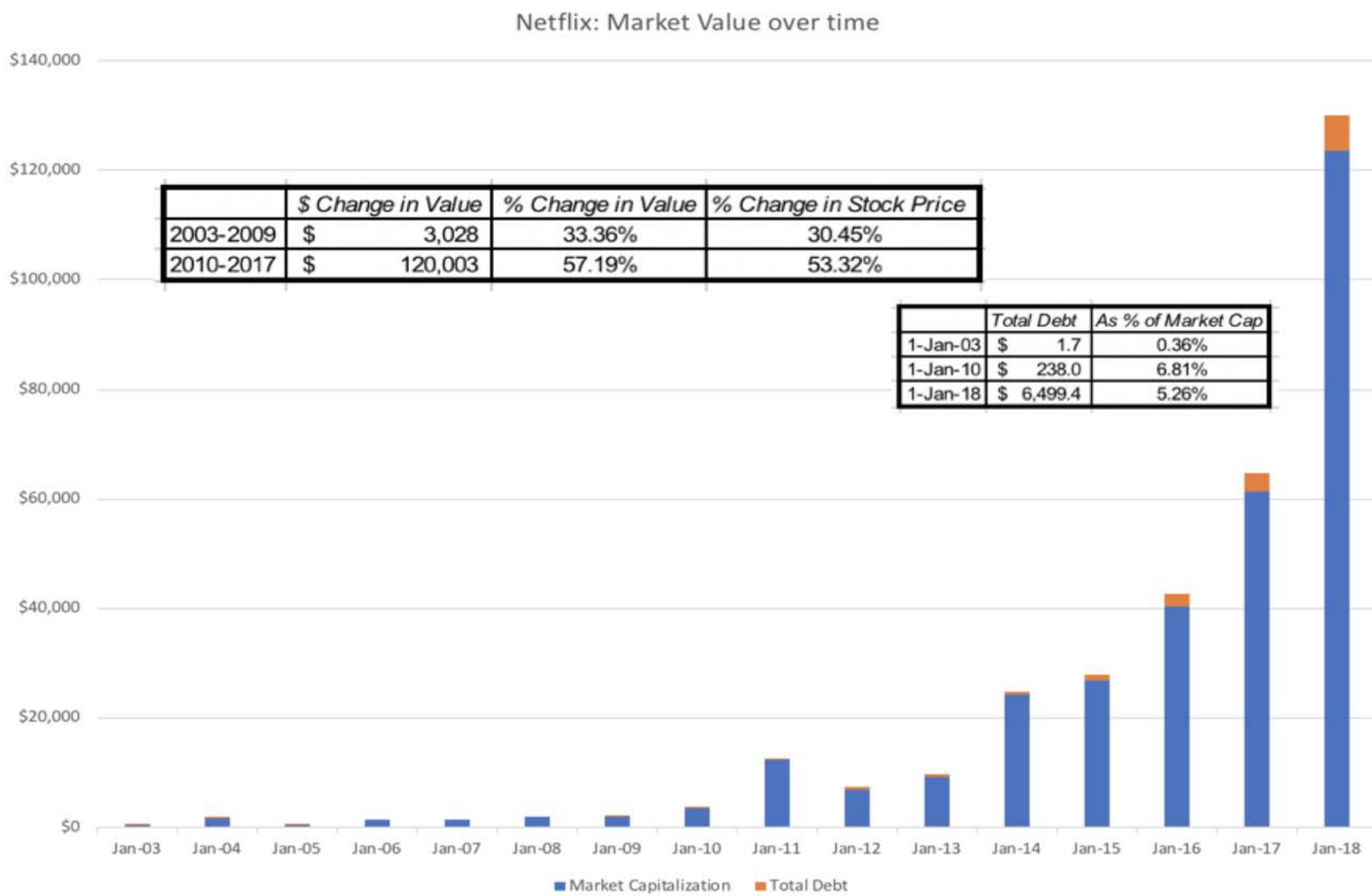
NETFLIX: THE FUTURE OF ENTERTAINMENT OR HOUSE OF CARDS?

Aswath Damodaran

Setting the Table

- Netflix has changed not just the entertainment business, but also the way that we (the audience) watch television.
- In the process, it has also enriched its investors, as its market capitalization climbed to $139 billion in March 2018 and even after the market correction for the FANG stocks, its value is substantial enough to make it one of the largest entertainment company in the world.
- Among the FANG stocks, with their gigantic market capitalizations, it remains the smallest company on both market value and operating metrics, but it has almost as big an impact on our daily lives as its larger peers.

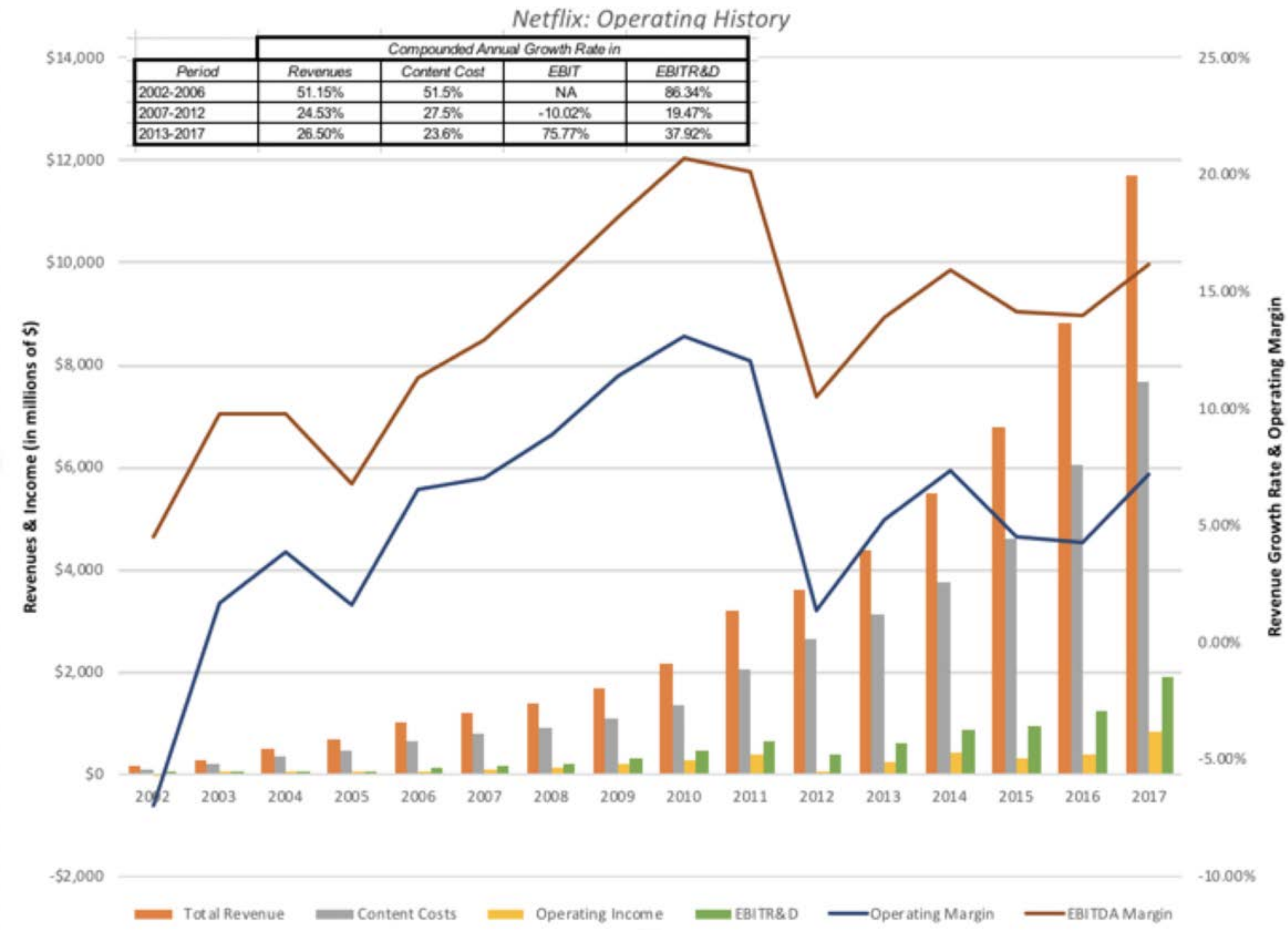
The Rise of Netflix



	$ Change in Value	*% Change in Value*	*% Change in Stock Price*
2003-2009	$ 3,028	33.36%	30.45%
2010-2017	$ 120,003	57.19%	53.32%

	Total Debt	*As % of Market Cap*
1-Jan-03	$ 1.7	0.36%
1-Jan-10	$ 238.0	6.81%
1-Jan-18	$ 6,499.4	5.26%

Netflix: Operating History



	Compounded Annual Growth Rate in			
Period	Revenues	Content Cost	EBIT	EBITR&D
2002-2006	51.15%	51.5%	NA	86.34%
2007-2012	24.53%	27.5%	-10.02%	19.47%
2013-2017	26.50%	23.6%	75.77%	37.92%

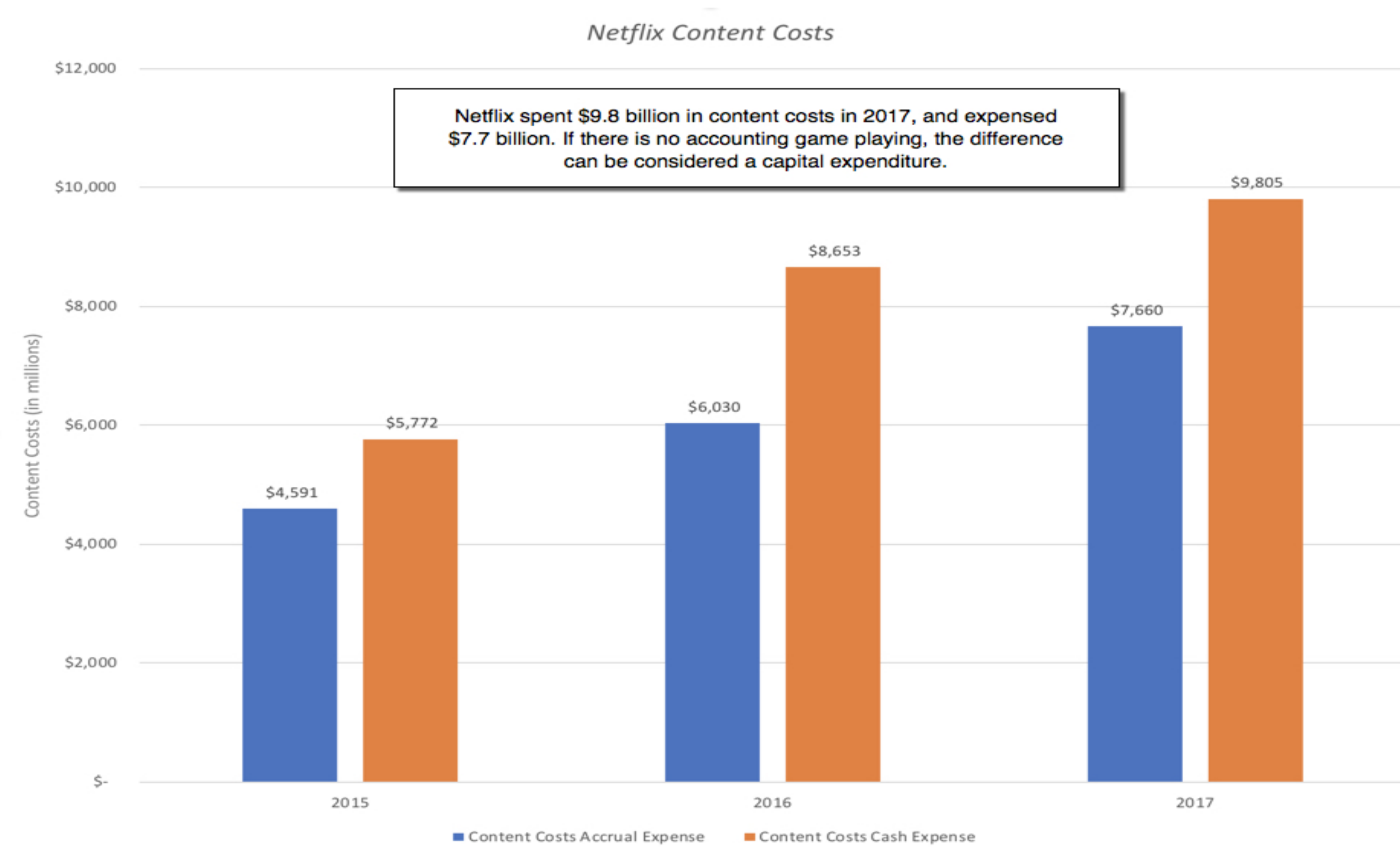
The Three Phases of Netflix History

- DVDs in the Mail: In the first five-year period, 2002 through 2006, the company mailed out DVDs and videos to its subscribers, challenging the video rental business, where brick and mortar video rental stores represented the status quo, and Blockbuster was the dominant player.
- The Rise of Streaming: As technology evolved to allow for the streaming of movies, Netflix adapted, with a few rough spots, to the new technology, while its brick and mortar competitors imploded. Netflix saw a drop in revenue growth that was not unexpected, but it also saw its content costs rise at a faster rate than revenues, as content providers (the movie studios) starting charging higher prices for content.
- The Content Maker: In in the 2013-2017 time period, by shifting to original content, first with television series and later with direct-to-streaming movies. For the first time in its existence, Netflix saw content costs rise at a rate slower than its growth in revenues, with operating profit margins, both before and after R&D reflecting this development.

The State of the Game

1. A Big Spender on Content: Netflix spends billions of dollars on content each year, but the way the content is accounted for can make it difficult to decipher how much.
2. With more and more on original content: More and more of Netflix spending is on original content, first on television and now on direct-to-streaming movies.
3. Adept at playing the expectations game: Netflix has managed to make markets focus on subscription count and gloss over its sharp edges.
4. And globalizing to succeed at it: To keep adding to its subscriber count, it has to go where the numbers are, in the rest of the world.

1. Big Content Spender



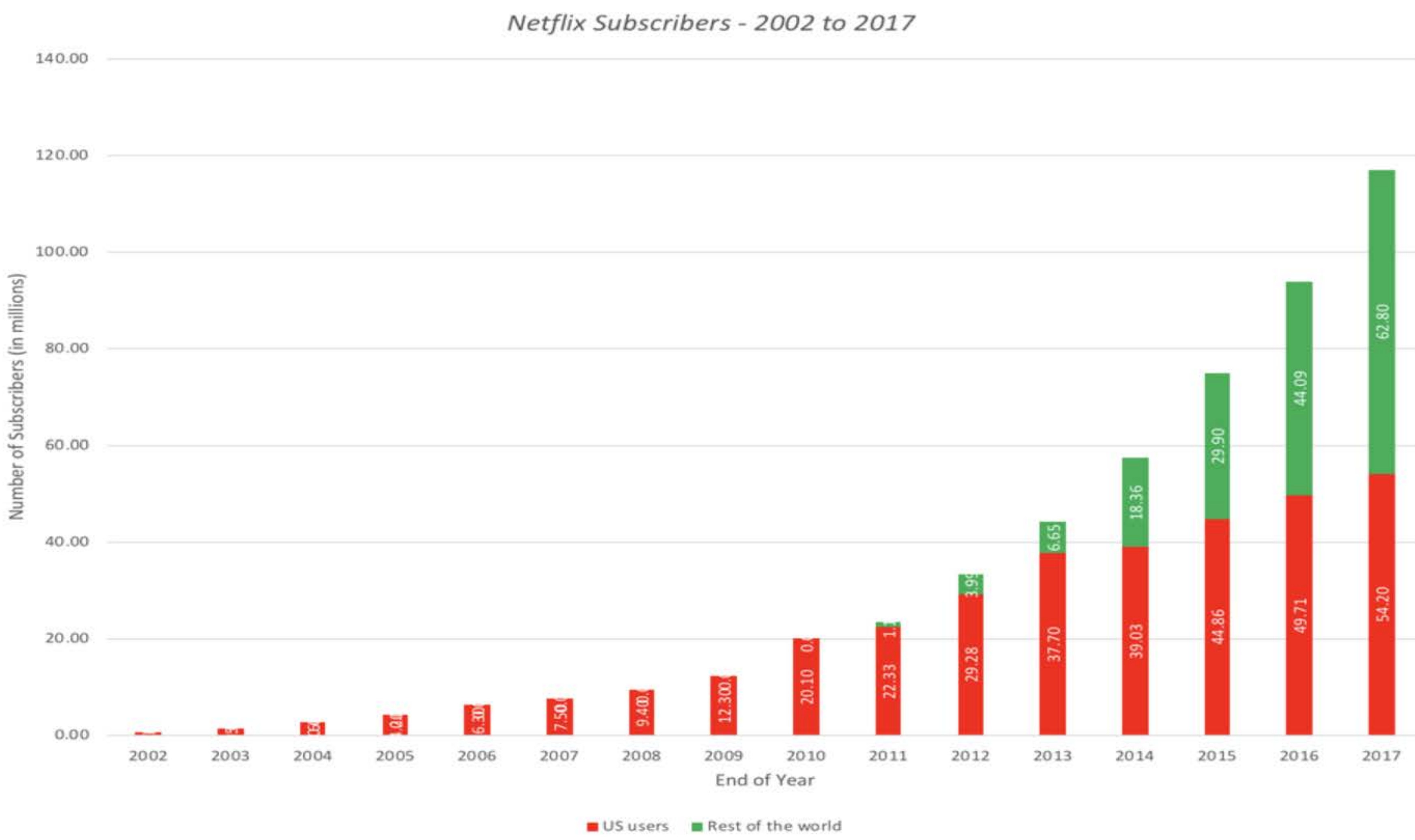
2. Much of it on original content

Company	Money Spent on Content	Company	Money Spent on Content
NBC Universal	$ 10.20	Amazon	$ 4.50
Fox	$ 8.00	CBS	$ 4.20
Time Warner	$ 8.00	Discovery	$ 2.20
Disney	$ 7.80	Apple	$ 1.00
Netflix	$ 6.30	Facebook	$ 1.00
Viacom	$ 5.40		

3. Adept at the expectations game..

- Netflix has managed to make the expectations game all about subscriber numbers, and every earnings report of the company is framed around these numbers, with less attention paid to content costs, churn rates and negative cash flows.
- After its most recent earnings report in January, the stock price surged, as the company reported an increase of 8.3 million in subscribers, well above expectations.
- The danger is that in the process of playing the user game, Netflix may dig itself into holes that it may not be able to get out of.

4. A Global Presence



Netflix: A Subscriber-based Valuation

- In a subscriber-based valuation, you value a company by first valuing existing subscribers, then the value added by new subscribers and close up by looking at the corporate cost drag.
- To do a subscriber-based valuation, you have to break costs down into
  a) costs for servicing existing subscribers
  b) the cost of acquiring new subscribers and
  c) a corporate cost that cannot be directly related to either servicing existing subscribers or getting new ones.

Step 1: A Cost Breakdown

NETFLIX: BREAKING DOWN EXPENSES							
Subscriber Statistics							
	2017	*2016*	*Net Change*	*Lost Subscribers*	*Gross Change*	*Cost of acquiring new subscribers*	
Number of Subscribers	117.60	93.80	23.80	7.04	30.84	Total User Acquisition Costs	$3,424.00
Revenue/Subscriber	$113.16	$103.32				Change in Subscribers in 2017	30.84
Content Cost Breakdown						Cost per new Subscriber	$ 111.04
Content Costs (Cash expense)	$9,806.00		Subscribers (20%)	$ 1,532.00			
Content Costs Expensed	$ 7,660.00		Corporate (80%)	$ 6,128.00		*Cost of Servicing Existing Subscribers*	
Content Costs Capitalized	$2,146.00					Revenue/Subscriber in 2017	$113.16
Netflix: Operating Income in 2017						G&A Cost as % of Revenue	7.39%
Revenues	**$ 11,693.00**	As %				Subscriber-related Content Costs	$ 1,532.00
Marketing Costs	$ 1,278.00	10.93%					
G&A Costs	$ 864.00	7.39%				*Corporate Costs (unrelated to Subscribers)*	
Technology & Development	$ 1,053.00	9.01%				Technology & Development	$ 1,053.00
Content Costs Expensed	$ 7,660.00	65.51%				Corporate Content Costs	$ 6,128.00
Operating Profit	**$ 838.00**	7.17%					

Step 2: Value Existing Subscribers

Annual Renewal rate assumed to be 92.5%

Revenue/ Subscriber grows 5% a year

Service costs include G&A and 20% of expensed content, grows 2% a year

Netflix: Value of Existing Subscribers

Streaming technology expected life of 15 years.

	Base Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Membership Survival	1.0000	0.9250	0.8556	0.7915	0.7321	0.6772	0.6264	0.5794	0.5360	0.4958	0.4586	0.4242	0.3924	0.3629	0.3357	0.3105
Revenue/Subscriber	$ 113.16	$ 118.82	$ 124.76	$ 131.00	$ 137.55	$ 144.42	$ 151.65	$ 159.23	$ 167.19	$ 175.55	$ 184.33	$ 193.54	$ 203.22	$ 213.38	$ 224.05	$ 235.25
Service Cost/ Subscriber	$ 21.39	$ 21.82	$ 22.25	$ 22.70	$ 23.15	$ 23.62	$ 24.09	$ 24.57	$ 25.06	$ 25.56	$ 26.07	$ 26.60	$ 27.13	$ 27.67	$ 28.22	$ 28.79
Operating Profit/Loss per Subscriber	$ 91.77	$ 97.00	$ 102.51	$ 108.30	$ 114.39	$ 120.81	$ 127.56	$ 134.66	$ 142.13	$ 149.99	$ 158.25	$ 166.95	$ 176.09	$ 185.71	$ 195.83	$ 206.46
Tax rate	25.00%	25.000%	25.000%	25.000%	25.000%	25.000%	25.000%	25.000%	25.000%	25.000%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
After-tax Operating Income	$68.83	$67.29	$65.78	$64.28	$62.81	$61.36	$59.93	$58.52	$57.13	$55.77	$54.43	$53.11	$51.82	$50.55	$49.31	$48.09
Present Value (at 7.5% Cost of Capital)		$62.34	$56.45	$51.10	$46.25	$41.86	$37.87	$34.26	$30.98	$28.01	$25.33	$22.90	$20.69	$18.70	$16.90	$15.26
Life of subscriber =	15.00															
Value per Subscriber =	$508.89															
Number of Subscribers =	117.60															
Value of Existing Subscribers =	**$ 59,846**															

Discounted back at 7.95% cost of capital (Netflix cost of capital)

Step 3: Value New Subscribers

Netflix: Value of New Subscribers

Cost of Acquiring a New Subscriber	$ 111.01
Value per new user (in today's $) =	$397.88

Net Subscriber base increases 15%/ year in years 1-5

Net Subscriber base increases 10%/ year in years 6-10

	Base Year	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Total Subscribers	117.60	135.24	155.53	178.85	205.68	236.54	260.19	286.21	314.83	346.31	380.94
New Subscribers	0.00	26.46	30.43	34.99	40.24	46.28	41.39	45.53	50.09	55.10	60.60
Value per Subscriber	$397.88	$405.84	$413.96	$422.24	$430.68	$439.30	$448.08	$457.04	$466.18	$475.51	$485.02
Value added by new Subscribers		$10,739	$12,596	$14,775	$17,332	$20,330	$18,548	$20,811	$23,349	$26,198	$29,394
Terminal Value (New Subscribers)											$31,674
Present Value		**$9,948**	**$10,809**	**$11,746**	**$12,763**	**$13,868**	**$11,721**	**$12,182**	**$12,662**	**$13,160**	**$28,418**
Value Added by New Users	**$137,276**										

Value of new subscriber expected to increase 2% a year

Discounted back at a cost of capital at 7.95%, Netflix cost of capital

Number of new subscribers expected to increase 1% a year in after year 10

Step 4: Value the Corporate Drag

Netflix: Cost of Corporate Drag

Technology & Development costs grow 5% a year

80% of Content Costs, grows 3% a year.

Global tax rate of 25%

	Base Year	1	2	3	4	5	6	7	8	9	10
Technology & Development	$1,053	$1,106	$1,161	$1,219	$1,280	$1,344	$1,411	$1,482	$1,556	$1,634	$1,715
Content Costs	$6,128	$6,312	$6,501	$6,696	$6,897	$7,104	$7,317	$7,537	$7,763	$7,996	$8,236
After-tax Corporate Expenses		$5,563	$5,747	$5,936	$6,133	$6,336	$6,546	$6,764	$6,989	$7,222	$7,463
Terminal Value (Corporate Exp)											$147,467
PV of Corporate Expenses		$5,153	$4,931	$4,719	$4,516	$4,322	$4,137	$3,959	$3,790	$3,628	$72,096
Value Drag of Corporate Expenses	**$111,252**										

Discounted back at Netflix 7.95% cost of capital

Step 5: Complete the valuation

Valuing Netflix	
Value of Existing Subscribers	$59,845.86
Value of New Subscribers	$137,276.49
- PV of Corporate Expenses	$111,251.70
Value of Spotify Operating Assets	$85,870.65
+ Cash & Cross Holdings	$2,823.00
- Debt	$6,500.00
Value of Equity	**$82,193.65**
- Value of Equity Options	$ 4,978.00
Value of Equity in common stock	**$77,215.65**
Number of Shares	446.81
Value per Share	$ 172.82

Netflix versus Spotify

- Marginal Value per User: By paying for its content, both licensed and original, and using that content to go after subscribers, Netflix has built a more levered business model, where subscribers, both new and existing, have higher marginal value than at Spotify, where content costs are tied to subscribers listening to music.
- More Sticky Model: The Netflix model, which is increasingly built around original rather than licensed content, provides for a stronger competitive edge, which should show up in higher renewal rates and more pricing power, adding to the value per subscriber, both existing and new.
- More Risk: The Netflix model will deliver higher value from subscription growth than the Spotify model, but it comes with a greater downside, because a slackening of that growth will leave Netflix much deeper in the hole, with more negative cash flows, than it would Spotify.

The Value Driver: Content Cost Growth

		Compounded Annual Growth Rate in Revenue (next 5 years)				
		5%	10%	15%	20%	25%
Annual Growth Rate in Content Cost	0%	$ 80.96	$ 142.82	$ 216.35	$ 303.17	$ 405.04
	2%	$ 53.12	$ 114.98	$ 188.50	$ 275.32	$ 377.19
	4%	$ 20.44	$ 82.30	$ 155.83	$ 242.65	$ 344.52
	6%	$ (17.84)	$ 44.02	$ 117.55	$ 204.37	$ 306.24
	8%	$ (62.60)	$ (0.74)	$ 72.79	$ 159.61	$ 261.48
	10%	$ (114.84)	$ (52.98)	$ 20.54	$ 107.36	$ 209.23

My Decision

- A Game Changer: There is no doubt that Netflix has changed the way we watch television and the movies, and it is changing the movie/TV business in significant ways. By competing for talent in the content business, it is pushing up costs for its competitors and with its direct-to-streaming model, putting pressure on movie theaters and distribution.
- In a dangerous business: That said, the entertainment business remains a daunting one, because the talent is expensive and unpredictable, and egos run rampant. The history of newcomers who have come into this business with open wallets is that they leave with empty ones.
- The defining factor: For Netflix to escape this fate, it has to show discipline in controlling content costs, and until I see evidence that it is capable of this discipline, I will remain a subscriber, but not an investor in the company.