

# Technology and the U.S. Movie Industry

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## Questions

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- How has technology affected movie industry revenue sources?**
  - In domestic (U.S./Canada) market
  - In international (“foreign”) markets
  
- What have been effects on movie production?**
  
- How is the digital (IPTV) conversion affecting the industry —and why?**



## Overview

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- ❑ **Great expansion in domestic and foreign revenues since 1970s due to:**
  - Successful market segmentation and price discrimination as new movie media proliferate—especially in the U.S.
- ❑ **Great expansion in U.S. production investments, due to...**
  - higher revenues, more efficient distribution
- ❑ **Stagnant/falling revenues since IPTV diffusion, due to....**
  - several factors...including lower costs of rentals and VOD



## My approach

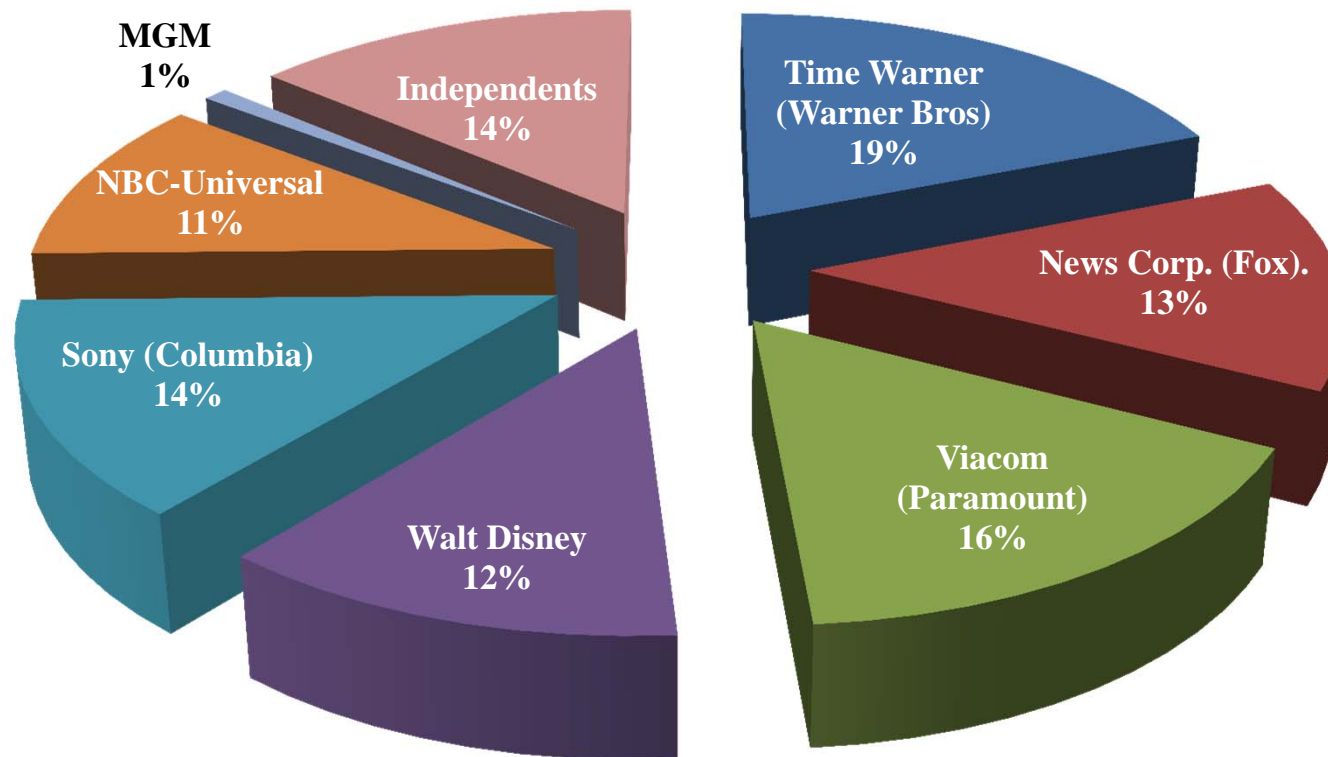
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- ❑ **Use an economic model of market segmentation and price discrimination to interpret trends**
  - First, historical expansion, then...
  - Recent contraction



# U.S. Studio Domestic Market Boxoffice shares, 2008-2010 averages

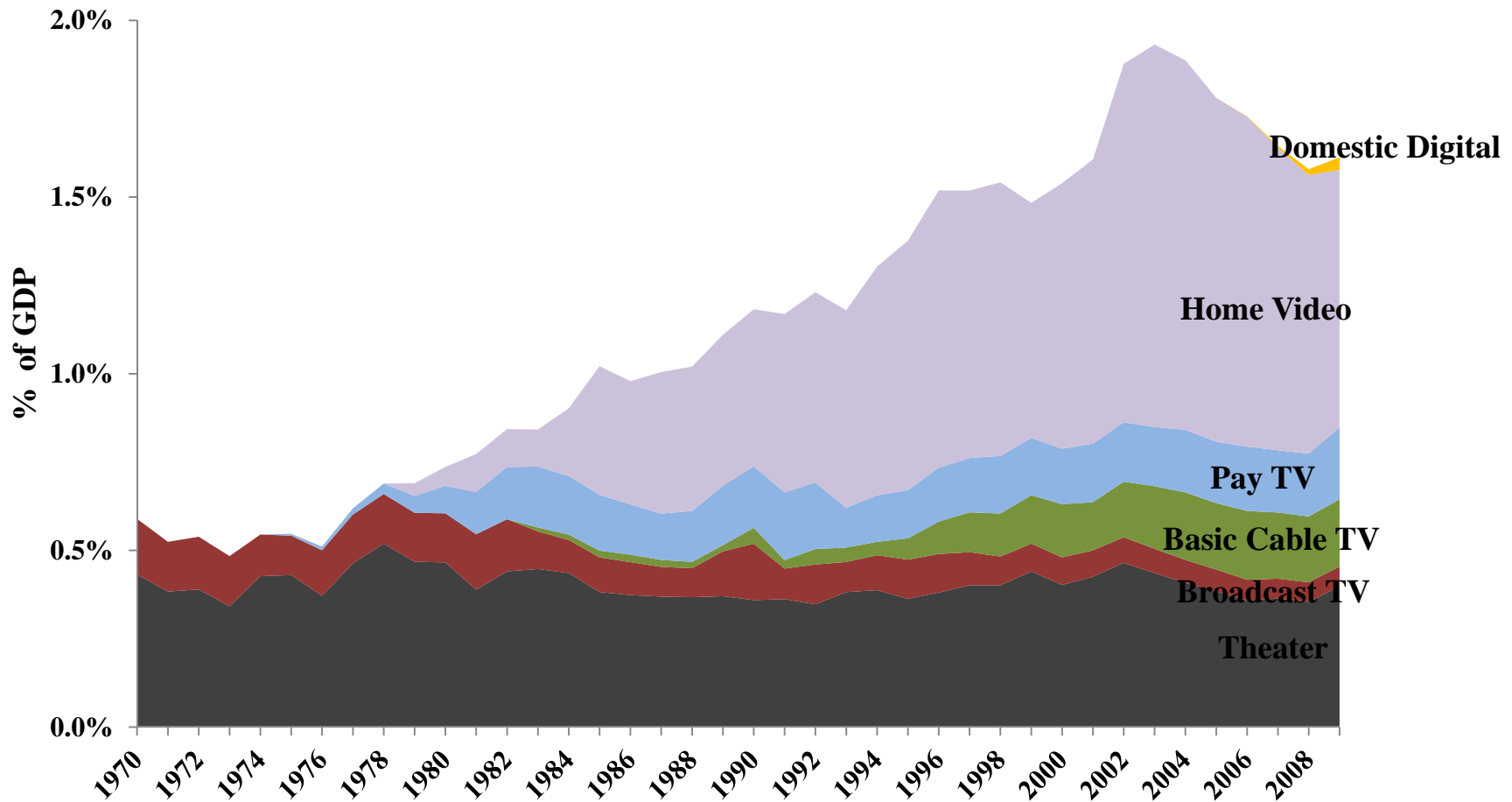
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*Source: derived from SNL Kagan (2011)*



# U.S. Movie Distributor Revenues\*, Domestic Market, as % of GDP, 1970-2009



\* Revenue from merchandise is not included.

Sources: Waterman (2005); SNL Kagan (2010)



## Drivers of the expansion

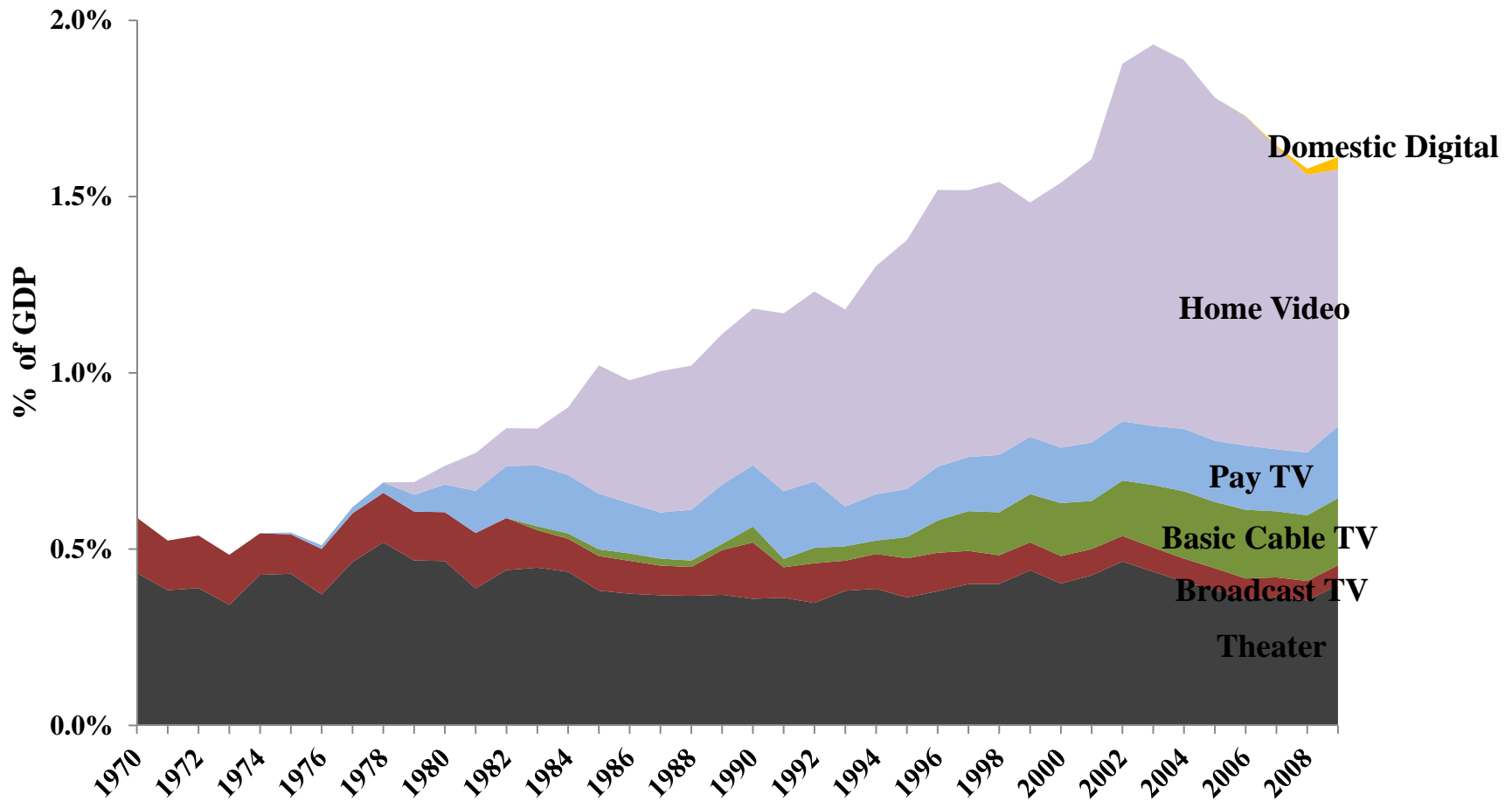
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### □ Distribution technologies--analog and digital

- Analog: broadcast/cable TV; VHS



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## Drivers of the expansion

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### ❑ Distribution technologies--analog and digital

- Analog: broadcast/cable TV; VHS
- Digital: digital cable/DBS;HDTV; DVD/Blu-ray



## Drivers of the expansion to mid-2000s

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### ❑ Distribution technologies--analog and digital

- Analog: broadcast/cable TV; VHS
- Digital: digital cable/DBS;HDTV; DVD/Blu-ray

### ❑ Economic factors

- New media usually lower cost and/or higher quality-- especially digital
- *Successful market segmentation and price discrimination by studios*



## Release timing and pricing of theatrical features (2002-2005)

(1) Media	(2) Approx Window (after theatre release)	(3) Retail Price per Transaction (2002)	(4) Realized Retail Price per Viewing** (2002)
<b>Theaters</b>		\$5.81	\$5.81
<b>Video sales</b>	4-5 months	\$14.77	\$3.69
<b>Video rentals</b>	4-5 months	\$2.84	\$1.13
<b>Home PPV/VOD</b>	30-45 days after video	\$3.50-\$4.00	\$1.50
<b>Subscription pay TV</b>	1 year	\$7.64/mo	\$0.76
<b>Basic cable TV</b>	2-3 years	\$34.52/mo	\$0.46
<b>Broadcast TV</b>	2-3 years	\$0	\$0.00

*Source: Waterman (2005); SNL Kagan (2006)*

## Drivers of the expansion to mid-2000s

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### ❑ Distribution technologies--analog and digital

- Analog: broadcast/cable TV; VHS
- Digital: digital cable/DBS;HDTV; DVD/Blu-ray

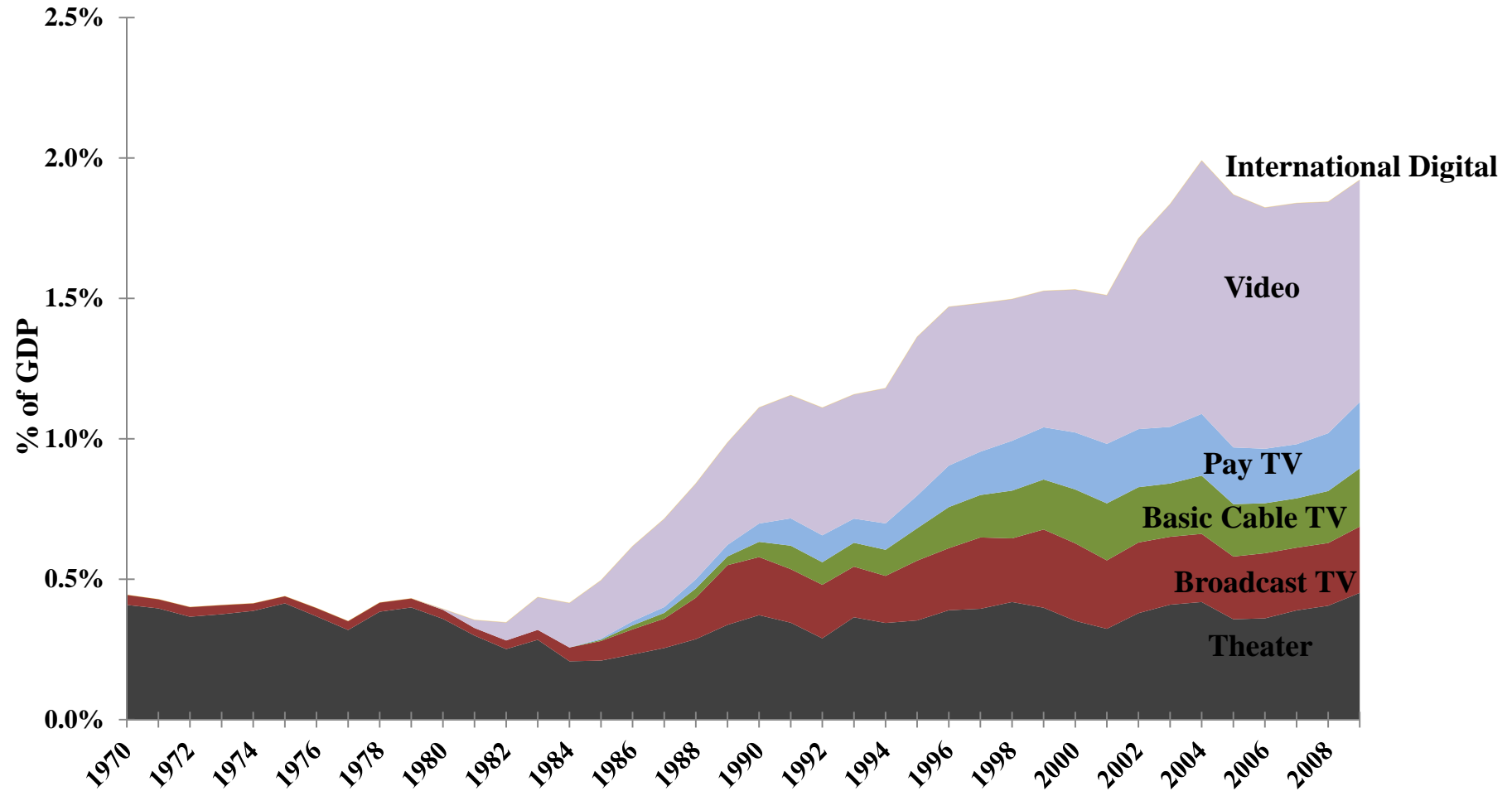
### ❑ Economic factors

- New media usually lower cost and/or higher quality--  
*especially digital*
- Successful market segmentation and price discrimination by studios

### ❑ Result: stacking of media revenues over time



# U.S. Movie Distributor Revenues\*, Foreign Markets, as % GDP, 1970-2009



\* Revenue from merchandise is not included.

Sources: Waterman (2005); SNL Kagan (2010)



# Changes in Hollywood shares of European film markets over time

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## ❑ Boxoffice market shares in European Markets

	U.S.-produced films	European-produced films
1968	35%	60%
2010*	68%	25%

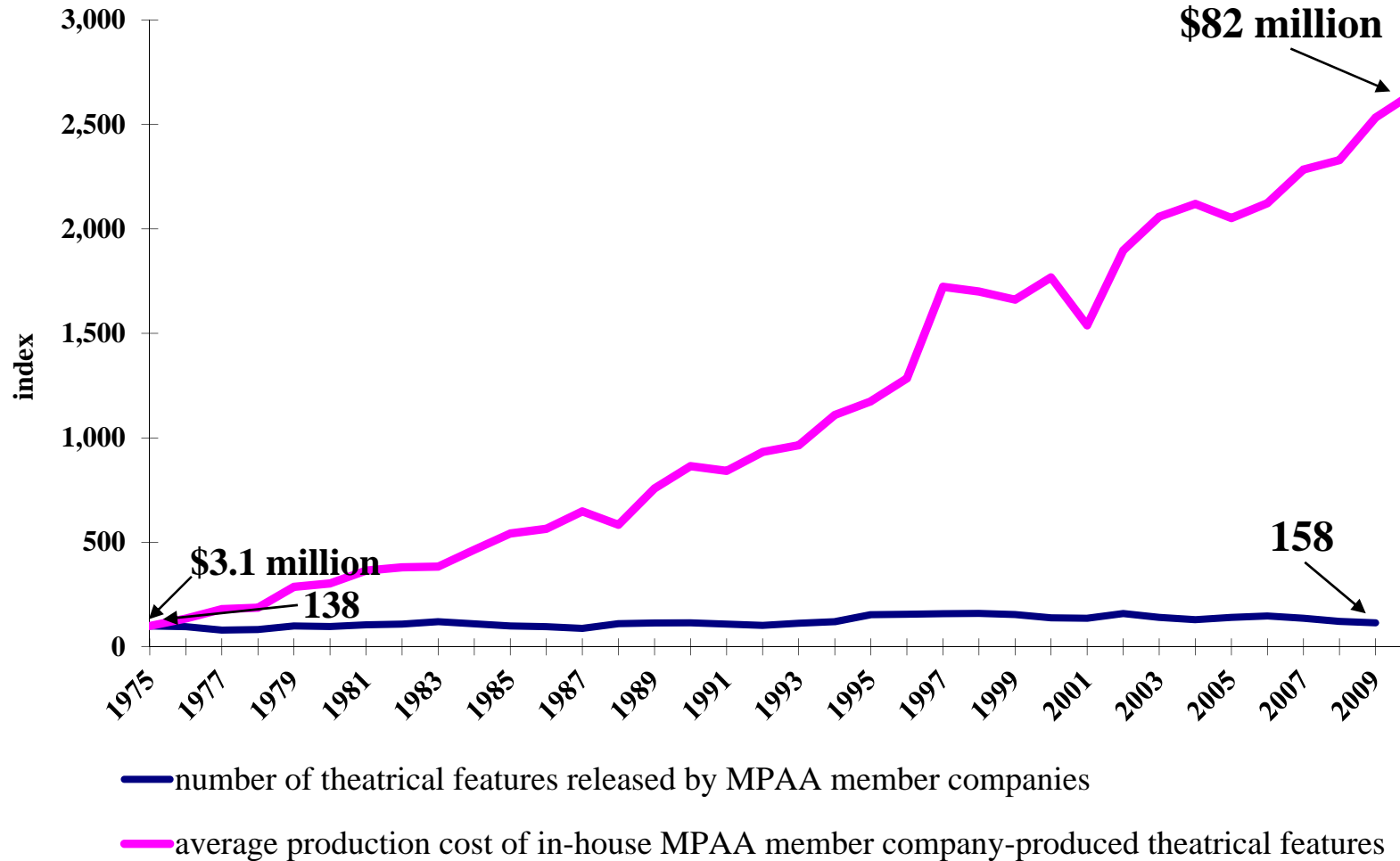
*Sources: EU (1994); EAO (2011)*

*\*not including European films with major US investment*

❑ A major reason: more rapid movie media development and higher movie spending per capita in U.S. since 1970s (Waterman, *Hollywood's Road to Riches*, Harvard U. Press, 2005)



# Number of MPAA Releases and Average Production Cost per Movie: 1975-2010



Sources: Waterman (2005); MPAA(2010); MPAA&BMO (2011)

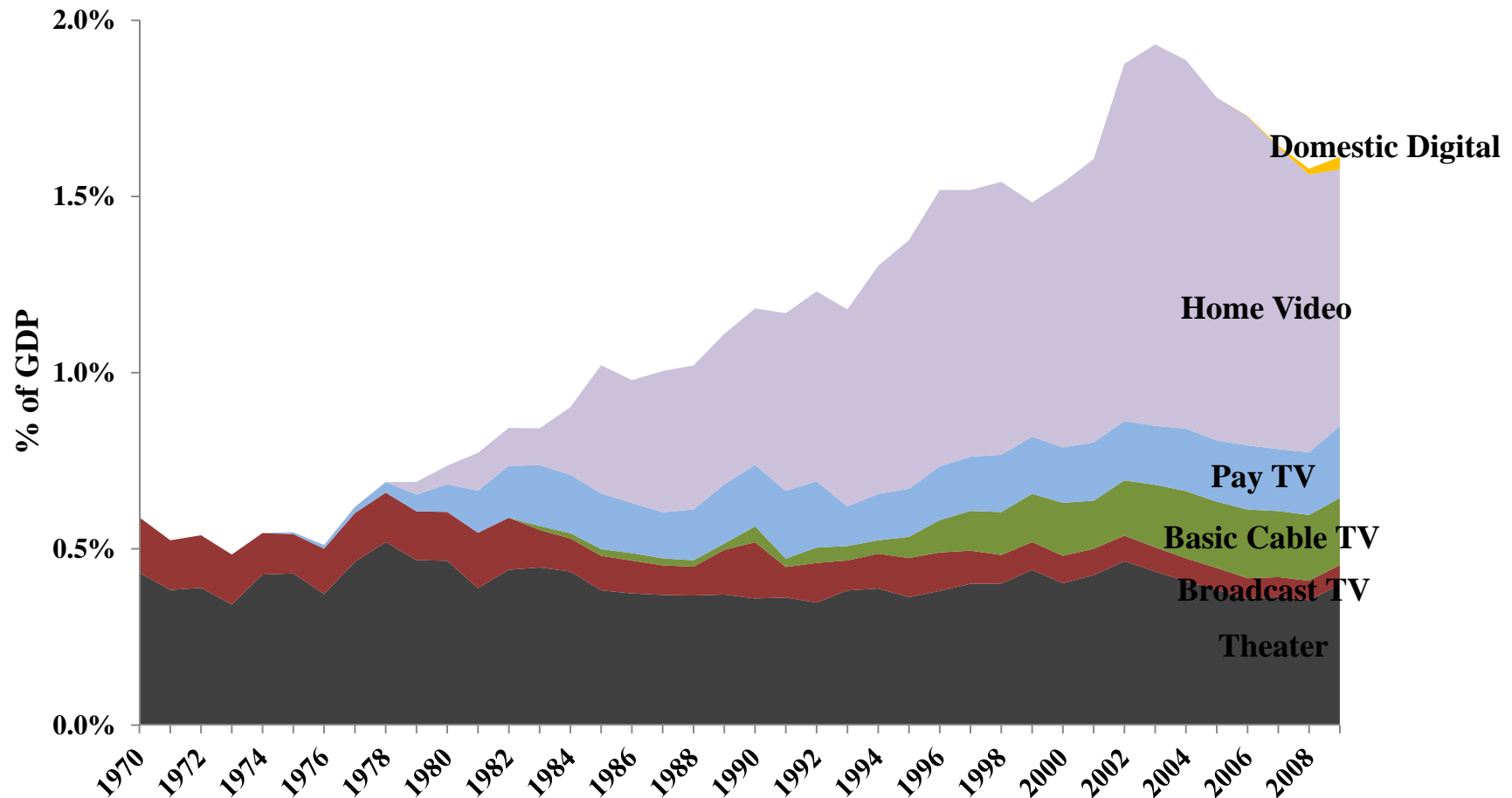


# The recent decline in U.S. studio revenues (Domestic market)

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# U.S. Movie Distributor Revenues\*, Domestic Market, as % GDP, 1970-2009



\* Revenue from merchandise is not included.

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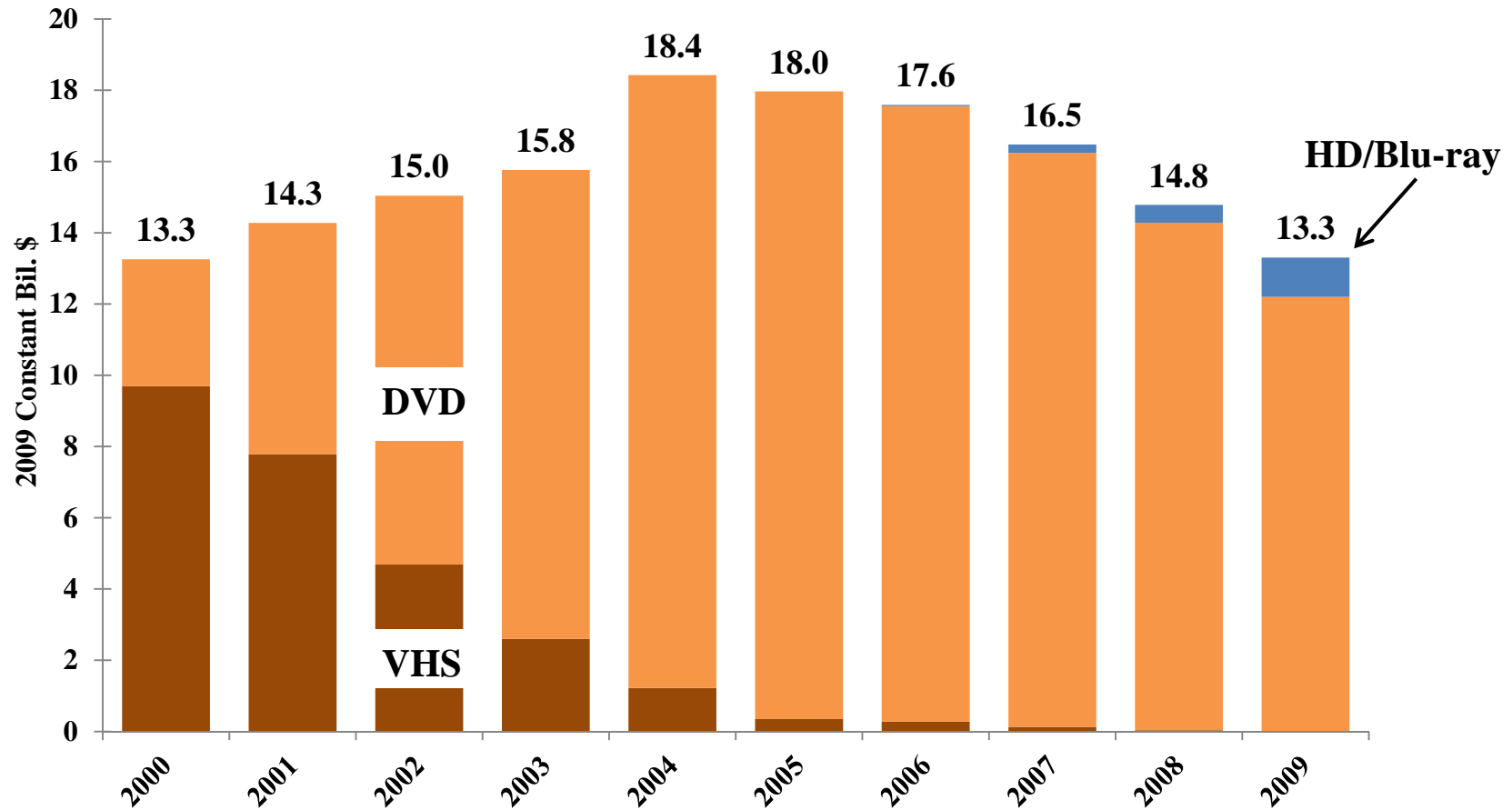
## The recent decline in U.S. studio revenues (Domestic market)

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- ❑ **Falling DVD revenues since 2004 the main factor**



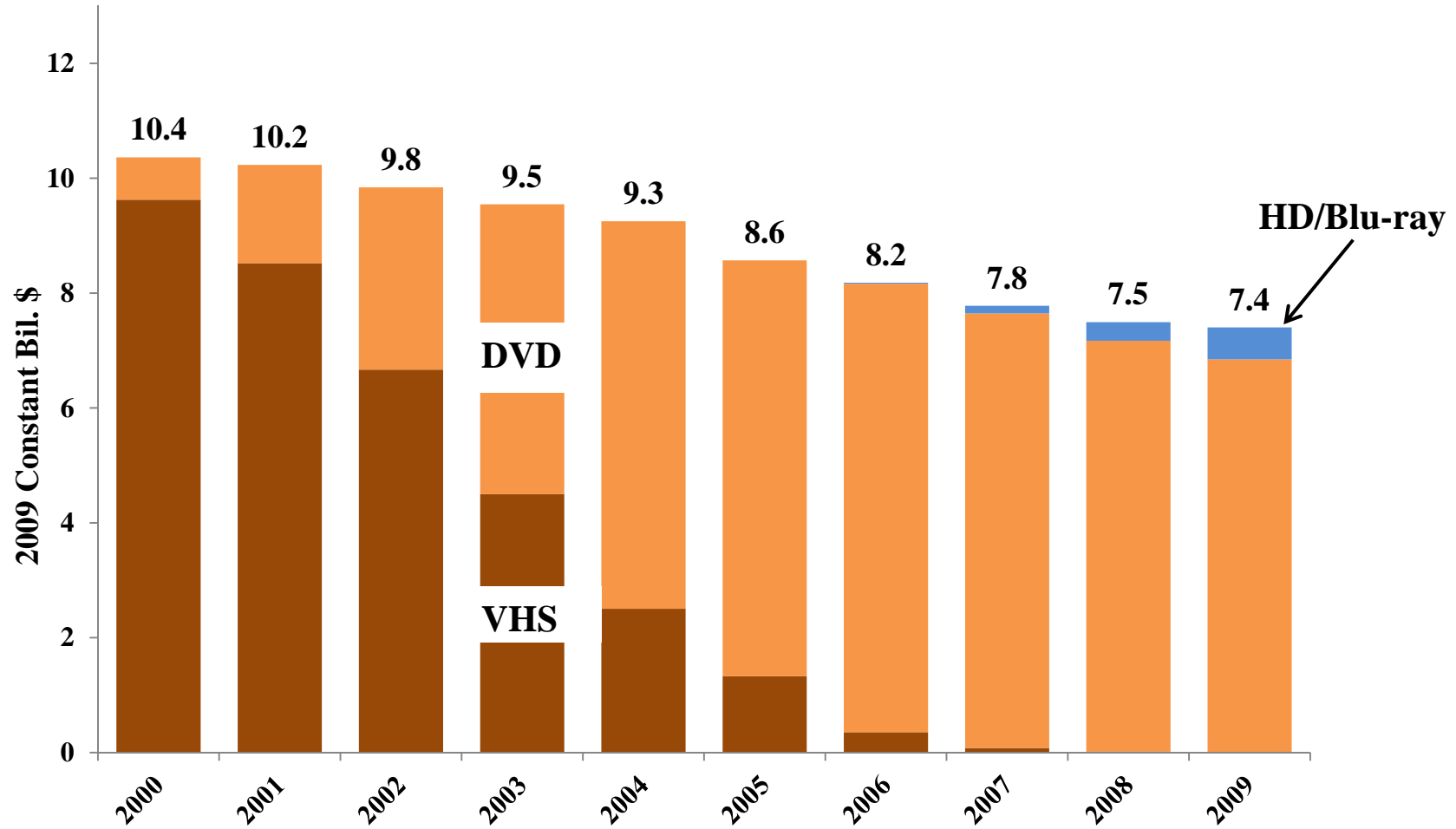
## US home video retail sales spending, 2000-2009 (constant 2009 \$):



Sources: derived from SNL Kagan (2010)



# US video rental spending by format,\*2000-2009 (constant 2009 \$)



Sources: derived from SNL Kagan (2010)



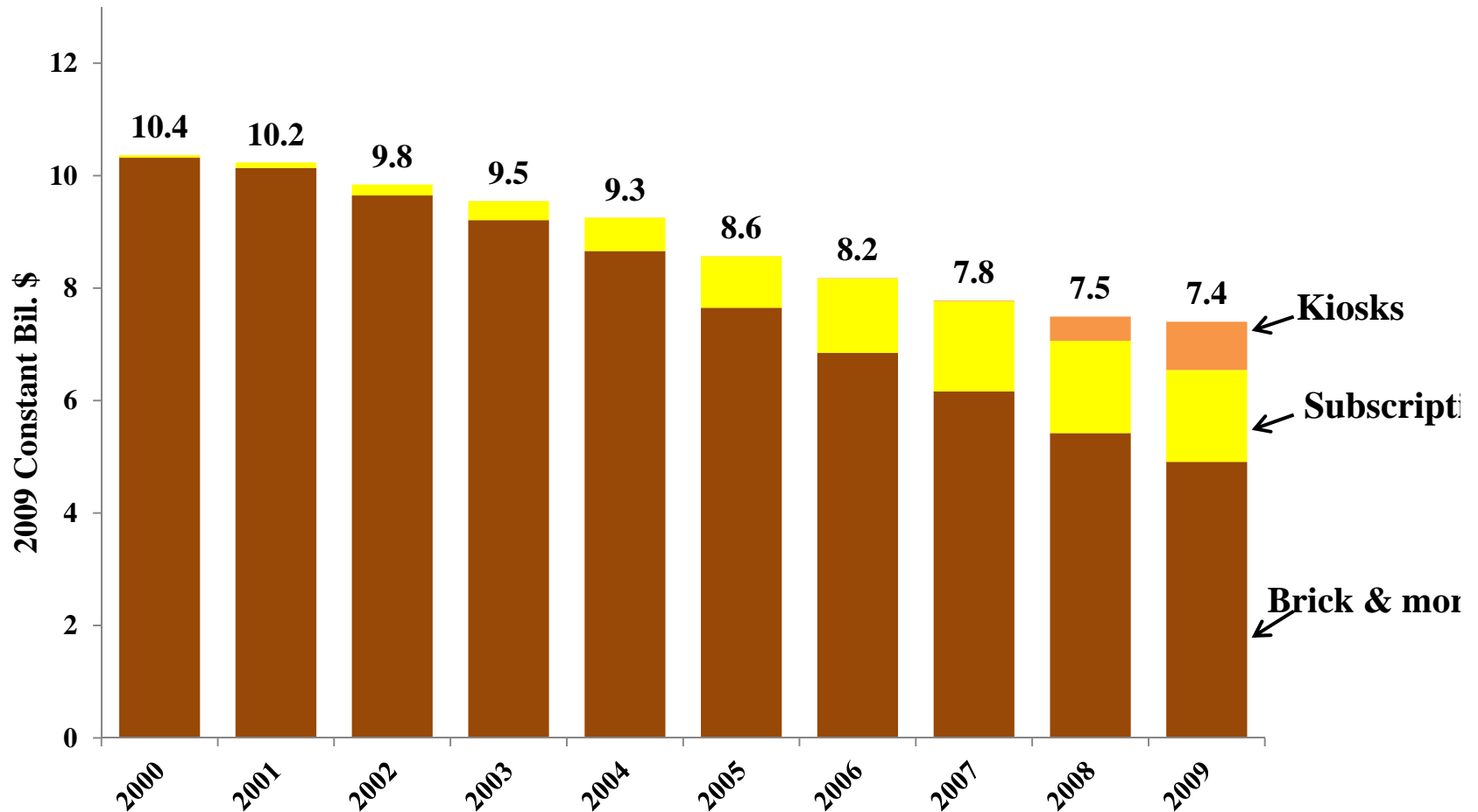
## The recent decline in U.S. studio revenues (Domestic market)

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- ❑ **Falling DVD revenues since 2004 the main factor**
  - Mainly sales (some rise in Blu-Ray)
  - Slower decline in rentals (28% vs. 20%)



## US home video rental spending by retail type, 2000-2009: (constant 2009 \$):



Sources: derived from SNL Kagan (2010)



## The recent decline in U.S. studio revenues (Domestic market)

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- ❑ **Falling DVD revenues since 2004 the main factor**
  - Mainly sales (some rise in Blu-Ray)
  - Slower decline in rentals
  - Growth in subscription (Netflix), Kiosks (Redbox)



## Reasons for the DVD decline

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### ❑ Piracy

- **Several economic studies, mixed results**
- **Cannot explain most of the decline**
  - Worst decline is sales
  - Relatively successful MPAA anti-piracy efforts

### ❑ **“We believe consumers are simply not interested in owning content anymore” –Richard Greenfield, BTIG**

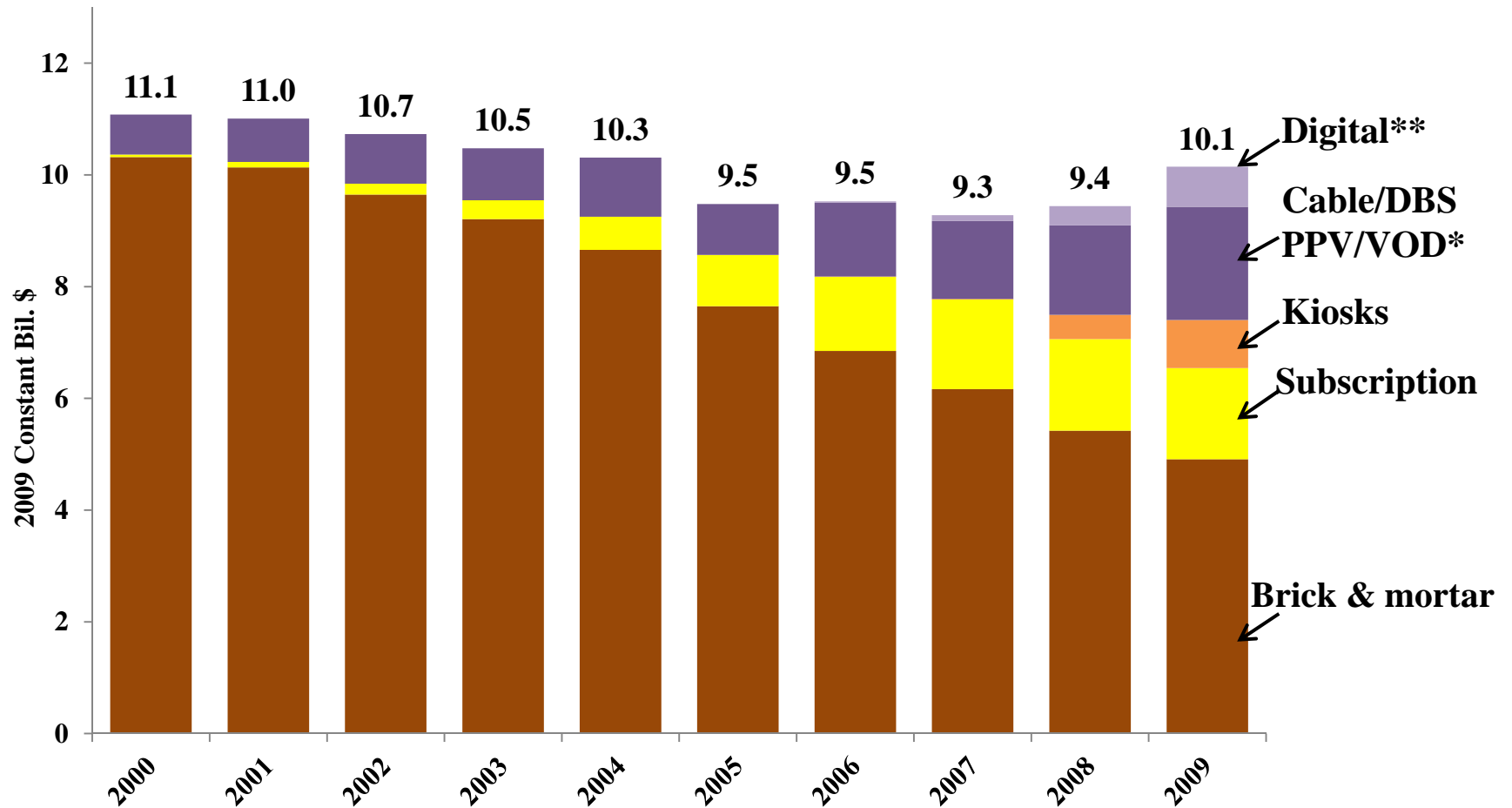
- **Implies evaporation of a very high value market (85% margin for studios)**

*or...*

### ❑ **Consumer substitution toward relatively low priced rental/IPTV movies**



# Total electronic a la carte spending, 2000-2009 (constant 2009 \$)



\* PPV/VOD spending = U.S. motion picture distributor revenues from PPV/VOD × 2

\*\* Digital spending = U.S. motion picture distributor revenue from Digital ÷ 0.7

Sources: derived from SNL Kagan (2010)



## Cost reduction in a la carte movie distribution

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**“Brick & mortar” DVD rental (2002) vs. Online “rental” (2010)**

	Rental price	Studio share*
<b>2002</b>	\$3.25	33%
<b>2010</b>	\$4.41	70%

\* Before duplications/distribution cost

*Sources: author calculations from SNL Kagan and Adams Media data*



## Prospects

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- ❑ **The studio copyright dilemma (“First Sale Doctrine”)**

*...but*

- ❑ **Generally robust demand for movies**
- ❑ **A direct pricing model that works**
- ❑ **Lower costs mean expanding markets in long term**

