Exploring the Return on Customer (ROC) Model in the Video Sales and Rental Industry: An Intramodal Analysis of Blockbuster, Redbox, and Netflix

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ABSTRACT

Our study explores the contribution of return on customer (ROC) as a form of customer relationship management. Proponents of ROC valuation claim that it accurately reflects customer equity development and the prospective financial strength of an enterprise. We analyzed financial data for three companies in the video sales and rental industry. Our analysis confirms the relevance of ROC as a potential aggregate measure which correlates with traditional indicators of financial health: net income, return on equity (ROE), and change in market share. ROC is of particular interest to investors and stakeholders because it does not require highly confidential financial information yet is found to be predictive of the long-term value of an entity's customer base. Our findings suggest that ROC correlates with standard financial measures such as ROE but also provides a balanced aggregate measure that accounts for operations, marketing effectiveness, and equity position.

Keywords: return on customer, customer metrics, customer equity development, big data, customer relationship management, marketing analysis

1. INTRODUCTION

Though the Financial Accounting Standards Board (FASB) may be unlikely to revamp reporting standards or requirements in the foreseeable future, some believe that there is more to the valuation of a business and its activities than is shown in ordinary financial statements (Gitman, 2003). Business value-adding activities extend beyond the exchange of goods and services for cash or cash value. Equity is built on a series of interactions that contribute to and enable future sales. Those who promote a customer relationship philosophy suggest that businesses not only consider cash flow, capital assets, and inventory but also realize that these are investments in future cash flow. Specifically, customer relationship management (CRM) followers suggest that organization leadership not only scrutinize return on equity (ROE) but rather, consider their return on customer (ROC) which accounts for the present value of future returns (Parasuraman, 1997).

The growth of online and service-oriented businesses places greater emphasis on the value of customer relationship-building, loyalty, and resulting customer equity (Vollrath & Lloyd, 2019; Yamamoto & Lloyd**,** 2019). Customer relationship

management and customer experience advocates propose that organizations attempt customer valuation. They suggest that businesses assess the value of customers not only on the resulting current cash flow but also account for the expected future earnings. They submit that this method more accurately reflects the investment and respective return on various business activities over its' true return cycle (the customer lifetime). Gupta, Lehmann, and Stuart's (2002) used publicly available financial statements to analyze customer value. Their empirical work employed the same return valuation formula, however using actual reported company data rather than estimates from industry experts.

Based on the premise that ROC is indicative of true firm value, this study examines return on customer as introduced by Peppers and Rogers (1996). In addition, other customer loyalty measures such as customer lifetime value and change in market share are also used. These are compared to typical performance measures such as revenue, net income, and return on equity.

1.1 Contributions

The contributions of this research are to advance our understanding of the value of customer equity-inclusive measures of firm performance. This is meaningful on several fronts:
1. Particularly with the growth of service-based businesses, customer assets and the ability to account for its' value become meaningful and significant in determining a firm's true shareholder value and risk.
2. The vast majority of investors and potential investors lie outside of the company. Having a means of determining the value of an entity's hard as well as soft assets place investors in a much better-informed position and fosters greater transparency with an aspect of the business which has thus far been elusive yet is the basis of sustained business.
3. Adhering to current financial reporting standards leave gaps in fulfilling the objective of providing information to help all stakeholders assess the amount, timing, and uncertainty of prospective cash receipts.

2. LITERATURE REVIEW

When considering the topic of return on customer (ROC), readers will naturally associate it with common financial terminology such as return on assets (ROA), return on equity (ROE), or return on investment (ROI). ROC is the result of an effort by learned professionals and researchers toward developing and standardizing a means of valuation for the most critical yet most obscure asset of any firm—its customers. Where calculation of ROA, ROE, and ROI are relatively clear-cut and routinely used, ROC is relatively new and has yet to be widely accepted in financial reporting circles.

The lifetime value concept is rooted in database marketing from the 1980s, with Robert Shaw's *Making Database Marketing Work* published in 1993, as well as Don Peppers and Martha Rogers's book, *The One to One Future*, also released in 1993. These innovators brought about a new way of looking at marketing and customer information, recommending that firms maximize their revenue potential by developing and maintaining "relationships" with their customers, rather than simply conducting a sales transaction. Shaw (1993) states, "to understand the true worth of your marketing program you have to calculate buyer lifetime value." Peppers and Rogers (1993) explain it as a relatively simple calculation to estimate the discounted present value of all future

purchases, plus other non-purchase benefits (such as referrals) less the cost of maintaining a relationship (marketing and customer service expenses).

These early discussions of customer valuation were marketing focused and spawn out of the CRM (customer relationship management) movement building from the 1980s through 1990s. Supporters understood its significance to organization strategy, its contributions in taking a long-term perspective to customer relationships, and its value in guiding management to attend to retention efforts rather than only focusing on customer acquisition. Blattberg and Deighton (1996) underscore the impact of various aspects of marketing (programs, branding, and product, for example) on customer equity, emphasizing the long-term effect of marketing in building customer value. Berger and Nasr (1998) present several mathematical models to determine customer lifetime value and highlight the distinction made by Blattberg and Deighton, where customer equity includes factoring in acquisition and retention costs. Other researchers, like Kim, Jung, Suh, and Hwang (2006), offer considerations of a more practical nature to marketing strategists. They suggest that managers segment customers based on value, which aligns with Peppers and Rogers' (1996, 1999) one to one philosophy. Peppers and Rogers (2004) go further to outline the full breadth of application in a strategic framework for managing customer relationships over a lifetime. This includes identifying high-equity customers and targeting sales and marketing efforts accordingly, even to the extent of dismissing negative equity customers.

Subsequent studies transitioned research from a marketing-focus to its application as an indicator of a firm's value and shareholder equity, by demonstrating the usefulness of customer valuation to a firm's revenue-generating activities. Two articles, referenced by many other researchers, introduce the idea of valuing customers as an asset of the company. Srivastava, Shervani, and Fahey (1998) discuss market-based assets, which include knowledge, customer relationships, and partner relationships as potentially representing a significant portion of a firm's market value, adding that they yet remain off the balance sheet in financial reporting. Bolton, Lemon, and Verhoef (2004) advance the discussion proposing an integrated framework to assess customer asset management of services. The growth of service industries over the past several decades warrant greater attention to the valuation of intangible business activities (both revenue-generating and revenue-enabling). This holistic perspective is captured by Rust, Zeithaml, and Lemon (2000) in their proposed return on quality, which considers value equity, brand equity, retention equity, and the overall quality contributed by all business aspects from the product, through sales and marketing, to service and billing. Effectively, all are believed to contribute to a firm's customer equity.

Several other studies recognize the importance of customer equity valuation at the organizational level versus at the consumer level. Kumar and George (2007) describe the difference as aggregate and disaggregate level approaches. Studies that focus on an individual level analysis of customer lifetime value and customer equity are considered disaggregate analysis and are useful for managers in guiding operational sales and marketing decisions. In contrast, an aggregate level approach examines the entirety of a firm's customer lifetime value and equity, which is useful for external stakeholders and investors to evaluate the strength and viability of the firm. This is not to say that one type is superior to the other. In fact, they build on each other for a comprehensive view of the business, are useful in strategic decision-making, and provide a more fluid communication tool in differentiating a firm's intangible strengths (specifically its' customer asset).

Unfortunately, traditional financial statements do not allow for these aggregate customer equity metrics. Wiesel, Skiera, and Villanueva (2008) expand on the reporting expectations of the Financial Accounting Standards Board and the International Accounting Standards Board, requiring methods which demonstrate relevance, reliability, and comparability. They add that the Board also acknowledges that currently used financial statements do not present the full picture of a firms' value, stability, and potential for growth.

In search of valid and reliable measures, researchers have examined a variety of models and methods. Gupta, et al. (2006) describe six lifetime value models: RFM models (recency, frequency, and monetary value), probability models, econometric models, persistence models, computer science models, and diffusion/growth models. Kumar and George (2007) contribute by analyzing five aggregate and disaggregate level approaches taken by earlier researchers. In their assessment, they provide a helpful dissection of the components of each approach and the drivers of customer equity, as well as charting customer equity and lifetime value results. Only one of the methods described by Kumar and George (2007) allows for customer equity determination using publicly available firm-level data and an infinite projection period. They refer to this as the GL (Gupta & Lehmann) approach.

Gupta et al. (2002) conducted a customer value analysis of five well-recognized internet firms (Capital One, Amazon, Ameritrade, eBay, and E*Trade), using publicly available information such as annual reports and 10Ks. This study is meaningful because outsiders who are interested in determining the performance of a firm are unlikely to have access to internal data necessary for other methods of determining customer equity. Many of the alternate methods mentioned throughout the decades require detailed data only available within the organization itself, and even then, only for firms that are progressive enough to gather, retain, and use such information.

Gupta et al. (2002) selected five businesses from three distinct industries, which makes comparison a bit challenging. Instead, this researcher elects to examine the customer equity proposition for several competitive firms in the same industry. The industry selected is consumer video sales and rental, the top three players being Blockbuster, Netflix, and Redbox. Having all three businesses from the same industry allow for a more accurate assessment since they are all subject to the same market forces. Thus, industry-specific market conditions can be dismissed as a customer equity impacting factor, unless the entire industry is affected. In addition, examining businesses in the same industry lets us compare performance data to indeed see the effective differences resulting from each entity's strategic model and management decisions.

Most other researches have focused on the disaggregate level approach. Therefore, far more has been done toward the advancement and understanding of consumer behavior and the individual equity impact of specific marketing and service-related activities. For example, the effect of branding, customer loyalty programs, relationship-building, cross-selling, and segmentation on individual customer lifetime value has been well-documented (Rust, Zeithaml, & Lemon, 2000; Kim, Jung, Suh, & Hwang, 2006; Blattberg & Deighton, 1996). This study, in contrast, adopts an aggregate approach where greater opportunities for learning exist.

3. METHODOLOGY

To accomplish this assessment of aggregate customer valuation, data was collected from three competitive firms in the consumer video sales and rental industry—

Blockbuster, Netflix, and Redbox. Sources include annual reports and other supplemental data for the ten-year period from 2001 through 2010 (Blockbuster Inc, n.d., 2005, 2011; Blockbuster Inc. Presentation, 2007; Constar Inc., 2006; Digital Transformation of Home Entertainment, n.d.; Lincoln, 2012; Netflix Investors, 2019). In the case of Blockbuster, this is the period leading up to their ultimate downfall. Hence, we compare a variety of variables to determine which, if any, are useful predictors of Blockbuster's imminent decline, as well as the rise of Netflix and Redbox.

As described by Kumar and George (2007), the GL (Gupta & Lehmann) approach best align with our purpose and availability of data. The following formula will be applied where margin is *m*, retention rate is *r*, and discount rate is *i*. We extrapolate the retention rate based on the firm's customer data as shown in the formula below (Figure 1).

$$CLV = m\left(\frac{r}{1 + i - r}\right)$$

Figure 1. Customer Lifetime Value (CLV) Formula by Kumar and George (2007)

Customer lifetime value is then applied in the ROC formula (Figure 2) provided by Peppers and Rogers (2005). The ROC formula is computed as where π_i is cash flow from customers during period, *i*, ΔCE_i is change in customer equity during period, *i*, and CE_{i-1} is customer equity at the beginning of period, *i*. ROC is a firm's current period cash flow from its customers and changes in its customer equity, divided by the total customer equity at the beginning of the period (Peppers & Rogers, 2005). Note that CE (customer equity) in the equation below is synonymous with customer lifetime value (CLV):

$$ROC = \frac{\pi_i + \Delta CE_i}{\Delta CE_{i-1}}$$

Figure 2. Return on Customer (ROC) Equation by Peppers and Rogers (2005)

ROC will be used along with a comparison of other financial data between the three companies over a ten-year timeframe from 2001 to 2010 to evaluate its effectiveness as a complement to current financial information and as a reliable performance measure available to the open marketplace.

Limitations of this study are as follows: First limitation is that this study does not examine if CLV can predict a firm's future financial performance such as future income and future ROE using more advanced statistical computations. Second limitation is that this study uses simple regression of firms' ROC values to examine the trends in the firms' ROE, operations, marketing effectiveness, and their equity positions in relation to their ROC values.

4. RESULTS

We begin by recognizing Blockbuster's leadership position concerning revenue and market share. Although generating revenue is of the utmost importance for retailers, it is quite limited as a measure of an organization's ability to meet ongoing customer demands or its' earning potential for investor consideration. Table 1A lists revenue data for the three top competitors in the video sales/rental industry. Table 1B lists market share

data for the same. Note: Redbox was a late comer to the market, so from 2001 to 2004 revenue data is not available.

Table 1A. Revenue (Netflix, Blockbuster, and Redbox) (in U.S. Dollars in Thousands) from Year 2001 to 2010

Revenue (in $1000)	Netflix	Blockbuster	Redbox
2001	$ 74,255	$ 5,156,700	
2002	$ 150,818	$ 5,565,900	
2003	$ 270,410	$ 5,911,700	
2004	$ 500,611	$ 6,053,200	
2005	$ 682,213	$ 5,864,400	$ 220,675
2006	$ 996,660	$ 5,522,200	$ 260,952
2007	$ 1,205,340	$ 5,542,400	$ 307,385
2008	$ 1,364,661	$ 5,065,400	$ 761,681
2009	$ 1,670,269	$ 4,062,400	$ 1,144,791
2010	$ 2,162,625	$ 3,240,700	$ 1,159,709

(Revenue is obtained from annual reports for each respective company.)

Table 1B. Market Share (Netflix, Blockbuster, and Redbox) (in percent) from Year 2001 to 2010

Market Share	Netflix	Blockbuster	Redbox
2001	0.4%	30.5%	
2002	0.8%	29.3%	
2003	1.3%	28.6%	
2004	2.3%	27.8%	
2005	3.1%	27.0%	1.0%
2006	4.6%	25.6%	1.2%
2007	5.6%	25.9%	1.4%
2008	6.5%	24.1%	3.6%
2009	8.6%	20.9%	5.9%
2010	11.8%	17.6%	6.3%

(Market share is calculated based on revenue, relative to industry value.)

Despite favorable revenue and dominant market share results, as shown above, Blockbuster declared bankruptcy in 2010. It is clear that more information is necessary to gain an accurate picture of an entity's financial staying power. Revenue and market share, though meaningful, are insufficient and misleading.

The study proceeds with an examination of three additional measures thought to better reflect an organization's management of operations, equity, and growth. First, net income is considered to include operating costs as an indicator of the organization's effectiveness in sales generation. By comparing the net income of the three companies, we see that the early 2000s were not profitable for either of the two companies that were publicly traded at the time (Blockbuster and Netflix). Redbox data was not available until 2005. Net income data for each of the companies is presented in Table 2.

Table 2. Net Income (NI) (Netflix, Blockbuster, and Redbox) (in U.S. Dollars in Thousands) from Year 2001 to 2010

Net Income (in $1000)	Netflix	Blockbuster	Redbox
2001	$ (38,618.00)	$ (238,800.00)	
2002	$ (21,947.00)	$ (1,621,100.00)	
2003	$ 6,512.00	$ (978,700.00)	
2004	$ 21,595.00	$ (1,248,800.00)	
2005	$ 42,027.00	$ (588,100.00)	$ 22,272.00
2006	$ 48,839.00	$ 50,500.00	$ 18,627.00
2007	$ 66,608.00	$ (73,800.00)	$ (22,253.00)
2008	$ 83,026.00	$ (374,100.00)	$ 28,548.00
2009	$ 115,860.00	$ (558,200.00)	$ 57,270.00
2010	$ 160,853.00	$ (268.00)	

Secondly, a return on equity comparison allows for the consideration of balance sheet items (indicating the entity's management of assets, liabilities, and resulting equity). Again, Redbox data was not available until 2005, being new to the market. Furthermore, Redbox ROE information from 2010 and thereafter was not available because of their acquisition by a corporation that aggregated their balance sheet data and did not allocate or notate applicable assets, liabilities, or equity to its' Redbox operations. The failure of ROE as an accurate measure for this purpose is evident in the 2001 ROE for Netflix and the 2009 and 2010 ROE for Blockbuster. In these three instances, a positive ROE results from net losses and negative stockholder equity. The division of two negative values to calculate ROE produces a positive ROE, which is highly inaccurate given their financial deficiencies during those periods. ROE is shown in Table 3.

Table 3. Return on Equity (ROE) (Netflix, Blockbuster, and Redbox) (in percent) from Year 2001 to 2010

Return on Equity	Netflix	Blockbuster	Redbox
2001	43%	-4%	
2002	-25%	-40%	
2003	6%	-31%	
2004	14%	-117%	
2005	19%	-92%	8%
2006	12%	7%	6%
2007	15%	-11%	-7%
2008	24%	-175%	9%
2009	58%	178%	14%
2010	55%	49%	

The third measure considered is change in market share. Where market share is period specific, change in market share is reflective of an organization's period to period shift. Table 4 compares the change in share for the three companies. Here, it is clear that Netflix and Redbox demonstrate growth and Blockbuster shows year over year shrinkage.

Table 4. Change in Share (Netflix, Blockbuster, and Redbox) (in percent) from Year 2001 to 2010

Change in share	Netflix	Blockbuster	Redbox
2001	77%	-11%	
2002	81%	-4%	
2003	65%	-3%	
2004	76%	-3%	
2005	37%	**-3%**	
2006	47%	-5%	19%
2007	22%	1%	19%
2008	15%	-7%	153%
2009	32%	-13%	63%
2010	37%	-16%	7%

While each of these data comparisons divulge far more than revenue and market share, customer relationship management theorists believe that these commonly used financial measures are insufficient in conveying the long-term potential of a company to remain viable, nor do they offer a means to value an organization's primary asset—it's customers (Peppers & Rogers, 1996). Thus, we proceed in the exploration of return on customer as a more explicit measure of a company's stability, as a sum of the present value of its customer base, and as an indicator of investment-worthiness. ROC serves as a logical step beyond equity measures used widely in firm financial assessment (Table 5).

Table 5. Return on Customer (ROC) (Netflix, Blockbuster, and Redbox) (in percent) from Year 2001 to 2010

Return on Customer	Netflix	Blockbuster	Redbox
2001	168%	-817%	
2002	861%	-4133%	
2003	289%	-2497%	
2004	221%	-2566%	
2005	129%	-1016%	
2006	172%	-95%	28%
2007	72%	-231%	18%
2008	97%	123%	1123%
2009	110%	-3024%	428%
2010	147%	-622%	

Unlike most publicly traded corporations, Netflix reported customer data from 2000 through 2011, which allow the public (and potential investors) to determine their customer value. This provides the benchmark data for this study. The process of determining the ROC begins with the customer retention rate, uses the prevailing interest rate for the period, calculates the customer lifetime value, and subsequently factors the return on customer (in this case, in aggregate). Unlike the study conducted by Gupta et al. (2002), this review does not consider acquisition costs independently. Rather, it is factored into each period's net income. With respect to retention rates, where Gupta et al.

(2002) elected to use industry estimates, this study instead calculates retention from actual subscriber data presented in Netflix's annual reports for the related period.

Customer lifetime value (present value of customers based on retention) is determined using the formula presented in Figure 1. CLV (referred to as CE) is then used in the return on customer formula shown in Figure 2 (Peppers & Rogers, 2005). Along with return on customer, lifetime value per customer, and change in market share are also determined. Since Netflix financial statements (10-K annual reports) are inclusive of customer count data, a regression analysis is conducted to examine the significance of ROE and its' correlation with net income, ROE, and change in market share.

Table 6 provides pertinent company data for Netflix. Performing a multiple regression analysis using Table 6 data, we find a reasonably strong correlation between net income, ROE, change in share, and return on customer. The regression analysis produces a favorable *Multiple R* value (.88787), with an *R Square* value of .78831. Even adjusting for the sample size, we still show a nearly 70% (.69759) validity to the model. The model *significance f* is affirmed with a value of .00928. Furthermore, *p-values* for each of the variables selected shows comparable relevance: net income with *p-value* .01016, ROE with *p-value* .01443, and change in share with *p-value* .01019. The respective coefficients are then used to extrapolate return on customer for Blockbuster and Redbox, which have not made their customer information publicly available. Table 9 summarizes the regression analysis output.

In summary, though net income is telling of each organizations' sales operation effectiveness, it alone does not reveal the status of the business' customer equity development. ROE is a better indicator of customers' worth but, as mentioned earlier, the double negative produces a false and misleading product. Lastly, although change in market share shows the competitive sales trend, it too is lacking in fully conveying the customer equity-building impact of business activities (Table 7 and 8).

Table 6. Netflix: Net Income (in U.S. Dollars in Thousands), Return of Equity (ROE) (in percent), Change in Share (in percent) from Year 2001 to 2010

Netflix	Net income (loss, in thousands)	ROE (%)	Change in share	ROC
2001	$ (38,618)	43%	77%	168%
2002	$ (21,947)	-25%	81%	861%
2003	$ 6,512	6%	65%	289%
2004	$ 21,595	14%	76%	221%
2005	$ 42,027	19%	37%	129%
2006	$ 48,839	12%	47%	172%
2007	$ 66,608	15%	22%	72%
2008	$ 83,026	24%	15%	97%
2009	$ 115,860	58%	32%	110%
2010	$ 160,853	55%	37%	147%

Table 7. Blockbuster: Net Income (in U.S. Dollars in Thousands), Return of Equity (ROE) (in percent), Change in Share (in percent) from Year 2001 to 2010

Blockbuster	Net income (loss, in thousands)	ROE (%)	Change in share	ROC
2001	$ (238,800)	-4%	-11%	-817%
2002	$ (1,621,100)	-40%	-4%	-4133%
2003	$ (978,700)	-31%	-3%	-2497%
2004	$ (1,248,800)	-117%	-3%	-2566%
2005	$ (588,100)	-92%	-3%	-1016%
2006	$ 50,500	7%	-5%	-95%
2007	$ (73,800)	-11%	1%	-231%
2008	$ (374,100)	-175%	-7%	123%
2009	$ (558,200)	178%	-13%	-3024%
2010	$ (268)	49%	-16%	-622%

Table 8. Redbox: Net Income (in U.S. Dollars in Thousands), Return of Equity (ROE) (in percent), Change in Share (in percent) from Year 2001 to 2010

Redbox	Net income (loss, in thousands)	ROE (%)	Change in share	ROC
2001				
2002				
2003				
2004				
2005				
2006	$ 18,627	6%	19%	28%
2007	$ (22,253)	-7%	19%	18%
2008	$ 28,548	9%	153%	1123%
2009	$ 57,270	14%	63%	428%

By examining the relationship between the select variables for each of these video sales/rental companies individually, it is apparent that Netflix and Redbox have positive net income, ROE, and have grown their market share. This trend produces significantly greater ROC than implied by net income, ROE, or change in market share alone. Conversely, Blockbuster not only shows an annual financial loss, but has lost market share nearly every year over the decade. Losses of this magnitude have a compounding effect on return on customer, revealing significant destruction of customer equity. Again, the last two years of positive ROE for Blockbuster must be disregarded. Of these measures, only ROC assigns a comparable value to the development or deterioration of customer equity.

The following summary output data (in Table 9 below) provides the results from the regression analysis to determine the relevance of ROC as a representative measure of customer equity, which is reliably indicative of the aggregate impact of income, equity, and market status.

Table 9. Netflix: Return on Customer (ROC) Regression Analysis Results

Multiple R	0.88787		
R Square	0.78831		
Adjusted R Square	0.69759		
S.E.	1.41188		
Observations	11		
F	0.00928		
P-value: Net Income (in U.S. Dollars in Thousands)	0.01016	S.E.: Net Income (in U.S. Dollars in Thousands)	7.54^{-6}
P-value: Return on Equity	0.01443	S.E.: Return on Equity	2.29528
P-value: Change in Share	0.01019	S.E.: Change in Share	2.34409

Table 10 provides a key business activity timeline for the three organizations. When the financial data presented thus far is considered relative to the activities of the three companies, associations can be drawn regarding the organization's customer value proposition.

1. CONCLUSION

This study sought to explore the value of return on customer (ROC) as proposed by customer relationship management (CRM) theorists (Peppers & Rogers, 2005). The position is that traditional measures endorsed by the Financial Accounting Standards Board may not sufficiently reflect customer equity and the future outlook for an enterprise. Advocates of CRM suggest that ROC goes beyond revenue, net income, return on equity (ROE), cash flow, and market share to indeed demonstrate an organization's effectiveness in building customer equity.

The results of this study appear to support the position that return on customer offers a holistic equity measure of a business' customer base. ROC not only correlates with standard financial measures such as ROE but seems to provide a balanced aggregate measure that accounts for operations, marketing effectiveness, as well as equity position. As evident by this study, not only can return on customer provide valuable insight to potential investors, it may also prove useful to organization management in developing a long-term philosophy regarding their business investments and customer value return. Blockbuster serves as an example of poor decision-making and deterioration of customer equity. Within the scope of this study, ROC proves to be a valid measure, worthy of greater consideration by firms, financial institutions, and potential investors.

While the results of this study show a favorable correlation between ROC and a firm's customer value, we recognize that it is limited to the top three competitors in a single industry, is only based on ten years of data, and the information is somewhat dated being that the most current data is from 2010 (eight years ago). Future studies should seek to validate return on customer across other industries and over a longer period of time. Other variables should also be tested.

Table 10. Blockbuster, Netflix, and Redbox Key Business Activities from Year 1985 to 2017

YEAR	Blockbuster $4.99/5-day rental	Netflix $4.99/2 rentals per mo. Or $8.99 unlimited	Redbox $1 per night
1985	Founded by David Cook. First store opens in Dallas		
1989	Expands internationally		
1994	Viacom acquires for $8.4 billion		
1997		Netflix founded by Reed Hastings & software exec Marc Randolph offering online movie rentals	
1998		Launches first DVD rental and sales site, netflix.com	
1999	Blockbuster IPO value up to $4.8 billion	Deputs subscription service with unlimited rentals for one low price	
2000	Blockbuster declines purchase of Netflix for $50 million.	Netflix introduces member personalization, ratings, & predictive choices	
2002		Netflix IPO on Nasdaq	
2003			
2004	Enters the online DVD rental market		Launch 1st market test kiosk DVD rentals in McDonald's restaurants
2005			Expand to 800 restaurants in 5 additional markets. Coinstar purchase 47.3% share
2007	New CEO Jim Keyes (formerly of 7-Eleven).	Introduces streaming on personal computers	Acquires 2 patents for rental/return and transporting/installing technology
2008		Partners with Xbox 360, blu-ray players and TV set-top boxes companies to stream	
2009	Blockbuster rolls out kiosk system	Partners with PS3 and internet TV and device companies	Coinstar purchases remaining shares
2010	Delisted from NYSE. Files for bankruptcy. Valued at $24 million.	Netflix available on Apple, Nintendo, and other internet devices. Launches in Canada	
2011		Launches throughout Latin America & the Carribbean	
2012		Wins first Primetime Engineering Award. Expand to Europe	
2013		Launch original programming	
2015		Expands to Australia, New Zealand, Japan and continue across European countries	
2017		Wins first Oscar	

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