their habits. Even more ominously for the TV networks, young viewers have entirely different habits. Many of them are skipping expensive subscriptions to cable or satellite providers and watching their favorite programs on computers and mobile devices.

History

VHS: The First Time Shifting Technology

In 1975, Sony released the Betamax and in 1976, JVC followed with the VHS. The movie studios and TV networks were concerned about this new technology and Universal City Studios filed suit against Sony in a case that went to the Supreme Court. Among the issues the Justices considered was whether recording a program to watch at another time, or multiple times, constituted copyright infringement. The Supreme Court ruled for Sony, and with that, the bond between viewers and TV networks was broken. Having recorded a program, consumers were no longer tied to network broadcast schedules and could easily fast-forward through commercial breaks. Today, the idea that the government could restrict technology that allows us to watch what we want when we want it is laughable.

It worked out fine for the networks at first. Home viewers started buying VHS movies, and there were only approximately three people in the country who could figure out how to program their VCRs so they could watch programming at a more convenient time. I am embarrassed to note that it wasn't until the late '80s when I finally figured out the mystery of how to get the VCR to stop flashing 00:00.

Time Shifting 2.0: DVRs Hit the Mainstream

In 1999, ReplayTV and TiVo launched the first digital video recorders (DVR). These devices had an on-screen channel guide, which made them easy and intuitive to program, and could store 20-40 hours of

programming. In addition, the ReplayTV devices had a 30-second skip button. Instantly, viewers could watch TV programming on their schedule, and easily blip out the commercials. TiVo left out the 30-second skip button to avoid angering the TV networks.

In 2001, ReplayTV introduced a new model with a feature called "Commercial Advance" that could automatically skip over entire commercial breaks. These new units could also share TV shows with other ReplayTV units. Many TV companies, including three major networks, filed suit, alleging that the ReplayTV Commercial Advance and show-sharing technology was part of an "unlawful scheme" that "attacks the fundamental economic underpinnings of free television and basic nonbroadcast services". They were not overstating the case. This technology was an attack on the entire broadcast TV model.

In 2003, a free ReplayTV Request Server was started that allowed thousands of users to share recorded TV shows. Previously, users had to get shows from people they already knew. Now, there was on online database listing every show stored by every ReplayTV unit that subscribed to this free server. It was possible to see this as a video version of Napster, the application that crushed the recorded music business. SONICblue, the owner of ReplayTV declared bankruptcy before the case went to a decision.

The Cable Companies Give In and Offer DVR

In 2002, TiVo partnered with DirectTV, a satellite television provider, to offer combination boxes containing a DVR and a DirectTV receiver in the same unit. Partly because of this partnership, TiVo avoided network-unfriendly technology such as show-sharing, Commercial Advance, and 30-second skip. Within a few years, the cable companies started offering their customers their own DVR options for an extra few dollars a month. These DVRs didn't allow show-sharing and while they did allow users to fast-forward through commercials, most of them didn't offer 30-second skip buttons at the time. Still, the satellite and cable companies had all started providing customers the ability to watch TV on their own schedule and to easily fast-forward through the commercials.

From there, the technology has continued to move toward the consumer and against the networks. In 2005, Verizon started to offer FiOS cable service. By 2010, it had DVR models that allow the user to select a 30-second skip interval. By 2011, it had a feature that allows users to view on their TV saved video, YouTube video, or even pirated content stored on a computer. In 2009, Cablevision won a lawsuit permitting it to offer customers a DVR service where recorded shows sit on Cablevision servers. This increased the availability of Cablevision homes with DVR functionality from 25% to 50%. And coming full circle, in 2012, Dish Networks offered customers a product called "Hopper," which allows customers to skip over entire commercial breaks. Because the TV networks that were suing SONICBlue in 2003 dropped the suit when SONICBlue declared bankruptcy, there was no precedent litigation relating to this Commercial Advance imitator. Shortly after the introduction of the Hopper, Fox, NBC Universal, and CBS sued Dish Networks for copyright infringement out of concern that commercial-skipping technology was detrimental to their business model.

Threats To The Current Model

Any examination of the network TV model has to start with the understanding that the technology to easily record and watch TV shows at a time convenient for the viewer, and to skip through the commercials while doing so, is widely available and easy to use. It is also apparent that TV viewers are becoming more aggressive and more comfortable in directing their own entertainment experience, and their preferences are unfriendly to the lucrative network TV model.

There are multiple threats to the current model. I intend to explore each one of them, but the important thing to realize is that **every single way people are changing how they consume media is less profitable than the current model**, which involves a big monthly cable bill and a large commercial load. The metric I've chosen to quantify how much less profitable the new models are is revenue per viewer per half-hour. For the current model, I'm including advertising fees, affiliate fees, and syndication. The numbers are from each company's most recent fiscal year.

There are limits to this methodology. First, media companies are complex. For example, if CBS overbids for the Super Bowl, the higher advertising and affiliate fees it receives will be included in the revenue/viewer/halfhour metric, but the higher content acquisition cost won't. However, CBS might overpay so it can expose a huge audience to its new shows and films, which could turn into profitable franchises. A more serious issue with the methodology is that while it's easy to get ratings information for specific highly rated shows, it's difficult to get viewership numbers across a national network broadcasting 24 hours a day.

I use share of total advertising revenue as a proxy for viewers. Across a large segment of the industry, that's a reasonable approach. For specific companies, there will be distortion. For example, Disney gets high affiliate revenue from the Disney Network and ESPN, but comparatively low advertising revenue. My methodology may be understating its viewership and overstating its revenue per viewer. Time Warner results have a similar issue because of the huge affiliate fees it gets from HBO and Cinemax, networks with no advertising. We see the opposite result for CBS, which has been fighting for years to collect retransmission fees from cable and satellite companies, but gets substantial ad revenue from highly rated shows.

It's also important to note that my methodology looks at revenue from all shows across groups of networks; however, all shows do not earn comparable ad rates. Many networks make most of their money from a limited number of primetime shows. These shows are the ones that are most vulnerable to piracy and other less profitable viewing methods.

Again, the goal is not to precisely quantify the revenue associated with each viewer, but rather to get a sense of the magnitude of the threat posed by each new viewing method.

Profitability Of The Current Model

It's Not Going To Get Better Than This

- Advertising fees per viewer per show*
- Affiliate fees per viewer per show*
- Total fees per viewer per show*

* a show is a 30 minute program

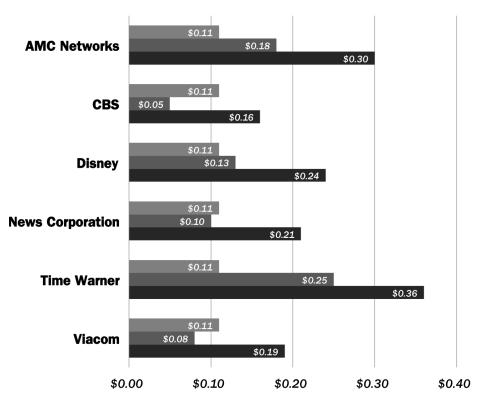


Figure 2 // Source: Author Calculations

To understand the outlook for the media companies, it's crucial to look at each of the factors that pose a threat to the current lucrative model.

	Commercial Free	Commercial Light	Full Commercials
No Fee	Piracy/ Bit Torrent	YouTube Hulu	Network Over the Air Broadcasting
Monthly Fee	DVR Netflix	Hulu Plus	Network Cable TV

DVR

According to Nielsen, there are 103 million pay TV households in the United States (through cable, satellite, and telco companies). There are another 11 million households that receive free over-the-air broadcast signals, but I am excluding them from profitability calculations for now. Of the pay TV homes, 47 million have DVRs, up from under 43 million the year before. These devices enable easy recording and time-shifting of network programming. While some viewers still own a separate TiVo or legacy ReplayTV device, all of the pay TV providers offer DVR options to their customers for low fees. The network-friendly versions allow users to fast-forward through commercials. The less network-friendly ones have 30-second skip buttons to enable easy commercial-skipping. And the very network-unfriendly options have software that allows the viewer to automatically skip over entire commercial breaks instantly.

National DVR Penetration

Triples in 5 Years

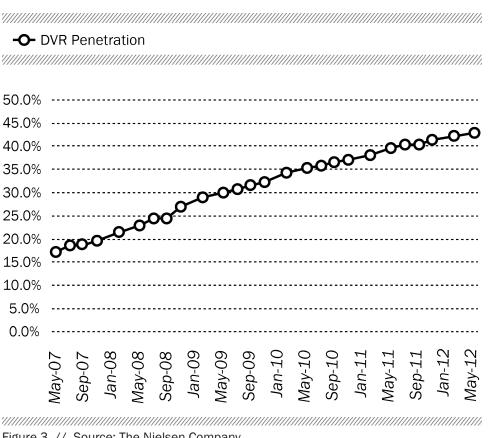


Figure 3 // Source: The Nielsen Company

While viewers shifting from live TV to DVR do allow the networks to continue collecting affiliate fees from the cable providers, these devices are a threat to the advertising portion of the model. Nielsen has already started to include in its ratings shows that have been DVR'd and watched within three days. Some of the networks are trying to get Nielsen to include recorded shows that have been watched within a week.

A Lot of Potential to Avoid Commercials

There are two statistics I find shocking. First, the average person watches four hours and 35 minutes of live TV a day, but only 22 minutes of DVRrecorded programming. Even adjusting for the fact that DVR penetration is just under 50%, this means that people with DVRs are doing over 80% of their TV watching live. More surprising is that when watching recorded content on a DVR, viewers are watching approximately 50% of the commercials. I believe that roughly half of DVR users routinely skip over the commercials while the other half uses the devices for timeshifting purposes only.

DVR penetration has doubled in the past four years and has been growing consistently every year. At current rates of growth, DVR penetration will be at 63 million and 60% in the next four years. Time spent watching DVR'd programming has gone up 57% in the past three years, and that trend should continue as more people wean themselves from a network schedule and start to embrace an on-demand entertainment lifestyle. Most importantly, it is likely that some of the 50% of viewers who are watching the commercials during recorded viewing will discover the fast-forward button and start skipping the commercials.

Commercial "Watching" isn't What it Used to be

Another reason people "watch" 50% of the commercials is because of multi-tasking. It's becoming more common for TV viewers to have their cell phones or iPad with them while they're in front of the TV. They read email, text with friends, update their Facebook status, or check their Twitter feed. In an April 2012 survey, the Pew Research Center found that 38% of cell phone owners used their phone to keep themselves occupied during commercials. Of greater concern to ad sellers is that this behavior is more prevalent among younger viewers than older ones. Of viewers aged 18-24, 73% used their cell phones to distract themselves during commercials while only 9% of those 65 and older did.

In other words, Nielsen may be recording these people as watching the commercials, but they may be less engaged than previous audiences. This is not going to be a positive for TV ad rates, and the age group data indicates it's only going to get worse over time.

DVR usage will continue to grow at the expense of live TV. For the media companies, this will not affect their affiliate fees. However, right now every time a viewer switches from live TV to DVR, the best case scenario is that advertising revenue gets cut in half. As more people start skipping over the commercials, the value of advertising on DVR'd shows will trend toward \$0.

The Current Model vs DVR

DVR Cuts Advertising Revenue in Half

- Live TV
- DVR (Current: 50% Ad Skip)
- DVR (Possible: 100% Ad Skip)

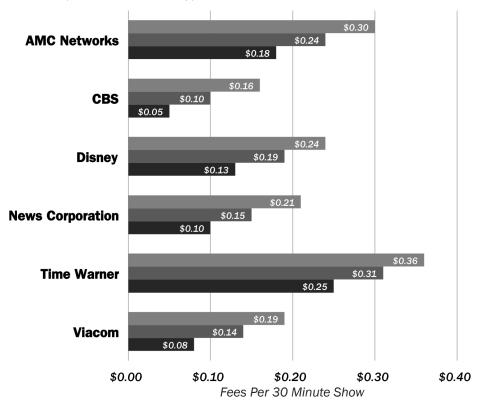


Figure 4 // Source: Author Calculations

Netflix

Netflix started in 1999 as a subscription-based DVD rental service. In recent years, it has started to move more of its customers to a subscription-based on-demand streaming service. This means that subscribers can access Netflix-licensed TV shows and films through their computers or on their TV through their cable connection, internetenabled DVD player, Roku device, gaming system, or another internetconnected device. In general, Netflix tends to have entire seasons of TV shows available in the season after the show has aired. For example, if a TV show is in its fourth season, it would be common for Netflix to have all the episodes from seasons 1, 2, and 3 available, but not any of the new episodes from season 4.

More subscribers are changing their viewing behavior as a result. Instead of watching a show unfold throughout an entire season, subscribers will have viewing marathons when they watch entire seasons of a show over the course of a few days. These viewers don't see any commercials and some of them are starting to cancel their expensive cable subscriptions, which affects networks' ability to collect affiliate fees.

I have heard and seen much discussion that Netflix is overpaying for content, but by my calculations, it isn't paying more for content than the networks are. Adjusting Netflix subscription expense for an estimate of what it pays for content delivery, it looks like Netflix paid out about 39% of its revenue in 2011 to content providers. This figure comes to 55% for the first half of 2012.

Subscribers Watch a Lot of Netflix and Don't Pay Much

The average Netflix subscriber watches 75 minutes of Netflix streaming content a day. Adding in time spent watching mailed DVDs would increase that amount slightly. While the average subscriber is currently paying \$11.54 a month, the company is trying to move more customers to a streaming-only option with a \$7.99 price tag. This would allow it to avoid carrying inventory of physical DVDs as well as shipping costs to mail those DVDs to and from subscribers.

If we assume that Netflix pays out 50% of its revenue in content acquisition costs, this is what the revenue model looks like at current and goal subscription pricing. Remember that Netflix is pulling viewers away from the traditional model to one where they pay a small monthly fee and don't watch commercials. Also, networks with attractive programming will receive higher than average fees from Netflix, but will also lose greater advertising fees if viewers shift from their live offerings to Netflix.

The Current Model vs Netflix

Netflix Eliminates Ad Fees and Has a Low Monthly Cost

- Live TV
- Netflix 1:15 Hours of Watching at \$11.54 Avg. Monthly Fee
- Netflix 1:15 Hours of Watching at \$7.99 Avg. Monthly Fee

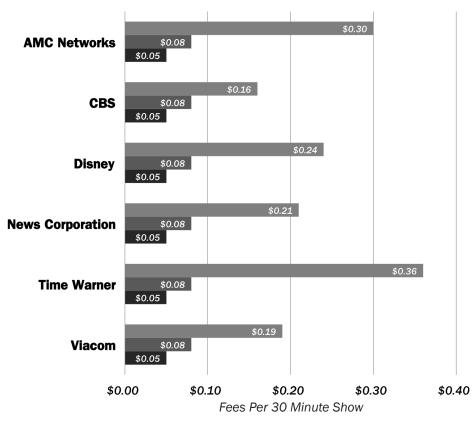


Figure 5 // Source: Author Calculations

Hulu

Hulu provides web-based on-demand programming from NBC, Fox, ABC, CBS, Nickelodeon, and other networks. It is owned by NBC Universal, Fox Entertainment Group, Disney-ABC Television Group, and Providence Equity Partners. Hulu is an interesting threat to the traditional network model because it allows customers to drop their \$70-\$100 per month cable bill and still legally watch most hit shows on TV.

Hulu has two customer offerings. Access to Hulu.com programming is free and typically offers the last five episodes of TV shows beginning eight days after their original air date. The Hulu Plus option is \$7.99 a month and typically offers entire seasons of TV shows and access to shows one day after they air. Hulu Plus also offers some of its programs on connected devices like cell phones, gaming, and Roku devices, or other mobile devices. Because Hulu has to negotiate different agreements with each network, the availability of shows on Hulu, and Hulu Plusenabled internet-connected devices is not uniform. More importantly, both Hulu and Hulu Plus users have to watch commercials.

Hulu has a clever ad model that enables it to charge higher rates for a 30-second spot than traditional live TV can. Hulu breaks up the show into a few segments and forces viewers to watch commercials to unlock the next segment. Because the Hulu commercial breaks tend to be around 90 seconds, which is shorter than the typical network TV break, viewers are less likely to walk away and visit the kitchen or bathroom during the commercials. Hulu also has a feature that allows viewers to select certain ads they believe are more relevant to them. Advertisers are willing to pay more for views from TV watchers who have selected their ads.

Hulu Is Growing Quickly and Gets High Ad Rates

The model is working. In 2010, Hulu was able to collect 14.3 cents per viewer per half-hour of programming -- above the industry average. I do not have more recent information, but would be shocked if that number has gone down in the past year and a half. What makes the 14.3-cent number remarkable is that Hulu is producing more ad revenue per show than the networks are with an ad load that is one-third to one-half of the eight minutes per half-hour typical for network TV. It does get higher ad rates, but at the expense of showing fewer ads.

Despite a lot of complaints from Hulu Plus users about paying for the service and still needing to watch commercials, the number of paying subscribers is growing quickly. Hulu Plus had 1.5 million subscribers in January 2012 and was up to 2 million by April. If Hulu Plus averages 2 million customers for 2012, that will add up to almost \$200 million in revenue. Hulu ad revenue was around \$340 million in 2011, so with a little growth there, we should see 2012 Hulu revenue in the neighborhood of \$600 million, up substantially from \$420 million in 2011.

Hulu has said it will spend about \$500 million in 2012 for content acquisition and development. While it is developing a couple of its own shows, most of that \$500 million will be spent licensing content from the networks. That means Hulu will spend almost 120% of last year's revenue, and over 80% of this year's revenue, on content acquisition. In contrast, the networks analyzed in this report spent an average of 45% of their advertising and affiliate revenue on content acquisition, including both programming and production costs. CBS and Disney are at the high end, with content acquisition costs of 63% and 53% respectively. At the low end, Viacom spends 32% and AMC is at 34%.

We believe that Hulu will continue to pay more than 44% in content acquisition because most of the content it licenses already has an audience. This means it won't spend as much as the networks do for unaired pilots or heavily promoted shows that don't make it through their first season. However, it is unlikely that Hulu will pay more than 80% of revenue for content acquisition once it is out of its current high-growth mode. In fact, Hulu's CEO has said that Hulu pays out 50%-70% of its advertising revenue to content providers.

Hulu represents a perfect example of the thesis of this book. As viewers shift from live TV watching to Hulu, the networks lose their affiliate fee as well as a large share of their advertising revenue. In fact, Viacom has complained that one reason its ratings have fallen so much is because Nielsen is not counting the large number of viewers who are moving their Viacom-owned viewing to providers like Hulu. Viacom is probably right, but what that means is that Viacom's viewers are moving from a high revenue model to a low revenue model.

I offer two cases below. The low case assumes that Hulu continues to get 14.3 cents per viewer per half-hour, and shares half of that with the networks. The high case assumes that Hulu can push more ads without losing viewers and that it receives 20 cents per viewer per half-hour, and shares 70% of that with the networks. Note that networks with more attractive programming will receive higher than average fees, but will also lose greater advertising fees if viewers shift from their live offerings to Hulu.

The Current Model vs Hulu

Hulu Eliminates Affiliate Fees and Only Shares a Portion of Ad Revenue with the Networks

- Live TV
- Hulu 20.0 Cents Ads at 70% share
- Hulu 14.3 Cents Ads at 50% share

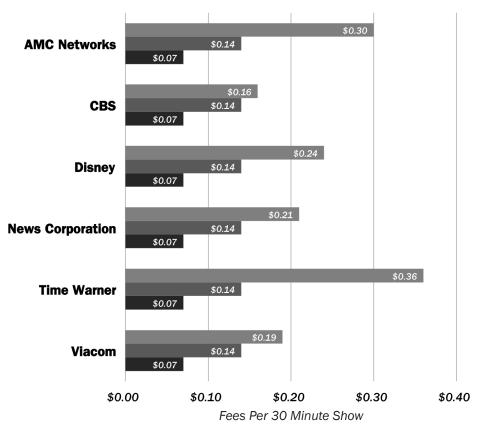


Figure 6 // Source: Author Calculations

YouTube

YouTube was started in 2005 as a way for people to share video with each other. As of January 2012, YouTube claimed it was streaming 4 billion videos a day and that the average user was on the site for 15 minutes. YouTube is a threat to the traditional TV networks in several ways. First, while time in front of the TV has grown in every decade since its invention, YouTube is not an alternate activity, but rather, alternate viewing. An increasing number of TVs, cable boxes, and Wi-Fi-enabled devices allow viewing of YouTube video directly from the television. By definition, time spent viewing YouTube video is time not spent watching network television and more importantly, network television ads.

The networks spend billions a year in content acquisition and development. YouTube is largely populated by videos made by other users and shared for free. The opportunity to share video easily with friends, or to have their 15 minutes of fame is all the incentive most of these new content producers need. The TV networks are now competing with millions of free "content producers" armed only with their digital video cameras or smart phones.

When Distribution Is Free, Everyone Can Have a Network

YouTube also allows users to set up their own channels. This means that distribution has essentially become free. A television network has to fill 24 hours of programming a day and a show's producers have to produce 22 episodes a season. Now, someone with good content can post their videos on their own schedule and make them available to any YouTube user on demand. While the number of people who have built a sizeable audience for their YouTube channel is relatively small, each one who does it is pulling viewers away from expensive network TV and reducing the tie viewers have to branded television networks and shows.

While some TV shows and film studios have put their content on YouTube, for the most part, the relationship between the media companies and YouTube has been hostile. For years, YouTube's approach had been to let users post the networks' content and to take the video down if the network complained. This meant that in many situations, YouTube was essentially acting like a pirate site. Google bought YouTube in 2006, and after enough litigation, implemented a system that identified copyrighted content and offered the copyright holder the option to leave the video up, take it down, or sell ads on the page or in the video and share the revenue with YouTube.

Ad rates on YouTube and the percentage of ad revenue shared with the content provider vary wildly. Most of the estimates I've seen are for ad rates around \$2.50 to \$25.00 per thousand views with YouTube sharing around half of that with the content provider. It's unlikely that the networks will start airing a lot of programming on YouTube, and YouTube is serving as a free alternative pulling viewers away from network programming. Assuming each video is five minutes, the revenue for 30 minutes of viewing would look like this:

The Current Model vs YouTube

Commercial Light Free Content Featuring Cat Videos

- Live TV
- YouTube (\$25.00 CPM)
- YouTube (\$2.50 CPM)

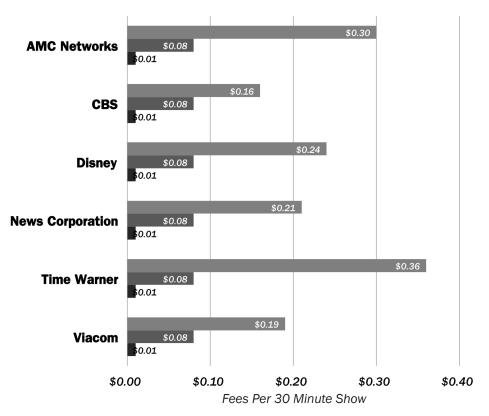


Figure 7 // Source: Author Calculations

Piracy/Bit Torrent

The Elephant in the Room the Networks Want to Ignore

Most of you have heard of Napster, the file-sharing application that cut sales of the recorded music business in half. Napster was shut down in 2001 by court order. It was possible to shut down Napster because it was located in the U.S. and the system was based on individuals sending entire files to each other. In addition, because each file was sent as a whole from one computer to another, transfer speeds were slow. This meant that most of the downloads were of individual songs that tended to be a few megabytes in size.

In 2001, Bit Torrent was launched. It had a few key differences from Napster. First, the system doesn't rely on servers based in the U.S. Second, Bit Torrent divides files into thousands of pieces. A Bit Torrent user could download these pieces from hundreds of users at a time. As users download these file segments, they automatically start to upload them to other users. Because multiple connections were open at a time, download speeds became fast enough that films, even entire seasons of TV shows, could be transferred in minutes. There are no fees or royalties involved, and the TV shows are always stripped of commercials. With multiple torrent sites located overseas, and individuals uploading small segments of content to others instead of whole files, it has become nearly impossible to litigate against the system, or even to shut down some of the torrent sites.

Finding Content Is Easy and Usage Is Huge

While we will never publish a guide to piracy, it is important for readers who invest in media companies to understand how easy piracy is. I once saw a college student download and set up a Bit Torrent application in under 10 minutes. This included the time required to set up an add-on program that maintained a block list of media and government URLs to protect him from being discovered by potential litigants. By checking only one or two sites that keep lists of active torrents, he could find in seconds any movie or TV show he wanted to watch. It literally took him less time to find what he was looking for on Bit Torrent than it takes me to find a particular show using the on-demand feature my cable operator provides, and the legal cable option has limited offerings.

While I expect that some readers haven't heard of Bit Torrent, don't assume it isn't being used. According to Sandvine, Bit Torrent and filesharing account for 13% of all fixed-access internet traffic in North America, 20% in Europe, and 27% in Asia. It is reasonable to assume that close to 100% of that traffic is illegal file sharing, and that most of it is films and TV shows. Films can be downloaded in about five minutes, and entire seasons of hit TV shows can be transferred in 10 to 15 minutes. At that point, the media can be watched on a computer, transferred to a mobile device, burnt to a DVD and played anywhere, or streamed to a television using the same technology that a Hulu or Netflix subscriber would use.

Piracy Prevents Price Increases

Piracy also serves as the backstop against what consumers perceive to be unreasonable behavior by the networks or cable companies. One of the reasons that iTunes did well was because customers believed that \$.99 for a song was a reasonable price. Customers had been grumbling about spending \$15 for an entire album for the one or two songs they wanted. Because it was the only way to get content legally, some artists made a practice of releasing albums that included many previously released songs. In general, when consumers believe they are getting a bad deal, they willingly turn to piracy. When they think they are being offered something at a reasonable price, they tend to pay the legal price.

Some people in the entertainment business like to claim that every illegal download costs them the retail price of the DVD of that film or TV show. It doesn't. Plenty of the people downloading content would have never purchased a copy of *Transformers 3*, or season 2 of *The Cleveland Show*. The more important point is that not only is piracy costing TV networks money now, it is acting as a deterrent to the networks against implementing a pricing model the consumer perceives to be unreasonable. There is anecdotal evidence that consumers are

canceling their \$70-\$100 a month cable bill and replacing that with Hulu and/or Netflix for about \$8 a month each. This has been widely reported and a January 2012 article from the Wall Street Journal titled "Cutting the Cord on Cable" gives a list of ten devices that help viewers get the shows they want without a cable subscription.

Netflix faced huge customer defections last year when it changed its pricing structure, causing a price increase for customers who wanted to stream content off the internet and receive mailed DVDs. The company planned to separate the streaming and DVD content into two separate businesses. The backlash and service cancellations were so great that Netflix reversed its plans to separate the two divisions the next quarter.

Hulu caused some anger when it launched its pay Hulu Plus service and still forced people to watch commercials. It's working for now, but at some level of pricing and commercial load, customers will defect from that as well. I have used Hulu and seen others use pirated content, and it's apparent that the difficulty level of finding what you want and playing it seems about the same. The pirated content comes without commercials and without a monthly fee.

All of this applies to the networks as well. When the threat of piracy keeps a lid on Hulu and Netflix pricing, those companies have to limit their content acquisition cost. A large component of high cable and satellite bills are the affiliate fees the cable company pays to the TV networks. These fees make up just under half of the TV revenue from the companies tracked in this report. We are now at the point where the incremental customer is realizing they are paying \$70-\$100 a month for hundreds of channels they never watch, and are choosing cheaper methods of finding their televised entertainment. The easy ability of frustrated customers to find free pirated content will make it hard for the networks to continue to push affiliate fees continually higher.

Piracy Is a One-Stop-Shop for TV Viewing on Any Device -The Networks Don't Offer That

Piracy also becomes more attractive when network TV offers confusing options. As viewers move more of their TV watching online, some of the TV networks think they can control the process with their own offerings. The problem with that line of thinking is it forces their customers to download applications, sign digital agreements, and set up subscription recognition and payment for EVERY network involved. This approach could work with the Disney Network for parents of young children, or with ESPN for sports fans, but it is unlikely that many customers will set up and check a dozen different applications on their smart phones and iPads.

More importantly, consider the complication of finding what you want to watch when you have to open a new application for each channel to check its offerings. This is why content aggregators like Netflix and Hulu are so important. They allow customers to search one set of listings to see what's available.

Danny Sullivan posted a perfect example of the challenges we're describing in a piece he published on Daggle.com last January. He pointed out that between the Fox broadcast spectrum available free on the government-licensed public airwaves, a \$125-a-month DirecTV subscription, and an \$8-a-month Hulu Plus subscription, he's effectively paying for *The Simpsons* three times. But because he missed recording the start of the new season on his DVR, DirecTV doesn't offer *The Simpsons* as an on-demand option, and Fox was fighting over content licensing rights with Hulu, he was unable to watch the episode on his TV. The only way he could see the episode was to use his computer to find the episode on *The Simpsons*' website and sit through a two-minute load time.

The networks claim that downloading pirated content is complicated and time-consuming. Mr. Sullivan is a valuable paying customer of multiple TV services who could have downloaded the episode of *The Simpsons* he wanted from a pirate site 20 times over in the time it took him to search for it and not find it using legal means. In his article, he remarks on the impact of this puzzling business model on his 13-year-old son. We assume that both Mr. Sullivan and his son only watch content they've bought, but when 13% of all North American internet traffic is pirated content, someone else's 13-year-old is making a different decision.

Having a free, easy, commercial-free option available means that the networks, cable companies, Netflix, Hulu, and others involved in the pay TV business need to offer what their customers determine represents a good value. The evidence is increasing that customer perceptions of value involve a lower revenue model than the one current investors are counting on for the future.

The Current Model vs Bit Torrent/Piracy

There's No Part of This That Works out Well for the Networks

Live TV

File-Sharing (Pirated Content)

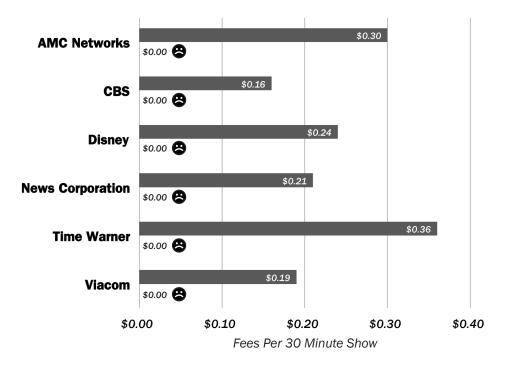


Figure 8 // Source: Author Calculations

Other Devices

There are a few additional methods of accessing television programming that do not currently represent a significant threat to the current model, but are worth mentioning.

Roku

The Roku is a device costing between \$50 and \$100 that is the size of a large drink coaster. The device sits between an internet connection and a television and facilitates internet access to programming on a television. While it does offer access to free channels, the most popular use of a Roku is to stream subscription-based services like Netflix, Hulu, or Hulu Plus. What Roku does well is make it easy to access internet programming or streaming content on a living room TV. This means that while it will help people make the transition from high-cost TV to a less expensive version, Roku does not represent a separate threat to the current model.

Apple TV

As of this writing, there is a lot of discussion of what Apple will do to take share in the television market. There is speculation that Apple is considering making internet-enabled TVs, or producing its own cable boxes. Right now, it has a product available that is similar to the Roku device. It sits between an internet connection and the television and provides access to purchased content. Like the Roku, it will make it easier for consumers to transition to a new, less profitable method of watching TV. While it is possible that a new unreleased Apple product will remake the television industry, the current version won't. While some customers may pay \$.99 for an iTunes download of a TV episode, that would run almost \$22 for a full season of episodes. At \$7.99 a month for unlimited use, most customers will prefer Netflix.

Amazon Prime

Amazon offers a free shipping option called Amazon Prime and charges \$79/year for the service. While Amazon Prime on its own is a money loser for Amazon, Prime customers buy much more from the site and overall and are more profitable for Amazon. In order to increase sales of Prime memberships and to more closely tie its customers to Amazon, the company started to offer free book loans as well as streaming TV and movies to Prime members. Like Apple TV, Amazon sells individual episodes and whole seasons of TV shows at prices above what a regular user of Netflix would pay. Right now, Amazon Prime is not a significant threat to the current model, but anything that pulls viewers away from the highly profitable current model is a negative for the TV networks.

Network Response

During the course of researching this piece, we spoke with investors and industry people who made the case for why the networks would be able to increase profits as they make the transition to a new model. Some of the more important ones are described and examined below:

We'll Have Our Own Online Offering

At face value, this is a compelling argument. Because you can force a viewer watching a TV show on their computer or iPad to watch a couple of commercials to unlock the next segment, a network gets paid more for an online ad than for an ad broadcast on live TV. Most of the big networks are making some of their programming available online and believe that in doing so, they are capturing all the value of viewers' move from traditional TV watching to online viewing.

There are two problems with this approach. First, this is still a lower revenue model than the traditional model. While the network can get more money per viewer per ad, it has to limit the number of ads it shows. If the networks tried to push four-to-five minute commercial breaks to viewers on computers, iPads, or mobile phones, they'll lose viewers. This model also reduces the value of the networks to cable and satellite distributors resulting in reduced affiliate fees.

Second, while CBS, ABC, Disney, HBO, and many other networks have their own online offerings, I think they are ignoring the value of content aggregators like Netflix and Hulu. Imagine a viewer who wants to watch a show on an iPad. For the networks to make this system work, the viewer would have to download apps for each network. Adding even more complexity, many of these apps, like HBO, require either a subscription agreement, or a verification process to ensure the viewer is entitled to the network's content. Without the use of a content aggregator, the viewer would need to open each of the applications and check which programs are available in each one to find what they want. Even worse, they could spend time checking and realize that what they want isn't available from any of multiple content providers. I have spent time testing a Roku device, and it works the same way. The viewer has to check the guide for each channel separately to see if the program they want is available.

This kind of time-consuming complexity is a problem for consumers. Sure, a family with young kids may be happy with a Disney app, and a sports fanatic will be happy with whatever is on ESPN's iPad offering, but for the average viewer, checking multiple guides to see if their show is available is not a consumer-friendly solution. Content aggregators like Netflix and Hulu are the best way around this problem, and as illustrated above, that means giving up affiliate fees, and effectively, sharing advertising revenue with the aggregator.

The other way around the problem for consumers is piracy. If the networks try to push consumers to check multiple sources and program guides to see if their shows are available, more of them will realize that torrent sites have search engines that will instantly bring up just about any show on TV or movie released to DVD.

Piracy is too hard

I've heard this one multiple times. One network employee even suggested that for a viewer to find enough illegal content to fill a week's worth of typical viewing would require treating the search as a full-time job. Again, I will never publish a guide to piracy, but they exist in abundance on the web. All I can surmise is that the technological capability required to get your Wi-Fi-enabled Blu-Ray player or Playstation 3 to connect to a network, and recognize your Netflix subscription is enough to download and install a torrent client on your computer. At that point, finding the show you want from a torrent site might be easier than finding that same show on Hulu, where it may or may not be available.

People will watch the commercials because they know they need to in order to get good programming

For years, I have heard network executives insist that consumers know that it's their responsibility to watch commercials to pay for the highquality programming offered by those networks. There are a lot of reasons people watch commercials. Some are interested in the ads and enjoy them. Others don't know about or don't think about the DVR recording and fast-forwarding options available to them. Still others may watch out of habit. More concerning, there is increasing evidence that people are multi-tasking while watching TV, meaning they may let the commercial run, but are texting, tweeting, and checking email – not watching.

I challenge the networks to find any significant percentage of the population who watches the commercials out of a sense of obligation. I further challenge the networks to find dutiful commercial watchers who are paying their cable companies \$100 a month and feel like they owe the networks still more. And, just for fun, I wonder if the networks really think the average viewer ever felt any obligation to watch commercials so CBS can pay people like Charlie Sheen up to \$48 million a year for his antics on and off *Two and a Half Men*. Jamie Kellner, the former chair of Turner Broadcast Systems, once claimed that walking away from your TV while commercials aired was a form of theft. Clearly, the public increasingly thinks that watching commercials is a form of abuse.

Netflix and Hulu are additive

Some of the networks claim that the fees they receive from Netflix and Hulu are additive to their existing business models. I am skeptical. A viewer watching Netflix or Hulu is a viewer not watching live network TV, and as outlined above, the networks make the most on live TV. Technically, it is possible that one network with a high-value programming library could grow online share at the expense of rival networks, but that isn't likely. Just as Blockbuster Video's rentals were skewed heavily toward new releases, Netflix and Hulu viewing is skewed toward a limited number of high-profile films and TV shows.

There may be some people who are excited about old episodes of *Matlock* being released on the new platforms, but we live in a world where 90% of households in the U.S. have access to hundreds of cable channels. A quick check of TVGuide.com reveals that there are 15 episodes of *Matlock* available on cable this week. Anyone interested in watching *Matlock* already has access to it. Releasing the show on Netflix is only going to pull viewers away from the live TV model.

Music Business

The First Domino to Fall

In 1998, Diamond Multimedia launched the Rio PMP 300, the first commercially available mp3 player. As consumers rushed to transfer their CD collection to mp3 files that could then be sorted and ported more conveniently, the music industry responded with a lawsuit in an effort to protect the CD business. They dropped the lawsuit in 1999 when sales of recorded music hit a record \$14.6 billion. Rather than embrace the new technology, the music industry insisted that people continue to buy CDs.

In June 1999, Napster launched its peer-to-peer file-sharing service. With no legal way to buy downloaded music, consumers embraced piracy and music sales started to fall. The music industry managed to get the courts to shut down Napster in July 2001, but didn't license legal digital downloads until 2003. Napster imitators like Limewire flourished and mp3 players became both cheaper and capable of storing thousands of songs, up from a couple dozen in earlier models.

Many people claim that Apple saved the music business by introducing iTunes. By providing a legal and easy way to download music, Apple did reduce the incentive for piracy; however, the new model produced much less revenue. Previously, music publishers were able to charge in the neighborhood of \$15 per CD and customers had to buy the entire CD. Some artists and publishers took advantage of the model by turning out CDs that only had a few new songs on them, essentially forcing music fans to repurchase much of the same music they already owned to get the new songs. iTunes and other legal download sites tended to sell individual songs for \$.99.

Sales of recorded music fell steadily from a high of \$14.6 billion in 1999 to \$6.3 billion in 2009. These sales have recovered a bit in recent years and 2011 sales were \$7 billion. Relevant to the core thesis on the media companies, it wasn't until 2011 that digital sales finally became 50% of total sales. Even though it took nine years from the launch of legal digital downloads for those downloads to become half of sales, the entire industry does less than half the revenue it did in 1999. Stated another way, physical sales of recorded music fell by over 75%, digital downloads are almost 25%, and over half the sales disappeared.

Music Industry Sales

Down by Over 50% from 1999

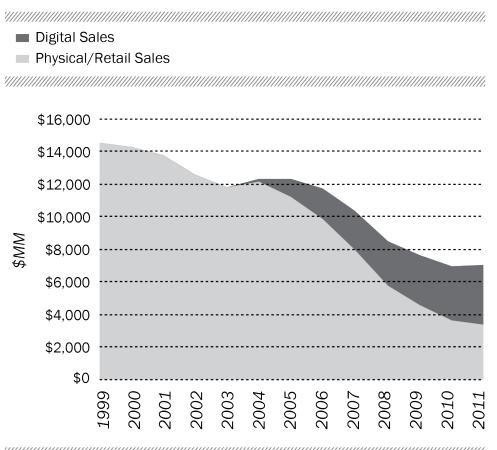


Figure 9 // Source: Recording Industry Association of America

There are similarities with the changes coming in the TV business. The music companies went from selling \$15 CDs to selling \$.99 songs. Cable companies are bundling hundreds of unwatched channels for \$70-\$100 per month and are starting to lose share to on-demand versions of individual shows. In this analogy, the large affiliate fees the TV networks enjoy are becoming like the unwanted songs on a \$15 CD. Once people don't need to pay for what they don't want, they might stick with what they're accustomed to for a while out of habit, but eventually, they'll seek out the cheaper model.

Newspaper Business

Another Profitable Media Business Destroyed by the Internet

The newspaper business presents an even better example of what can happen to an industry when the shift in a business model reaches a tipping point. As the internet grew in popularity and usefulness during the 1990s, many people predicted the decline of the traditional newspaper business. At first, they were disappointed. According to the Newspaper Association of America, newspaper print advertising grew every year from 1991, when it was \$30.3 billion, to 2000, when it reached \$48.7 billion. This happened even as the dot-com boom reached its heights. Then, the industry imploded. In 2011, newspaper print advertising was \$20.7 billion and newspaper-owned online advertising was another \$3.2 billion. Advertising revenue was cut by over 50% in 11 years and the reduction would be even greater if we adjusted the figures for inflation. So what happened?

Newspaper Ad Expenditures

Revenue grew in the early years of the internet ...

\$60.000 -----\$50,000 -----\$40.000 \$MM \$30,000 \$20,000 -----\$10,000 -----..... \$0 1998 2000 1996 2006 2008 2002 2010 992 1994 2004

Figure 10 // Source: Newspaper Association of America

... until the the business moved online

- Online Advertising
- Print Advertising

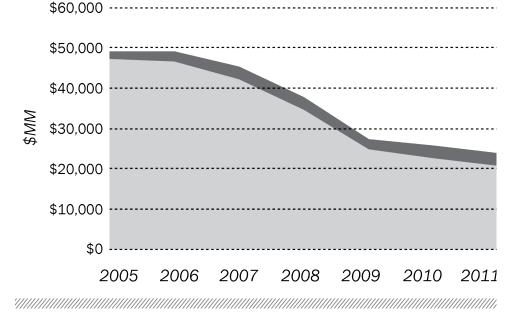


Figure 11 // Source: Newspaper Association of America

Newspapers used to be able to deliver huge audiences to advertisers. They were the consolidated source of information for people who wanted detailed coverage of international news, local news and events, sports, movies, and editorial content. In addition, unlike other media such as TV and radio, newspaper readers valued much of the advertising content in newspapers. In 2000, classified ads made up 40% of total newspaper advertising, and those ads included items for sale and help-wanted ads that had value to both the advertiser and the reader.

The most important reason new technology has had such a negative impact on media businesses is because of the democratization of choice and the ability of individuals to circumvent old-style monopolies. In the music business, people wanted to pick and choose individual songs instead of buying the full CD. In the newspaper industry, content became disaggregated. Film listings moved to a variety of internet sites that were easier to search than multiple newspaper pages. Classified ads migrated to sites like eBay and Craigslist. Help-wanted ads moved to sites like Monster.com. Readers who disliked their newspaper's often partisan editorial page took to the internet and easily found free columnists and bloggers they preferred. The internet acted as a monopoly destroyer and enabled readers with a different viewpoint to find their news elsewhere.

Even in sports, where local columnists with the resources of a large organization behind them should have been able to maintain market share, newspapers have fallen desperately behind free blogs. As a fan of Michigan football and basketball, I can attest that the quantity and quality of the writing and analysis of recruiting and game coverage by a variety of blogs far exceeds anything ever done by the Detroit newspapers.

Previously, newspapers had benefitted from a lack of competition and a perception as impartial arbiters and reporters of international and political news. Now, not only are readers able to cancel their subscriptions and still get the news they want, a constant stream of bloggers and media watchdogs follow news coverage and write about media bias, which is a negative for the newspapers' brands. When they controlled distribution, the papers could prevent these bloggers from reaching a wide audience. That is no longer the case.

As readers moved to online sources, circulation fell and the nonclassified advertisers disappeared as well. It is worth noting that even as the newspapers grew their online presence, even the addition of billions of dollars in online revenue wasn't enough to prevent a 50% slide in the entire business. There is a parallel between this and the TV networks.

The TV Business Looks a Lot Like the Newspaper Business in the Late 1990s

There is another comparison to be made between these two businesses. Newspapers did well when they were able to consolidate content. Most people who bought papers did not read every section, but to get the sections they wanted, they had to buy the entire paper. This looks a lot like the cable and satellite companies bundling hundreds of channels and charging customers \$70-\$100 a month for the entire bundle. As more attractive and much less expensive online offerings become available, cable customers are going to be less likely to pay for 500 channels when they only watch 10 of them. This is not going to be a positive for affiliate fees.

Finally, the internet infrastructure that supplanted much of the newspaper business was in place for years before advertising revenue started to plummet. Part of this is because it took a while for attractive online offerings to develop, and part of it is because people are often slow to change decades-long habits. But once customers started to move to lower cost or free online offerings, the decline in the newspaper business happened quickly. In this report, I have outlined the technology already in place to supplant the highly profitable traditional TV network model. While we can't know the date that the move toward a lower revenue model gains critical mass, when it happens, the profitability of owning networks will decline rapidly.

Who's Safe

Sports

There are several networks and types of programming that will remain safe as viewers shift to a less profitable TV model. The first is sports programming. Even as the experience of going to a game has become prohibitively expensive for many families, sports are as popular as ever. Cheering on a winning team will pull communities together for years to come, and new ways of watching sports, such as fantasy leagues, are pulling in new fans.

Previously, an NFL fan might watch his local team play once a week. Now, with the advent of fantasy leagues, fans have a rooting interest in every game taking place that week, including the statistics generated in "garbage time" as teams run out the clock in a game where the outcome is already decided. Except on rare occasions, sports fans do not watch games on a delay, but rather will rearrange their schedules to watch the action live. Despite all the skepticism of the network model contained in this report, and two decades of time-shifting TV shows specifically to avoid watching commercials, I readily admit that whoever is showing Michigan football owns my attention for three to four hours on 12 Saturdays in the fall. It's a good time to own assets like ESPN or the Big Ten Network.

News and Financial Reporting

Another safe asset is live news and financial news. I suspect that no one other than political writers who want to contrast the coverage from various networks DVRs election results, and big events will always draw a live TV audience. Financial news is almost always time-sensitive and CNBC's Squawk Box -- complete with a full commercial load -- is on in trading rooms all over the country. Fox News, which has taken share in news reporting, and CNBC are both assets that will be relatively unaffected by new viewing models.

Reality TV

A third safe asset may be reality TV shows involving voting. While I do not understand why people would want to watch American Idol live so they can vote on the winner (or against the loser), I'm sure there are plenty of American Idol watchers who don't understand why I would watch Michigan football. Either way, the immediacy of the action causes viewers to want to watch these shows live.

While I insist that the growth of reality TV has signaled the death of civilization, given that it has been around for approximately 15 years, it's probably here to stay. As networks start to face revenue reductions due to the change in their business model outlined in this report, one of the ways they'll respond is to increase their reality TV offerings. There will be a limit where the market is saturated, and we may have reached it already, but this would be another example of programming that is insulated from a changing TV market.

One Other Possibility

Right now, the trend has been for TV viewers who want to watch content in an on-demand format to move their viewing to the non-live TV options discussed at length in this report. While there are an increasing number of people who are canceling their cable or satellite subscriptions and using low-cost internet options for all of their viewing, that trend hasn't hit anything close to critical mass yet.

Should that happen, affiliate fees will fall for every subscriber who cancels. As a reminder, affiliate fees are paid by cable and satellite companies to TV networks every month for each subscriber with access to that channel. These fees then get passed on to customers through their cable bills. The TV networks and cable companies have been fighting for years about TV networks forcing cable companies to buy bundles of channels. Viacom uses access to MTV and Nickelodeon to pressure cable companies to carry and charge viewers for less popular offerings like a country music channel and Spike TV.

The recent fight between DirectTV and Viacom over affiliate fees and channel-bundling was the longest and largest on record. In the end, DirectTV agreed to carry most of Viacom's channels at close to the same rate other distributors pay, but during the negotiations, it kept Viacom's channels - including MTV, Nickelodeon, and Comedy Central - off the air for over a week.

A model where cable and satellite customers pay \$70-\$100 a month for 500 channels when they watch a tiny fraction of them is not sustainable. The example of newspapers losing over 50% of their business when

they could no longer force their customers to buy aggregated content is instructive here. At some point, the cable companies may be able to force the TV networks to unbundle their channels, and allow the customer to pick the limited number of channels they actually want and for which they are willing to pay. If that happens, even highly popular cable channels like ESPN will face a huge defection of customers who either aren't interested in sports at all, or who don't think ESPN's offerings are worth the affiliate fee they are currently charging. This is unlikely to happen in the near-term, but it is a possibility in the future, and a trend worth tracking.

Conclusion

What to Do With These Stocks

Traditional network TV has been a lucrative business, and many smart investors own media companies because of the expectation that they will continue to grow their operating income. What I have attempted to illustrate in this report is that the delivery of media content and the way viewers are watching it is changing in many ways. The most important point is that every single one of these changes is a move to a less profitable model than the current one. On a short-term basis, some of the networks might get a little bump to their revenue from a big contract from Netflix or Hulu, but over the long term, none of these changes will be positive for results.

In general, it's a positive when the management teams of good companies buy back significant amounts of stock at prices that reflect a discount to the value of the underlying business. In the case of the media companies, some of them are committing a lot of capital to stock buyback at low multiples of current and projected earnings. My concern is that when these companies start to face declining operating income, the stock buybacks and the additional leverage that will accompany them will not work to their long-term benefit.

With the Olympics this past summer and a presidential election where both sides will spend a staggering amount on TV advertising, there won't be a decline in the next couple of quarters. However, as we saw with the music and newspaper publishing businesses, when the change in the business model reaches a certain level, profitability can crash. The online and mobile worlds are much less profitable than the model that investors are projecting will continue in the future, and the entire model doesn't need to change to produce much weaker financial results. Investors should heed the example of the music business. It was only in 2011 that digital download sales (new model) reached the level of physical sales (old model), but overall industry sales are less than half of what they were 12 years earlier. A change in the TV business even a fraction of this magnitude would be enough to leave investors disappointed.

Media companies are complicated and have a variety of divisions, but it is helpful to take a look at which companies have the most exposure to changes in the TV business. The chart below shows U.S. advertising, affiliate, and syndication revenue as a percentage of total company revenue for the most recent fiscal year. The numbers are an approximation and some judgment is required to properly understand the table. For example, while AMC Networks shows 91% of its revenue as coming from TV, the other 9% is international TV revenue. AMC is more exposed than any other company in the study. Viacom gets 57% of its revenue from television and another 40% from its film division, another business model that faces threats from piracy as well as declining box office numbers. Disney, with its theme parks, famous characters, and only 40% of its revenue from television will face the same issues that Viacom will.

Who Has the Most Exposure

TV Revenue As a Percent of Total Revenue

AMC Networks	91%
CBS	53%
Disney	41%
News Corporation	40%
Time Warner	47%
Viacom	57%

Source: Author Calculations

It is too early to think about shorting media stocks. They are not currently expensive and near-term results should be fine. Owning these stocks is dangerous - probably more so than most investors believe. The charts illustrating sales figures for the music and newspaper industries show that the analogy of sleeping on top of a ticking time bomb is the correct one. My best thought on these stocks is to sell existing positions and remain on the sideline until the threats to the current profitable model of these companies start to cause significant sales declines. At that point, it should be safe to take short positions in these companies. **Gary Brode** is a Managing Partner and Portfolio Manager for Silver Arrow Investment Management, LLC. He started his career in the Mergers & Acquisitions Department at Morgan Stanley & Co. and has spent the last 19 years working for hedge funds, including Seneca Capital, Brahman Capital, and the Event Driven Group of John A. Levin & Co.; all funds with up to \$2.5 billion in assets. He was a Founder and Managing Partner of Akita Capital Management, LLC, a value-oriented long/short equity hedge fund.

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Gary Brode is a SumZero contributor.