State of the Video Marketplace Workshop

Position Paper

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When considering the consumer impact of bundled pricing (at the wholesale and retail level) and any policy implications and/or potential regulatory remedies, we believe it's important to first understand why bundled pricing exists in the first place. We don't believe bundled pricing practices have caused the industry structure to evolve as it has. On the contrary, we believe the shape of the industry structure (which is dictated by distribution technology) has caused bundled pricing. But the industry structure is changing, driven by technology which enables on-demand distribution rather than simultaneous linear distribution, so we believe pricing practices will change along with it.

Proponents of bundled pricing argue it benefits consumers by providing an extraordinary array of variety and continued program investment at a good consumer value. Detractors of bundled pricing argue it's unfair for consumers to be forced to pay for content they don't want. Whichever side of that argument one takes, it will matter less going forward, because we believe its unlikely bundled pricing can survive, in its current form. However, the pace at which pricing practices will change, and the ultimate resulting impact on consumers and industry participants, are all fair debate points.

By any measure, video entertainment (e.g. "TV") is an extraordinarily popular product in the U.S. The average American continues to consume nearly five hours of video per day.[1] For that privilege, American households spend roughly $95bn per year in pay-tv subscription fees[2], and "pay" with their time by sitting through about 18 minutes of advertising for every hour of viewing time, supporting roughly $65bn in annual TV advertising.

The delivery of this product, and the resultant economic entities and business models, has developed the way it has largely because of the distribution technology. Until very recently, the only way to deliver video entertainment into people's homes at that scale was through a one-to-many, simultaneous broadcast stream. Anyone who wanted to watch what was on, could tune to that "channel" at the appointed time.

In such a world, the only way to increase the choice/variety available to consumers was to add more networks. Given the extraordinarily high usage of the product, and variety of consumer tastes, the availability of more and more choice (meaning more and more networks) was inevitable.

So the number of linear networks multiplied. The ownership of the growing number of networks was concentrated in a handful of about ten companies[3]. Economies of scale made it much more profitable for existing network groups to add on another network (or two, or three), and barriers to distribution access also made it difficult for new entrants.

Consumers haven't historically acquired entertainment content directly from the networks (or, more accurately, studios). Distributors ("MVPD's") have provided both an aggregation function and a distribution function. There has been a fair degree of fragmentation among MVPD's. Wherever someone lives in the U.S, there is by definition three, usually four, sometimes five or more MVPD's competing to provide their pay-tv service. The MVPD's have capital intensive, high fixed cost business models; they are competing for subscribers in a fully saturated end market (for the past ~decade); and most of them sell multiple product lines (e.g. broadband, telephony).

We believe the confluence of technological and demand characteristics described above has caused the pay-tv value chain to develop as described in **Exhibit 1**. It also explains the various margin, ROIC, and profit pools along the chain, as well as the evolution of bundled pricing.

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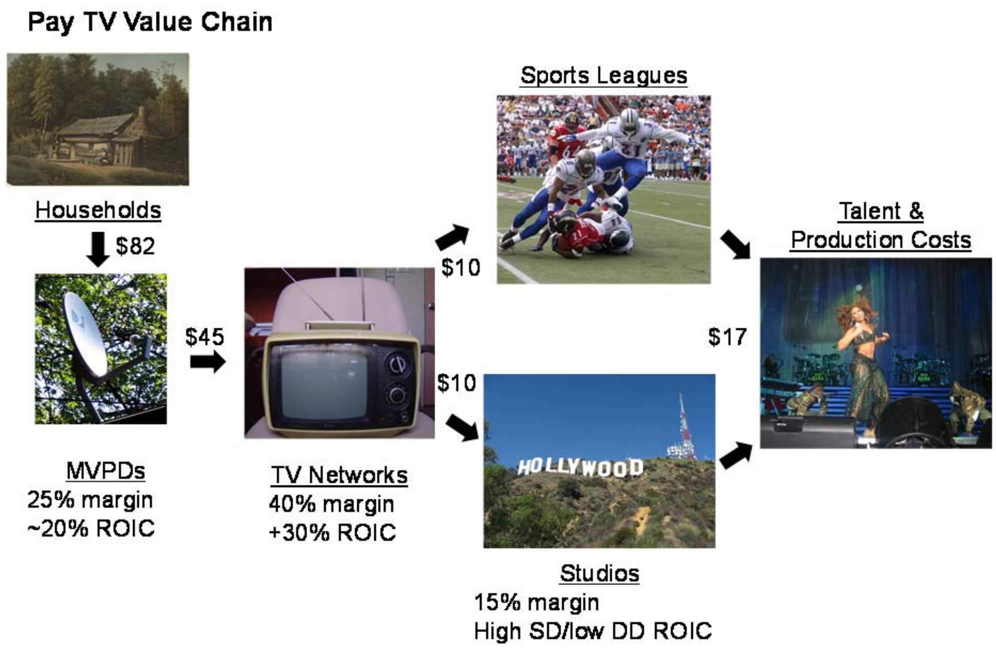
[1] Source: Nielsen
[2] $82 ARPU x 97mm subs x 12 months
[3] Disney, Fox, CBS, Time Warner, NBC Universal, Discovery, Viacom, Scripps, AMC Networks, A&E.

Exhibit 1
Pay TV Value Chain



Source: Wikimedia Commons, Bernstein estimates and analysis

The absolute and relative sizes of the profit pools across the value chain are stunning. The MVPD's earn a reasonably good return on their video business – for now – with ROIC's in the ~20%'s. The TV networks, on the other hand, earn phenomenally high margins and ROICs. In fact, we scanned the S&P 500 and found only about 3% of listed companies earn equivalent economics. It's a very exclusive club.

The networks don't earn those types of economics because "content is king". In fact, ironically, TV networks aren't really "content" at all. TV networks are intermediaries; aggregators whose sole function (value add?) is to acquire content, assemble it into a sequential order, and broadcast it out in a one-to-many simultaneous stream. For providing that service, these businesses have earned 30-40% ROICs.

"Content" actually resides with the studios and sports leagues, and ultimately the individual talent. And while plenty of fortunes have been made in Hollywood and on the football field, the average overall returns for the studios has been pretty lackluster – barely earning their cost of capital on average.

We believe TV networks have earned such phenomenal economic returns because until recently there has been a bottleneck on distribution and an effective monopoly on video brand advertising. The distribution bottleneck, in particular, we believe has given rise to the bundled wholesale pricing (which has necessitated bundled retail pricing). Both the distribution bottleneck and the video advertising monopoly are gone.

We see bundled pricing as a natural outcome of the distribution system as it used to exist. To get additional variety, there had to be additional networks. With only three networks, there was only three options to watch at a given time. To get ten things to watch, you needed ten networks. Then 25 networks. Then 100 networks.

The marginal cost of each additional network was very low, and networks would understandably take advantage of their position of power over the MVPD's to require MVPD's to take (and pay for) all the networks. And the MVPD's earned high enough margins and ROIC's that they could pass a little bit along to the consumer and absorb the rest.

The MVPD's only have ~10 decisions to make with respect to content. Given: the popularity of the TV product, and the ability for all consumers to switch among MVPD providers, it is no surprise to us that TV networks have held extraordinary "pricing power" and ability to bundle. If an MVPD doesn't like the price demanded by the TV network group (or the full suite of networks required in the bundle), the MVPD's only recourse was to stop carrying (all) those networks. If the MVPD did that, they would lose subscribers. And the cost of the lost subscribers would be greater than the cost of paying ever-increasing prices to the network groups.

We have quantified that break-even math for MVPD's in **Exhibit 2**. The math is a little different for each network group, but in simplified terms, if the aggregate affiliate fees demanded for a group of networks is, say, $3 (i.e. Viacom), and the value of a pay-tv subscriber to an MVPD is $21, then the MVPD should only drop the network group if they can do so and lose less than 13% of their subscribers. (This assumes the MVPD keeps any other lines of business they have with the subscriber, e.g. broadband and telephony).

Exhibit 2
2015 Current Affiliate Fee Breakeven

(Fees in $/sub/mo)	
Pay-TV ARPU	$82
Aggregate Affil Fees	$45
Customer-Related Expenses	$16
Gross Margin $'s	$21
Gross Margin %	45%
Customer-Related OpEx %	20%

	2015 Fees ($/sub/mo)	**Distributor Break-Even (% Subs Lost)**
DIS	$9.93	32.6%
FOXA	$5.09	19.9%
TWX	$3.71	15.3%
VIAB	$3.04	12.9%
DISCA	$1.06	4.9%
CBS	$1.11	5.1%
AMCX	$0.75	3.5%
SNI	$0.62	2.9%

Source: SNL Kagan, Bernstein estimates and analysis

Until recently, the break-even math has been impossible for the MVPD's to make any other decision than to pay what the network groups demanded. But as the marginal profit contribution of pay-tv video subs has gotten lower, and the affiliate fees have gotten higher, the break-even gets easier every day. In fact, our calculations suggest that if the rate of growth of pay-tv ARPU's and affiliate fees continue on their current path, the average video sub will generate $0 profit contribution to the average MVPD in 2023 (**Exhibit 3**).

Obviously, we therefore believe that something will have to give before then. Which on its own right should be expected to lower the growth rate of aggregate affiliate fees. This could be accomplished by some network groups losing distribution altogether, or certain networks being eliminated, or just an overall reduction in price inflation across the board.

Exhibit 3
2018 & 2023 Affiliate Fee Hypothetical Scenarios

(Fees in $/sub/mo)	**Current**	**Est. Growth Rates**	**2018**	**Est. Growth Rates**	**2023**
Pay-TV ARPU	$82	4%	$92		$112
Aggregate Affil Fees	$45	9%	$58	9%	$90
Customer Expenses	$16	4%	$18	4%	$22
Gross Margin $'s	$21		$15		$0
Gross Margin %	25%		17%		0%

			2018			**2023**	
	Current Fees	**Est. Growth Rates**	**Fees ($/sub/mo)**	**Break-Even (% Subs Lost)**	**Est. Growth Rates**	**Fees**	**Break-Even (% Subs Lost)**
DIS	$9.93	5%	$11.49	43%		$14.67	100%
FOXA	$5.09	8%	$6.42	29%		$9.43	100%
TWX	$3.71	10%	$4.94	24%	5%	$6.30	100%
VIAB	$3.04	3%	$3.32	18%		$3.85	99%
DISCA	$1.06	6%	$1.26	8%		$1.69	99%
CBS	$1.11	5%	$1.28	8%	15%	$2.23	99%
AMCX	$0.75	6%	$0.90	6%		$1.20	98%
SNI	$0.62	6%	$0.73	5%		$0.98	98%

Source: SNL Kagan, Bernstein estimates and analysis

None of this necessarily means an end to bundled pricing practices. But it could.

More directly with respect to bundled pricing, as distribution capability has expanded exponentially, the condition that made it necessary for there to be 100's of networks in the first place has gone away. We used to need 100 networks so consumers had 100 choices of things to watch at 8:00pm on Thursday night. Now we don't need 100 "networks" --- Netflix offers 10,000 choices, simultaneously all available at 8:00pm (or 8:01pm, etc.).

Note that SVOD services are still bundles, and still subscriptions. But the typical price is $8/month (compared to $82), and they include little or no advertising (instead of 18 minutes in the average hour-long show on linear TV). Clearly as long as there is enough content on an SVOD service that a consumer desires, the value equation has, in that case, changed immensely in favor of the consumer.

We believe this is explained by the fact that the distribution barrier to entry has been eliminated… and new businesses do not need to earn 40% ROIC to create value. No business does. A business only needs to generate ROIC greater than its cost of capital to create value. Which is why new SVOD entrants and other OTT video services can offer such a lower price point and lower advertising load to consumers. As long as their business models generate, say, low-double-digit ROIC's, they are creating value. They aren't fighting to protect legacy ~40% ROIC's.

It is our view that as long as SVOD services can continue to grow their consumer content offering at an ROIC greater than their cost of capital, the profit pools from the incumbent pay-tv value chain will necessarily migrate away from TV networks and, in our view, toward consumers and studios. (Maybe to MVPD's as well, but that largely depends on a whole different regulatory question around broadband services and pricing).

This doesn't mean a complete end to retail bundling, or a start of a la carte. We expect retail pay-tv "bundles" will continue to be popular. We liken it to restaurant pricing. If a consumer wants to eat a lot of food (with a wide variety), the all-you-can-eat buffet is by far the best value. Americans, on average, tend to want to "eat" a lot of TV. However, if a consumer really wants a few pre-defined packages that satisfy more specific tastes, the prix fixe menu is probably the best choice. Finally, if a consumer really wants one or two specific menu items, they should order a la carte.

Industry arguments that the existing bundle is the best value proposition for consumers may be true for most consumers, but if that's true they should have nothing to fear about the development of more options/choices. It's hard, however, to prove that the existing bundle is in the best interest of consumers when: a) no alternative has ever been tried; and b) TV networks are earnings 40% margins and 30-40% ROICs. And if the full bundle really is the superior option for consumers, it will win out anyway.

If the regulatory powers desire to accelerate the inevitable increase in consumer choice that is already starting to occur, we see two areas with the most potential for impact: sports programming, and digital antennas.

While arguably all genres are cross-subsidizing all other genre's in the current full bundle, sports programming sticks out specifically because it is by far the most expensive programming, and some people have no interest in it. Why should those people have to pay for it? Even if you're very hungry and want to eat at the buffet, if you don't want the crab legs, shouldn't you be able to pay a lower price without them?

However, executing regulatory action to achieve that seemingly simple objective seems likely to be very complicated and likely fraught with unintended consequences. For one thing, we would expect any of the affected sports networks to argue they are being unfairly singled out. Why should people without kids have to pay for kids networks? Why should people who don't care for cable news networks have to pay for them? Etc.

Beyond that, many/most networks that carry sports programming also carry other programming as well. For instance, the broadcast networks. How does one regulate that consumers don't have to pay for broadcast network sports, but are still able to see entertainment and news programming on those networks? And sports programming can be moved from one network to another and spread over more networks.

Digital antennas are the other potential source of largest consumer impact. Consumers are paying billions of dollars in retrans fees (in fact, the CEO of CBS has bragged that retrans/reverse comp revenue has doubled from $500mm in 2012 to $1bn in 2016, and will more than double again to >$2.5bn in 2020. Multiply that by four major networks. That's a lot of billions of dollars out of consumer pockets (or MVPD margins) for networks that are available to consumers for free, over the air. One could imagine regulatory action making it easier for consumers to utilize digital antennas, perhaps fostered by making it easier for third parties to integrate antenna signals into their overall suite of available video sources.

However, one obvious potential reaction to any such regulatory effort would be for the broadcast networks to abandon broadcast distribution altogether and simply become pay-tv networks. Which would eliminate the risk of consumers using antennas, but put the networks squarely into the same set of policy considerations as other predominately sports networks.