Group 1
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MGMT 420 - Netflix QGM

In the early 2000's, Netflix's (NFLX) unique business model had successfully endangered Blockbuster's (BBI) brick-and-mortar empire. NFLX targeted control points across the movie rental value chain wherein sufficient differentiation would enable a durable advantage. NFLX focused on a) 'virtual' movie rentals, delivered by mail, b) the development of a 'frequent viewer' genre with unlimited rentals, and c) the elimination of late fees. BBI's business model seemed archaic by comparison, relying on a) ubiquitous retail outlets for channel access, b) an emphasis on new releases to attract 'movie night' customers, and c) late fees based on limited rental durations. While NFLX contrasted BBI operationally, the crux of NFLX's strategy was to instantiate a technological shift in the movie rental marketplace. NFLX achieved this through a rental web portal, coupled with an innovative search engine and underpinned by a recommendation system driven by adaptive algorithms. It was this nexus of personalized video-renting technology that not only upended industry dependence on new releases but created a competitive barrier BBI could not imitate.

To quantify the contrasting business models among NFLX and BBI, revenue and cost data from 2004 was used to analyze profitability on a per-DVD-rented basis. A key profit driver was the mix of new and old releases. New releases (NRs) are classified as titles released within the past month, have a high market demand and subsequently high marginal cost. The value of a NR is highly time dependent, and depreciates quickly after the 1 month of rental exclusivity. To meet customer demand and prevent stockouts, new release titles have multiple copies. These two factors suggest most copies of new releases acquired by BBI and NFLX are resold after the first month. Old releases (ORs) and independent titles have a lower demand and are assumed to be wholly owned, without shared revenues paid to the studio. It is assumed that old titles will be held by BBI/NFLX for years after acquisition and constitute a depreciable asset.

Given these assumptions, our analysis first examined gross profitability. Concerning BBI, a NR/OR split of 70/30, combined with the total # of monthly rentals (*see Appendix for calculation*), results in an average gross profit per rental of $2.94. While NFLX is likely beholden to the same studio revenue share for new releases, their 30/70 NR/OR split and higher marginal costs per DVD (due to shipping) results in lower average gross profit per rental of $1.90. At face value, BBI would seem to have an edge.

Digging deeper, we turned to a fixed cost assessment. Based on BBI's per store revenue and operating profit, we determined the total monthly fixed costs and averaged by total monthly rentals to find fixed costs of $2.61 per rental. NFLX's advantage became apparent; considering SG&A, R&D, distribution and IT cost, their fixed costs/rental were $1.13, which were 43% of BBI's fixed costs per rental. Another way to highlight NFLX's fixed cost advantage was to consider rentals per outlet. As a rough estimate, BBI had around 4,255 wholly owned outlets renting 931M DVDs in 2004, or 220K rentals per outlet. For BBI, rental outlets cost $300K to set up and $475K per year to operate. The number of stores in the NFLX fleet was interpolated to be 17 in the same year, distributing 172M DVDs, or 10M rentals per outlet with each outlet costing roughly $60K to set up and $208K to operate annually. All told, NFLX generated five times the output volume per store, for 80% lower startup costs, with 60% leaner operations.

Piecing together gross profit and fixed cost elements paints a holistic picture; NFLX's bottom-line profit per rental in 2004 is $0.77, more than double BBI's $0.33.

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In 2004 Blockbuster looked to be an impenetrable incumbent. But per rental, NFLX was more profitable than Blockbuster. Quantitative analysis uncovered that this advantage was largely due to NFLX's ability to achieve significantly lower fixed costs through centralized distribution and NFLX's web-based recommendation system, which spread rental demand across a wider range of titles, as opposed to primarily new rentals. The recommendation system not only helped to lower fixed costs, it also brought greater value to consumers, who were now discovering movies within their taste that they otherwise would have never seen. The web portal, paired with the innovated unlimited rental subscription service, drove value into the NFLX product, ultimately differentiating NFLX from their main competitor, BBI. NFLX's ability to take advantage of the technological shift to web based products proved to be a competitive advantage over BBI. NFLX created major barriers for anyone trying to compete in the DVD rental market, including the data from their proprietary recommendation system, the diverse and costly DVD library required to compete, and the linkages within their value chain that enable their differentiated product.

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Table 1: Blockbuster Profit Analysis

Blockbuster PROFITS:	
Average Profit per DVD (Old+New)	$2.94
Average Revenue per DVD (Old+New)	$3.70
Average Gross Profit Margin per DVD	**79%**
Average Fixed Cost per DVD	$2.59
Average Profit per DVD (Fixed Costs incld.)	$0.35
Average Profit Margin per DVD	**12%**

Table 2: Netflix Profit Analysis

NETFLIX PROFITS:	
Average Profit per DVD (Old+New)	$1.90
Average Revenue per DVD (Old+New)	$2.86
Average Gross Profit Margin per DVD	**66%**
Avg. IT, Distrib., R&D, Network Expense per DVD	$0.42
Avg. SG&A Expense per DVD	$0.71
Average Profit per DVD (Fixed Costs incld.)	$0.77
Average Profit Margin per DVD	**27%**

A1. Blockbuster:
Variable Cost Analysis: Average Revenue per DVD: TR= Pr_{NR}* Q_{NR} + Pr_{OR} * Q_{OR}, where Q_{NR} = 0.7* Q_T and Q_{OR} = 0.3* Q_T
Avg. Revenue per DVD = TR/Qt = Pr_{NR}*0.7 + Pr_{OR}*0.3 = 4*0.7 + 3*0.3 = **$3.7**, just a weighted average of price (TR: Total Revenue,NR=New Release, OR=Old Release)

Fixed Cost Analysis: Average # of DVDs rented per month: = 4255 stores *$900,000/store*0.9/($3.7/rental)/12mo/10^6 = **77.63 million rentals/month**. (Assumes 10% of revenue in late fees, revenue from franchisee's not included)
Fixed Cost/DVD: Fixed Cost/month = (0.9-0.162)/12*4255 - 77.63*(3.70-2.94) = $202.5M
Average Fixed Cost/rental = $202.5M/77.63M = **$2.61/DVD**

A2: Netflix Total # of Rentals: 2.05M customers * 7 DVDs/month = 14.35M DVDs/month
Netflix Avg. Revenue per DVD = $20 subscriber fee/month / 7 DVDs/month = $2.86/DVD. $20 is the average subscription fee of Netflix in 2004.
Netflix Cost of New Releases(same as BBI + shipping) = $4 – $2.94 + $0.64 = $1.70, assume MC of Old Release = $0.
Shipping Cost = $0.38/way * 2 ways – $0.12 presort discount = $0.64 per rental.

A3.
BBI store in 2004 cost $476K to run (Revenue - Profit - Marginal Cost*# of rentals as computed in A1)
NFLX distribution centers in 2004 (interpolated to be 17) cost $208K to run (Running costs = ($6M-29.5M/12)/17, $29.5M the R&D from I/S/month, assumes depreciation = 0 conservatively).