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**MEDIA =**

**DISTRIBUTION DISRUPTION @  
TORRID PACE**

***Digital Leaders =***

***Transforming Media With***

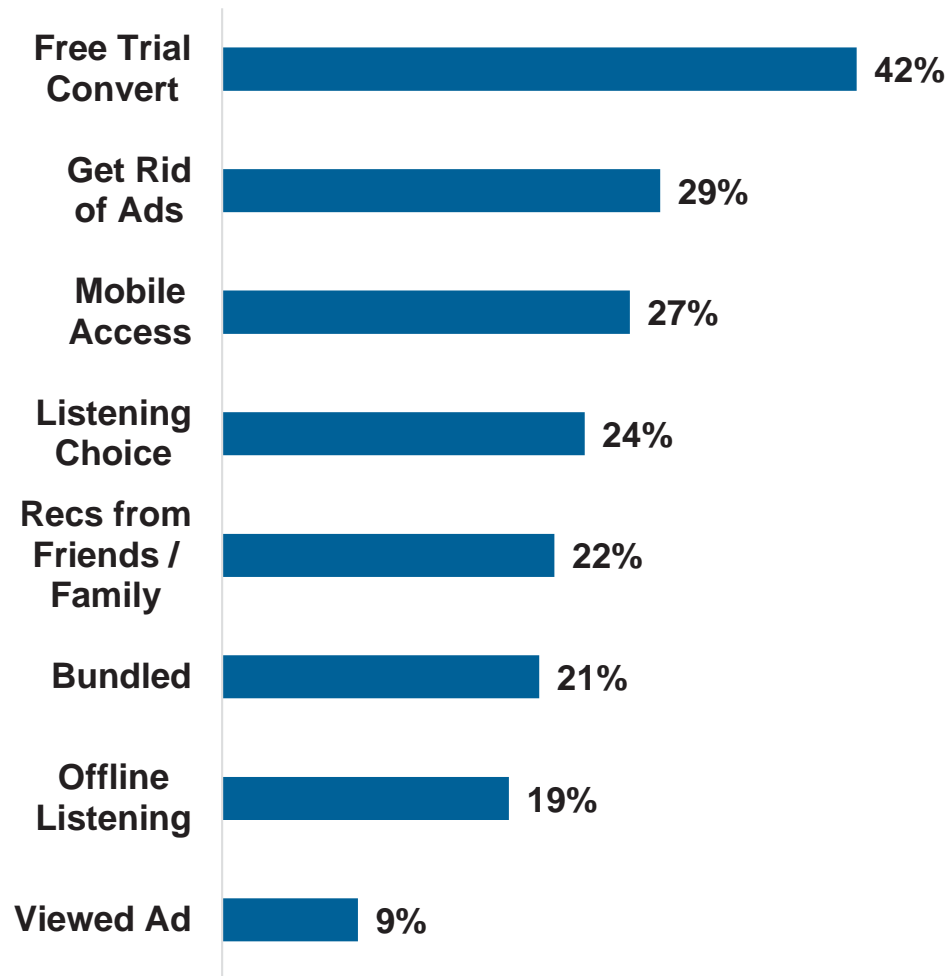
***Better User Experiences +***

***Lower Prices...Data + Scale***

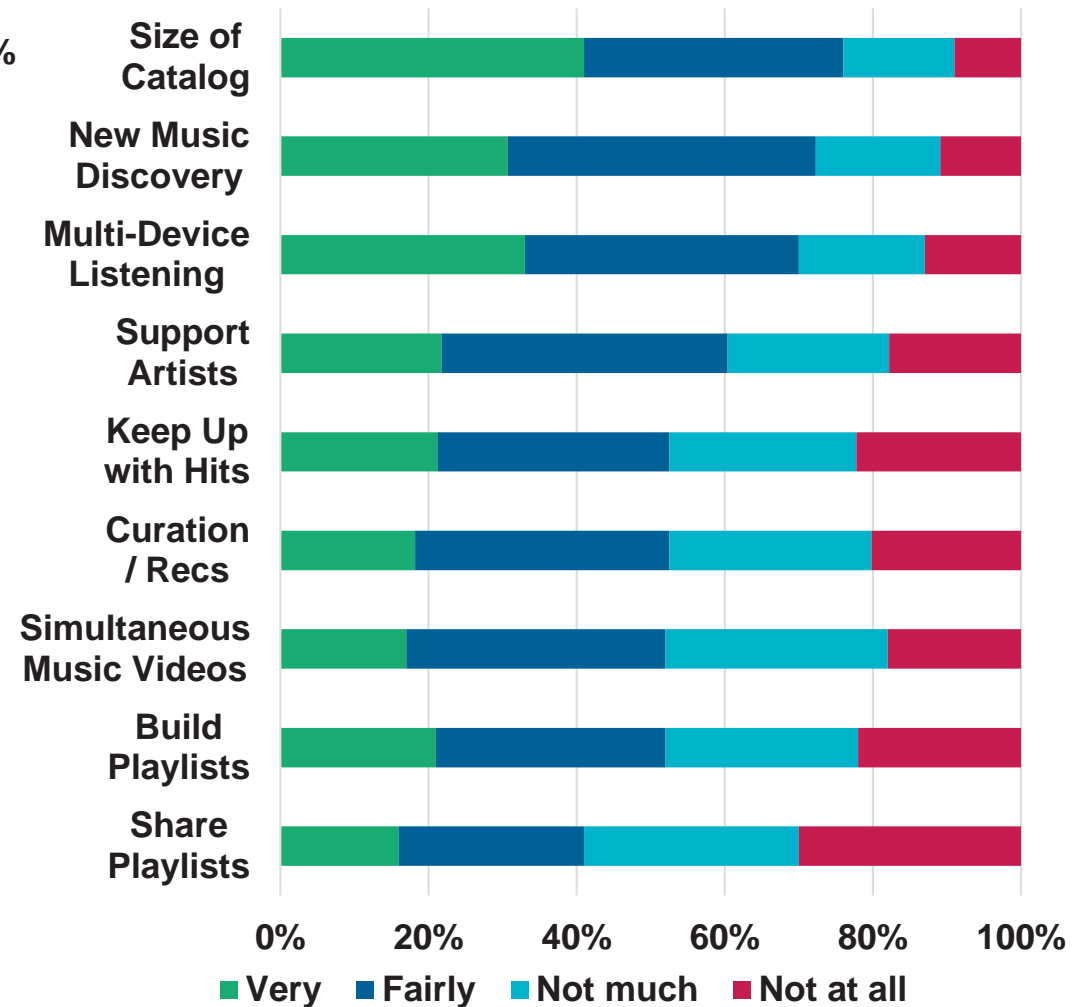
# Music = Why Streaming?

Access / Choice / Discovery / Personalization / Mobile / Fewer Ads

### Reasons for Paying for Music Streaming, 12/15

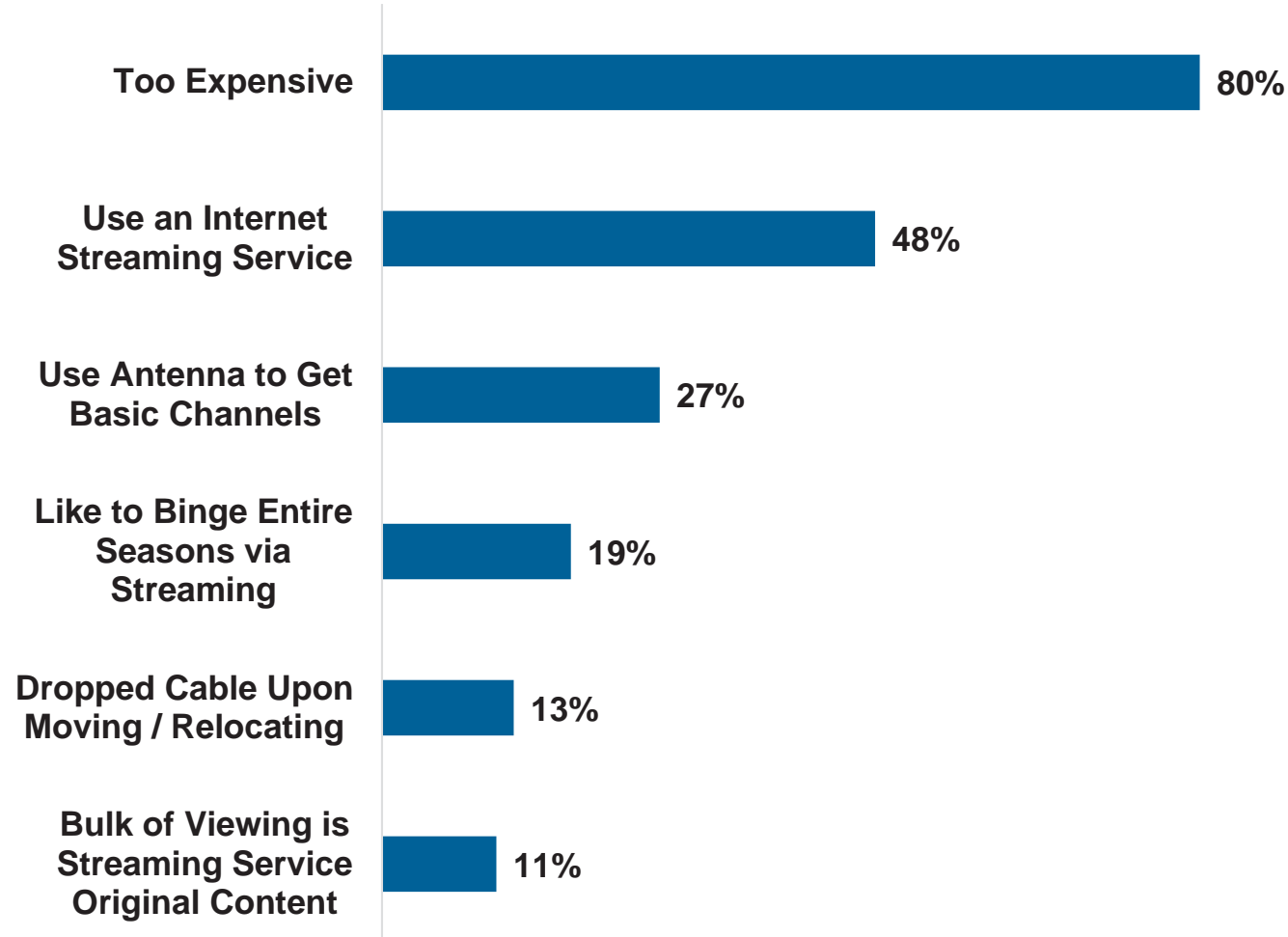


### Importance of Streaming Product Features, 12/15



# Video = Why Cord-Cutting? Lower Price + Convenience

## Reasons for Cutting Pay-TV Service, Q4:16

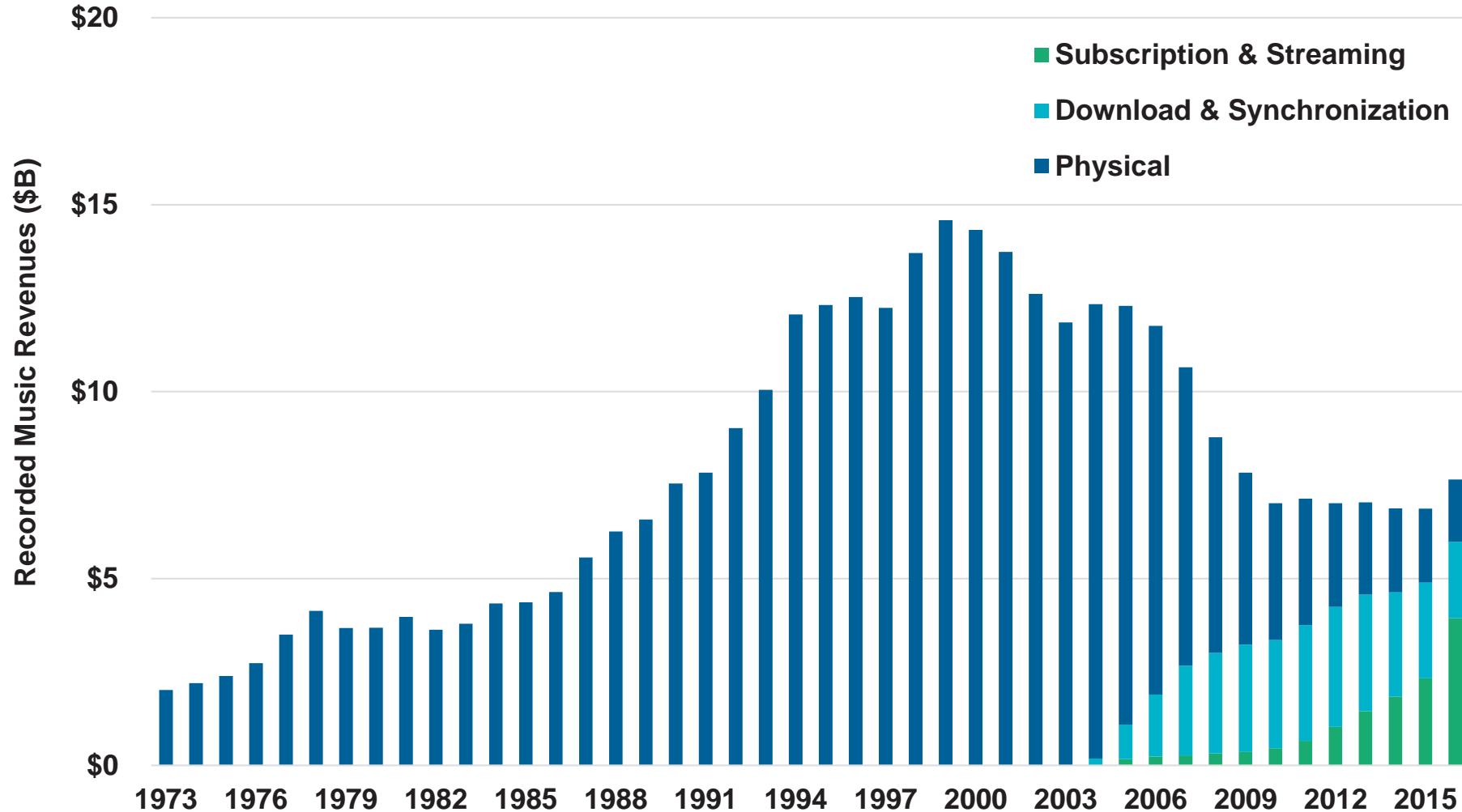


*Digital Evolution of  
Music + Video =*

*Ramping Rapidly...*

# Recorded Music = Revenue +11% After 16 Years of -4% Annual Average Growth... Subscription & Streaming @ 52% of Revenue vs. 0% Thirteen Years Ago, USA

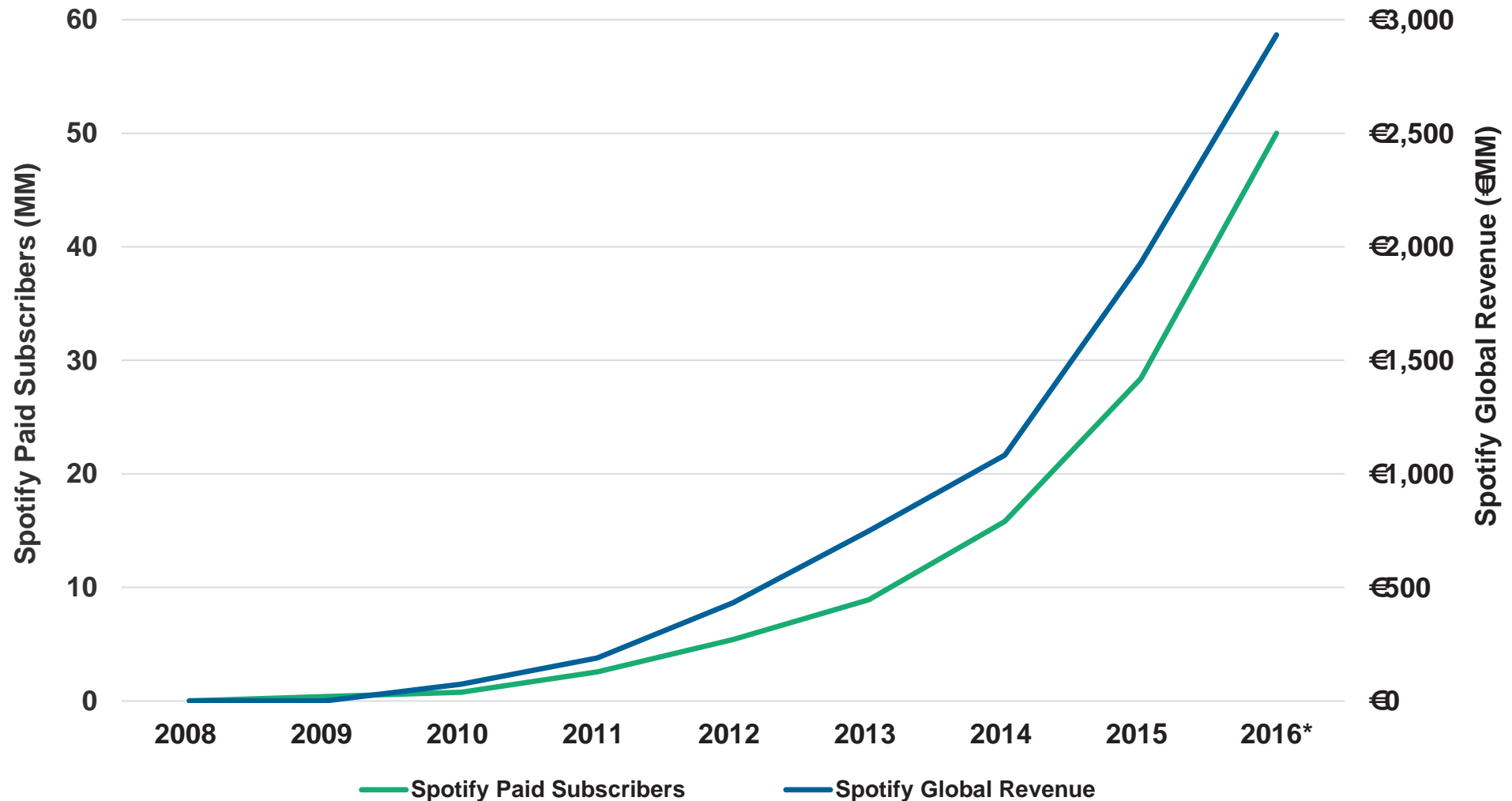
## Recorded Music Revenues by Format (\$B), USA, 1973-2016



# Spotify = Catalyst for Internet-Driven Evolution of Music Industry... 0 → 50MM Paid Subscribers / 126MM MAUs in <9 Years...

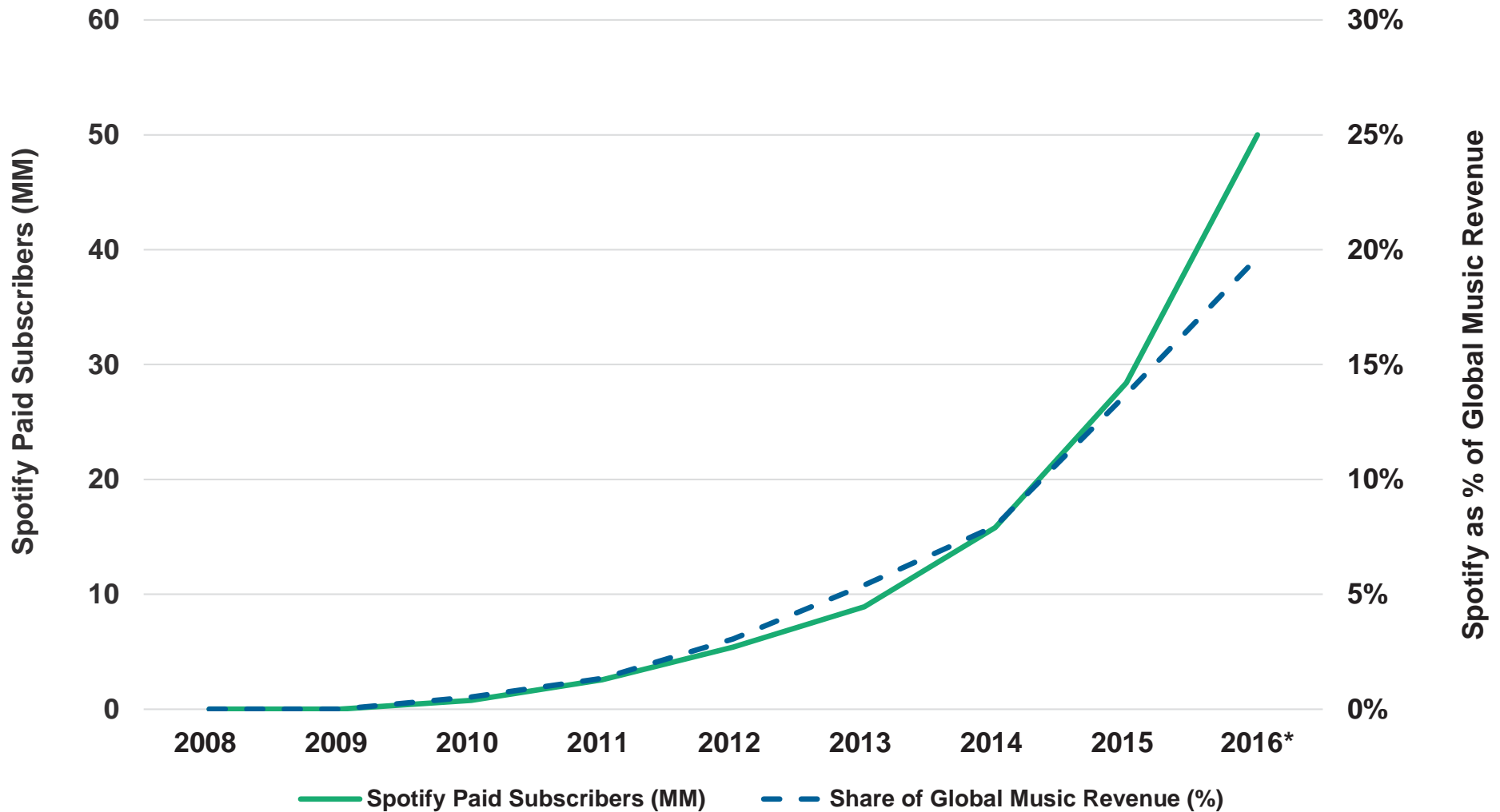
## Spotify Subscribers (MM) & Revenue (€MM), 2008 – 2016\*, Global

Q4:16 Monthly ARPU = €5.80 (\$6.10)



# ...Spotify = 20% of Global Music Industry Revenue vs. 0% in 2008

**Spotify Subscribers (MM), 2008 – 2016\*, Global**  
Q4:16 Monthly ARPU = €5.80 (\$6.10)

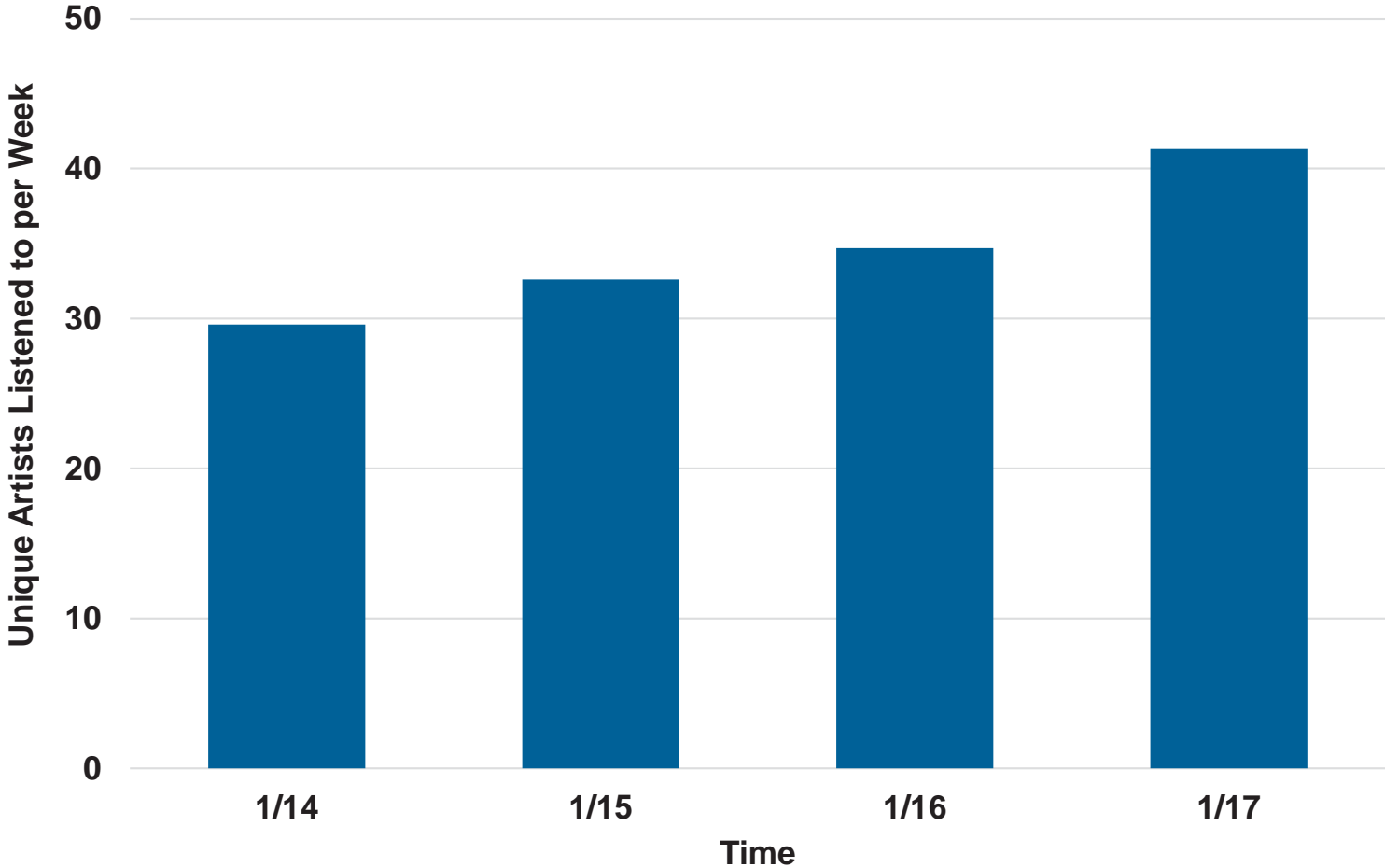




# Spotify = Users Listen to 41 Artists per Week, +40% (vs. 1/14) Owing to... Recommendation Engine (Data + Algorithms)

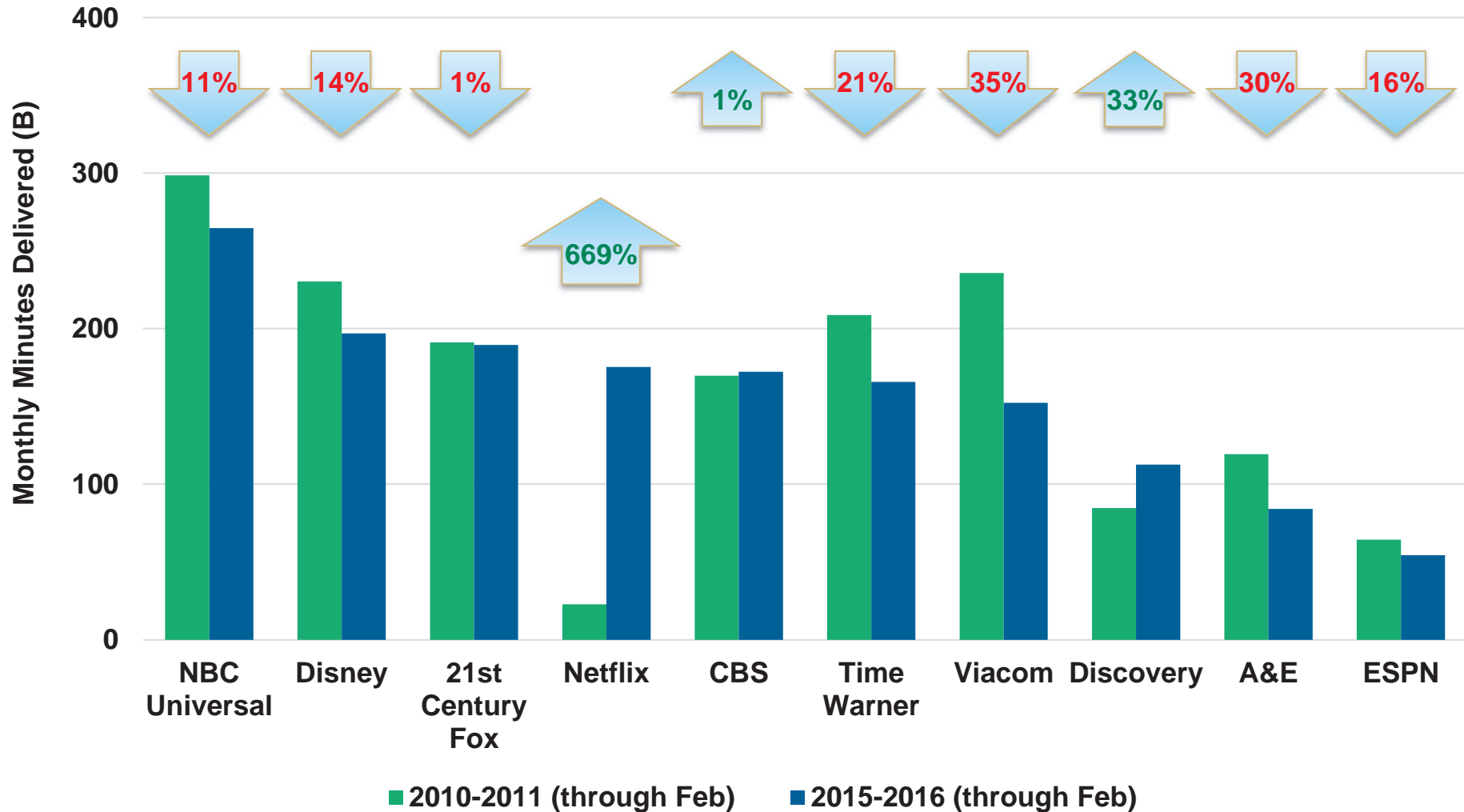
## Spotify

Unique Artists Listened to Per Week, Average, Global, 1/14-1/17



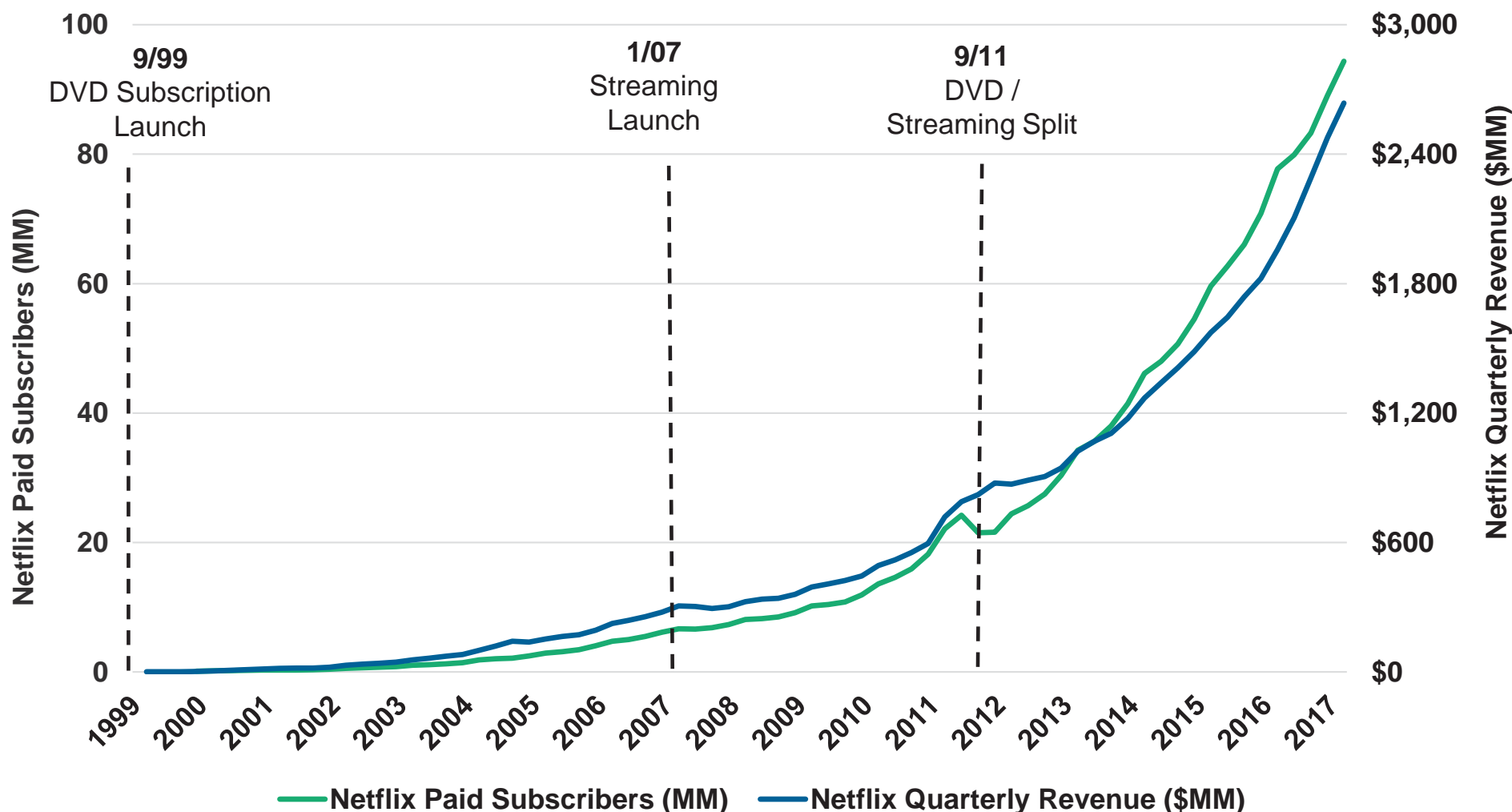
# Network TV\* Minutes Delivered = 2011 Top 5 Networks -10% Average... Netflix +669% Over 5 Years, USA...

## Monthly Minutes Delivered By Network Group, USA, 2010/11-2015/16



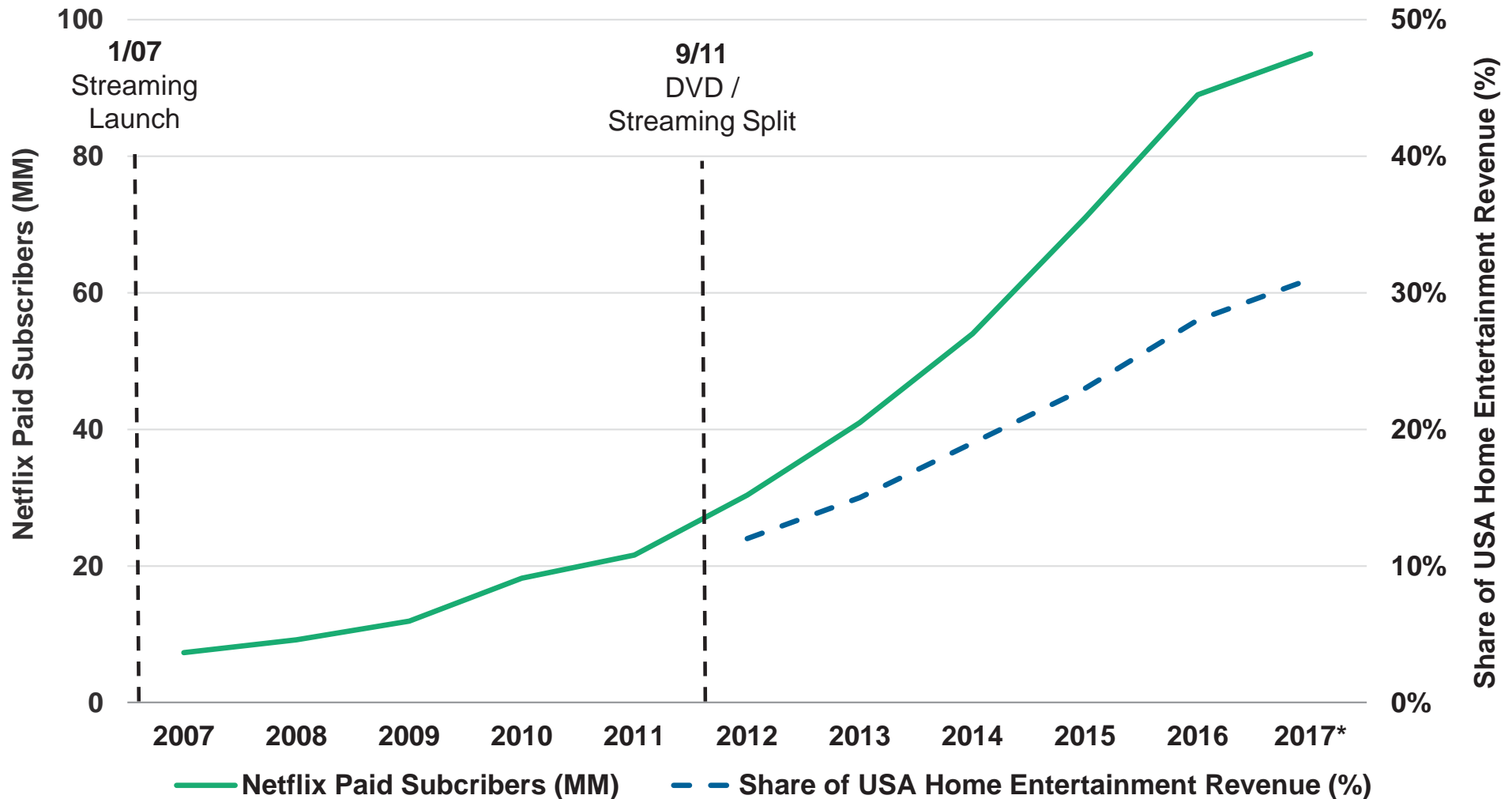
# Netflix = Catalyst for Internet-Driven Evolution of Video Industry... 95MM Streaming Subscribers in 10 Years...

**Netflix Subscribers (MM) & Quarterly Revenue (\$MM), 2/99 – 3/17, Global**  
Q1:17 Streaming ARPU per Month = \$9.14



# ...Netflix Streaming = From 0% to >30% of Home Entertainment Revenue in 10 Years, USA

## Netflix Subscribers, 2009 – 2017\*, Global Q1:17 Streaming ARPU per Month = \$9.14

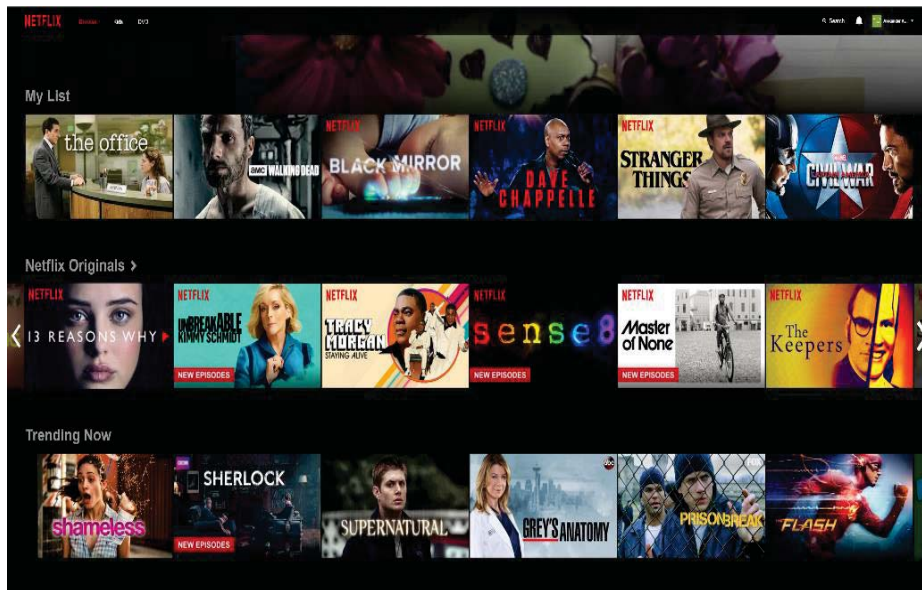


# Google Pioneered Search / Find / Obtain (SFO) for Content + Products... Netflix + Spotify Pioneered Search / Find / Serve Up (SFS) for Media

## From Give to Get...With Data + Algorithms

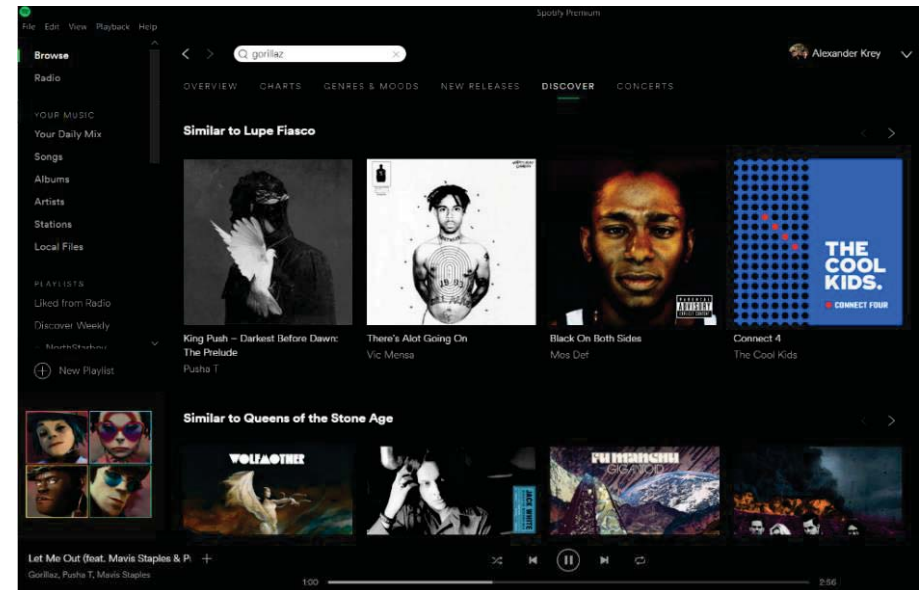
**98MM Different Netflixes...**

*\$1B cost savings / year  
from recommendations (12/15)*



**126MM Different Spotifys...**

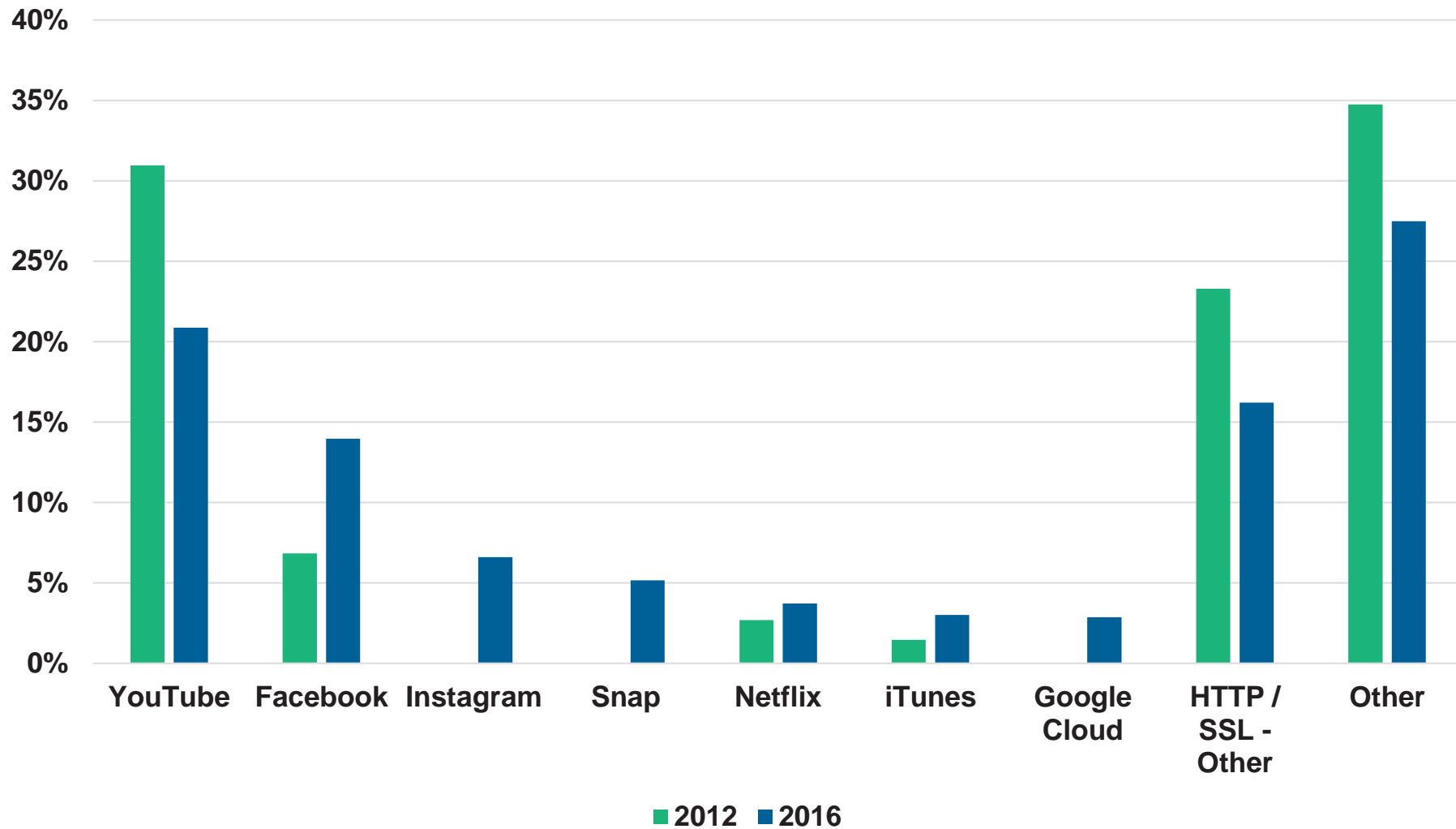
*~5B Discover Weekly streams in  
<1 year post-launch (5/16)*



*Digital Evolution of  
Music + Video =  
Multiple Approaches...*

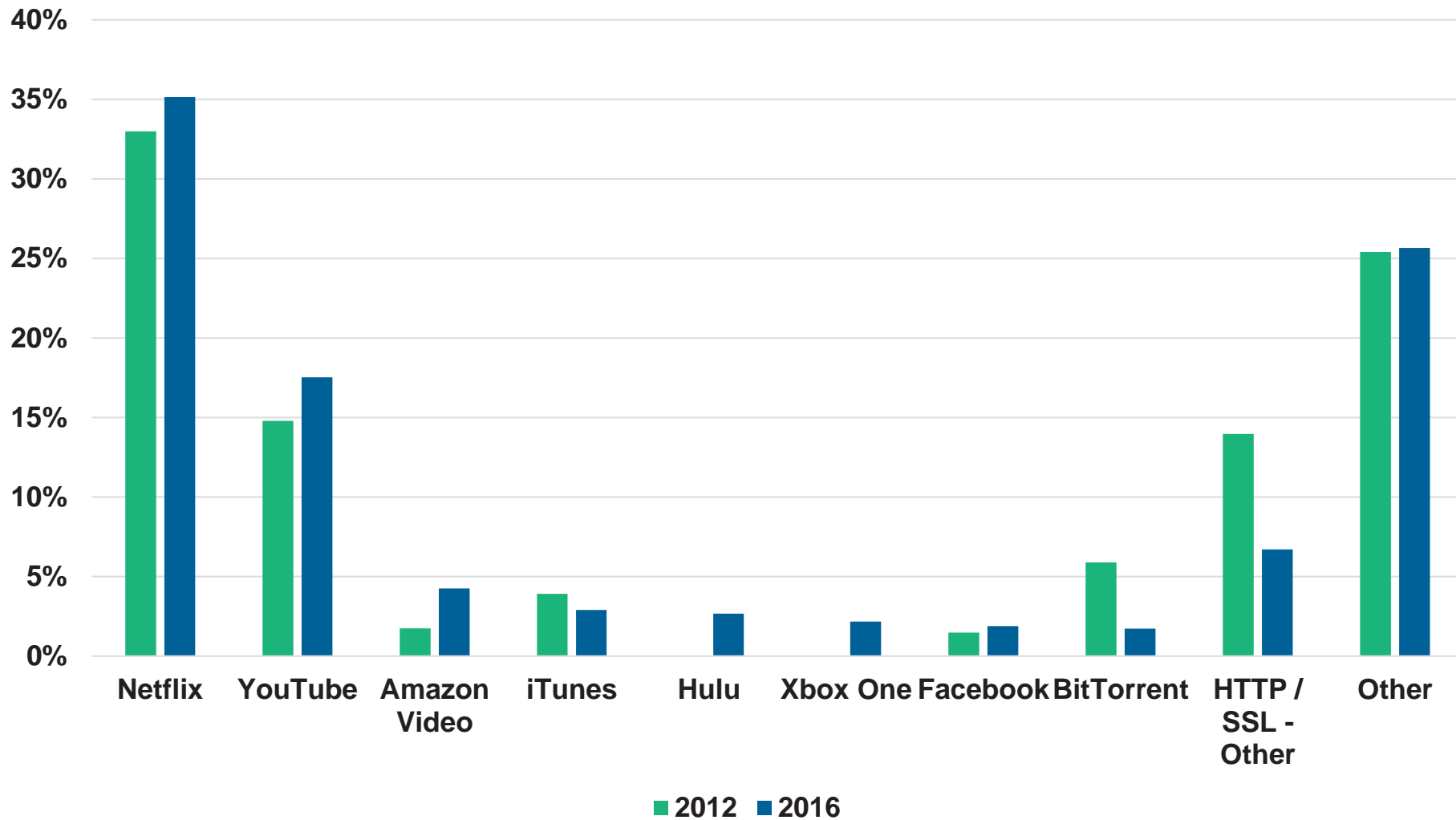
# Facebook / Instagram / Snap = Mobile Video Traffic Share Gainers Over 4 Years...

## Share of Downstream Video Traffic (%), North America, 2H 2016



# ...Netflix / YouTube = Fixed-Access Video Traffic Share Leaders

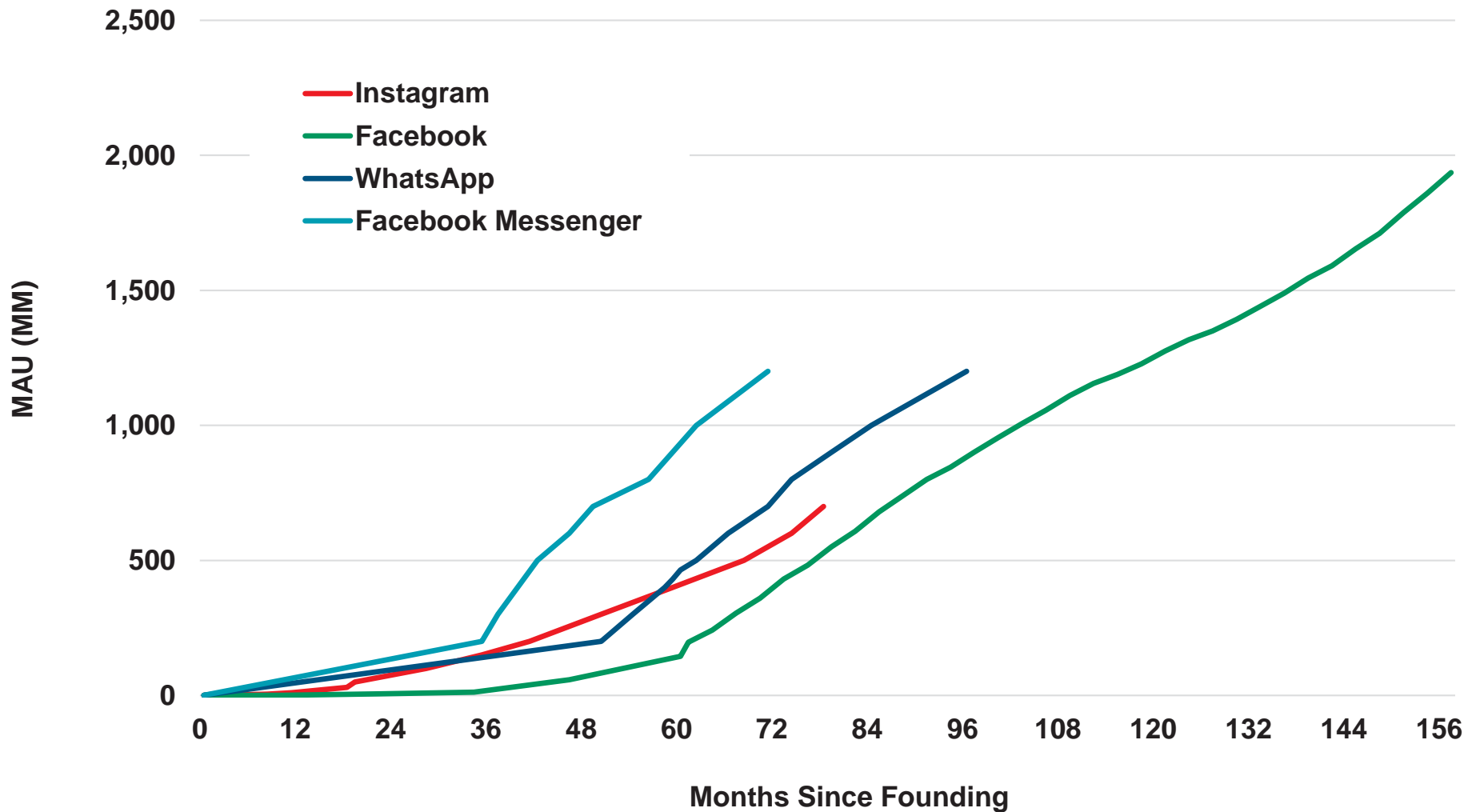
## Share of Downstream Video Traffic (%), North America, 2H 2016





# Facebook (Facebook / WhatsApp / Messenger / Instagram) = Video Ramping Across Platform

## Facebook Platform MAUs, Global, Months Since Launch



# Snap = Ramping Original Short-Form Content

## Snap 'Original Shows'

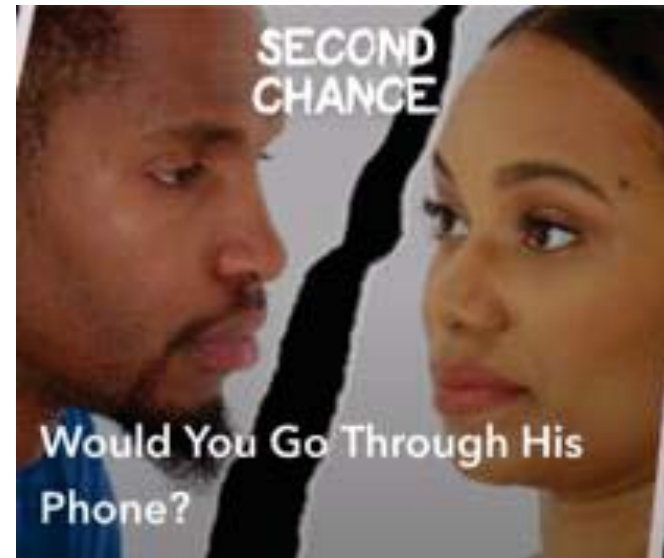
### Phone Swap

10MM+ Views for 1st Episode, 5/17



### Second Chance

8MM+ Views for 1st Episode, 5/17



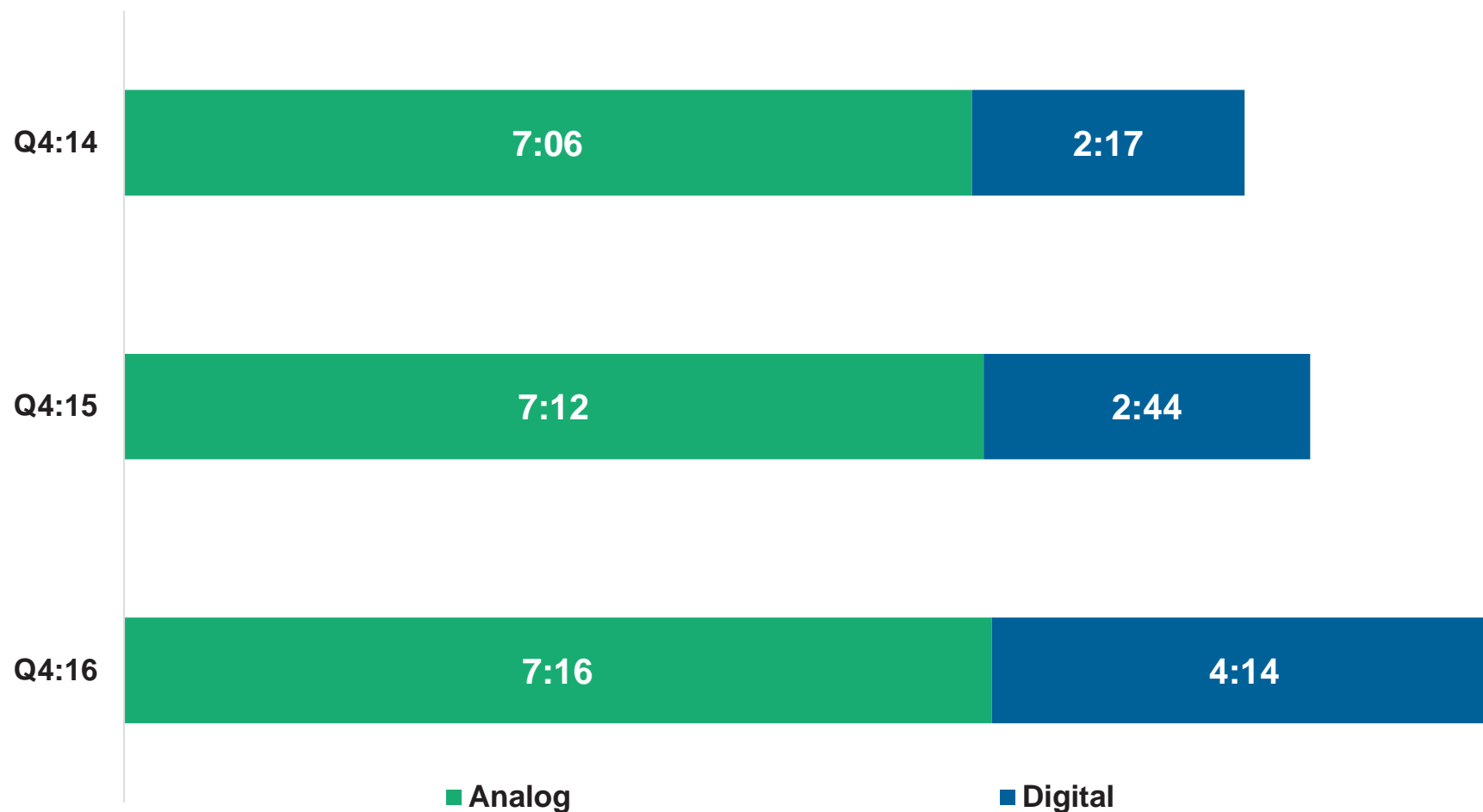
***Generational Media Usage =***

***Chasm Increasing...***

***Shifts to Internet-Enabled  
Media Continue***

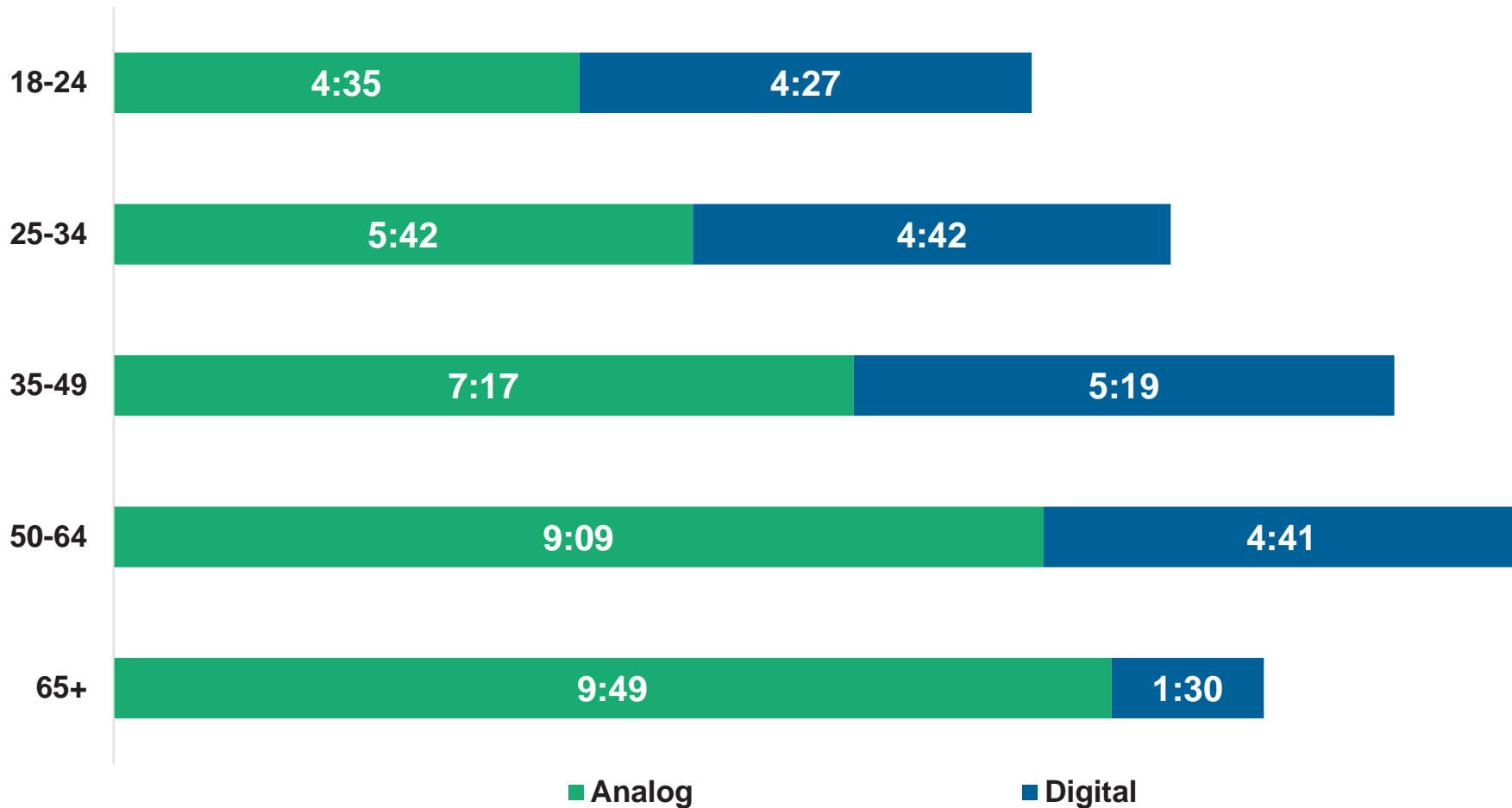
# Mobile Device Time per Day = +2x Over 2 Years...

## Daily Time Spent by Media (Not De-Duped), USA, Q4:14-Q4:16



# ...Mobile Device Time per Day = 18-24 Year-Olds @ 49% Digital...65+ Year-Olds @ 13%, USA

## Daily Time Spent by Media & Age Bracket (Not De-Duped), USA, Q4:16



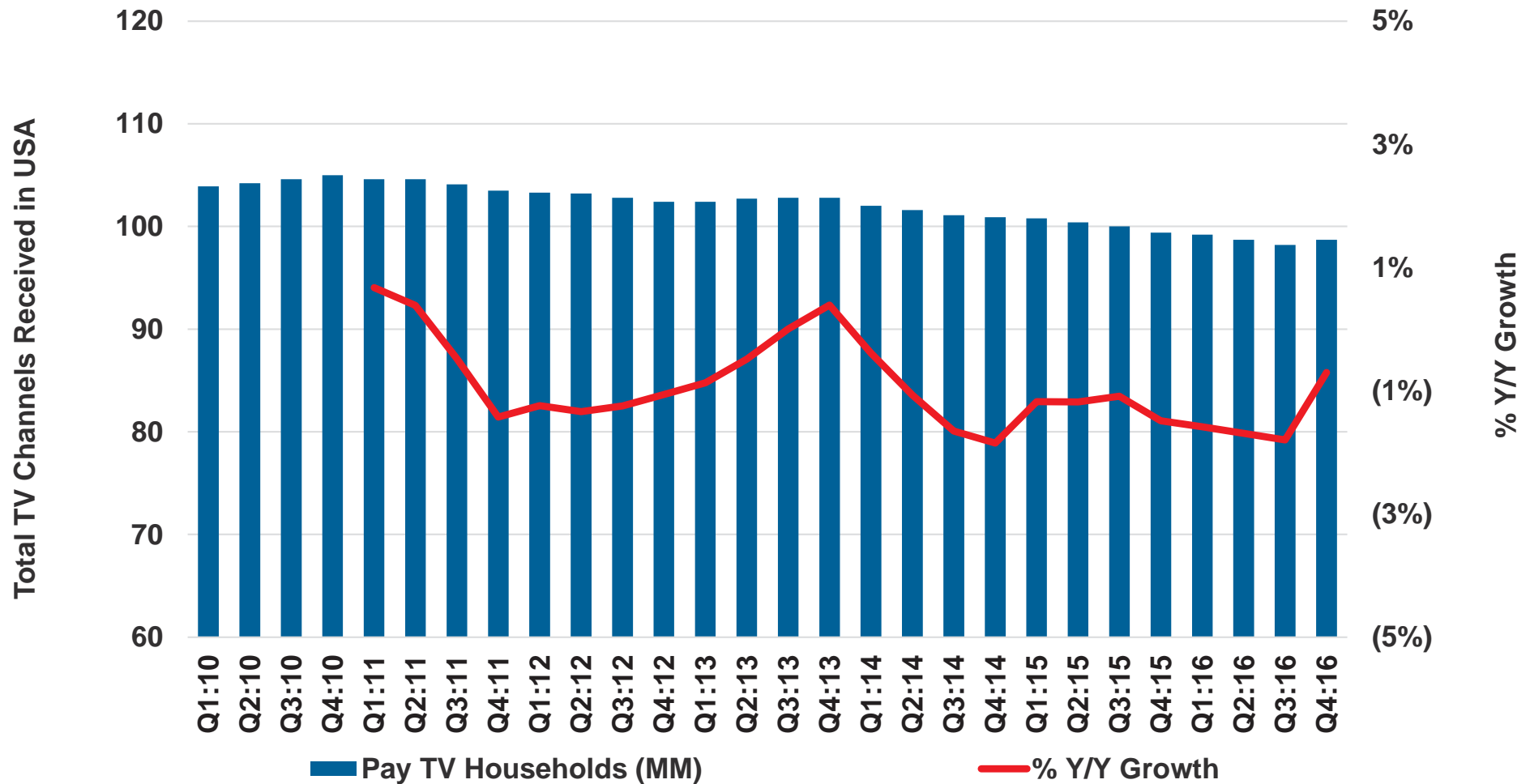
***Traditional Cable Conundrum =***

***Channels + Consumer Prices +  
Programming Costs Rising...***

***Subscribers Falling***

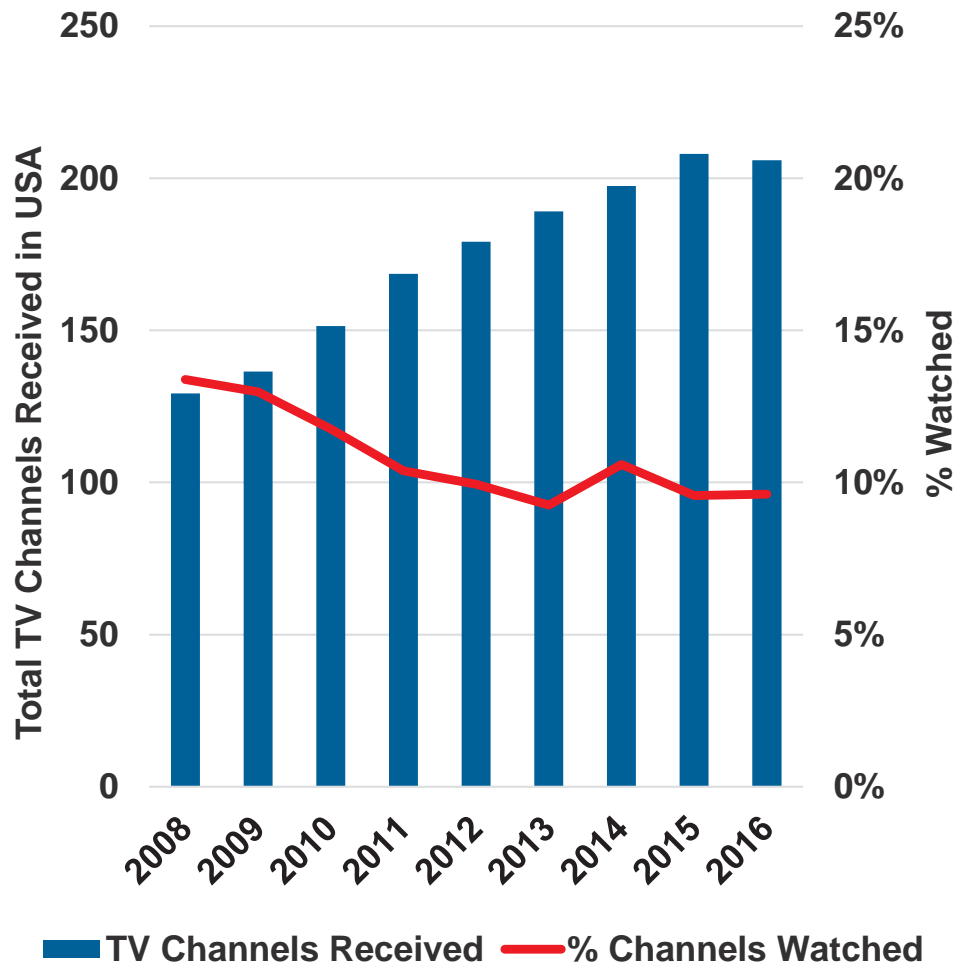
# Pay TV Household Growth = -1.3% Average for Last 12 Quarters... While Programming Costs >2x+ since 2006...

## Pay TV Households (MM), USA, 2010-2016

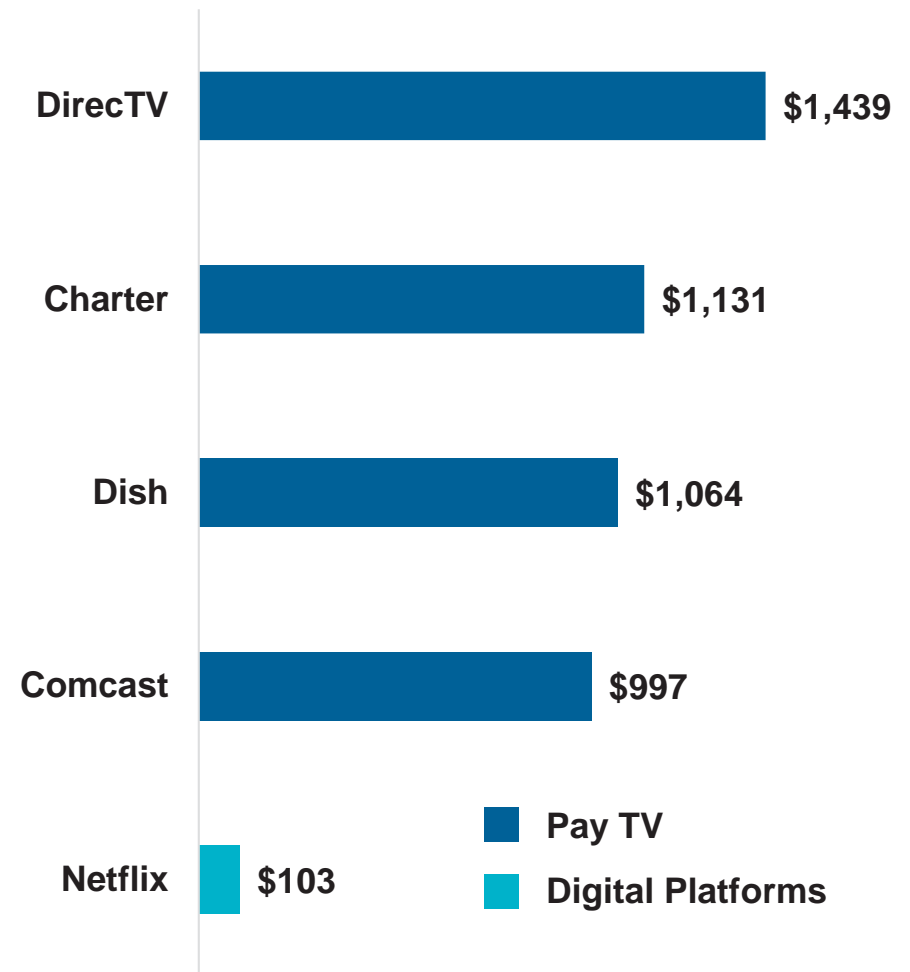


# ...# TV Channels Watched <10% of Channels Received... Pay TV ARPU 10-15x > Netflix...

### Average TV Channels Received vs. Watched per Household, USA, 2008-2016



### Annual ARPU, Selected Platforms, 2016





***Digital Subscriptions =***

***Rising Owing to Massive  
User Experience Improvements...***

***On-Demand / A La Carte Selection +  
Choice / Personalization / Payment  
Systems / 2-Way UGC / Mobile...***

# Media Evolution (1950-2017) = Market of Millions → Market of One x Millions

## Network Era

1950s-1980s

*Cater to All /  
High Viewership /  
No Personalization*



## Cable Era

1980s-2010s

*Broad Genres /  
Focus on Programming /  
Limited Bundle Choices*



## Digital Era

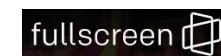
Current

*Cater to Sub-Genres /  
Power Users /  
A La Carte + Subscription*

### Digital Distributors



### Digital Studios



# Media = Distribution Disruption @ Torrid Pace

- 1) **Digital Leaders** = Transforming Media With Better User Experiences + Lower Prices...Data + Scale
- 2) **Generational Media Usage** = Chasm Increasing as Shifts to Internet-Enabled Media Continue
- 3) **Traditional Cable Conundrum** = Channels + Consumer Prices + Programming Cost Rising...Subscribers Falling
- 4) **Digital Subscriptions** = Rising Owing to Massive User Experience Improvements (On-Demand / Selection + Choice / Personalization / Payment Systems / 2-Way UGC / Mobile...)

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**THE CLOUD =**

**ACCELERATING CHANGE ACROSS  
ENTERPRISES**

*ALEX KURLAND @ KLEINER PERKINS*