

FRONTIER COMMUNICATIONS

Over-priced
Over-leveraged and
Over by 2020

Karen Vandergaag
David Langille
Curt Loyd

February 2015



Okanagan College



Table of Contents

Introduction	1
Company Overview	1
Industry	2
Landline Use	2
Television Provider Industry	3
Broadband Internet	3
Competitive Landscape	4
Frontier's Position	4
Acquisition History	5
Frontier's Competition	6
Frontier's Competitive Advantage	7
Strengths & Weaknesses	7
Financials	8
Declining Revenue Growth	8
Sources of Financing	9
Cash Flow	10
Debt and Interest	10



Stock Valuation	11
Sensitivity Analysis	11
Conclusions	12
Appendices	16
Appendix A- Income Statement Forecast.....	16
Appendix C- Assumptions for Income Statement and Cash Flow Forecasts.....	18
Appendix D- Stock Valuation Methodology.....	20
Appendix E- Share Dilution Value.....	20
Appendix F- Monte Carlo Simulation	21



Introduction

Frontier Communications is has seen a recent rally in its stock price, which is unwarranted due to overbearing debt obligations and poor strategic positioning. We performed extensive industry and company analysis to determine Frontier's future outlook. Evaluating growth rates and the competitive landscape for the telecommunications industry, we developed a set of assumptions from which we forecasted income statements through 2020. In 2016 Frontier will purchase \$10.5 billion of infrastructure from Verizon. Despite expectations of future revenue growth, financing this transaction will cause cash deficits that will lead to bankruptcy. Through cash flow analysis, we forecasted cash balances through 2020, incorporating future borrowings and maturing debt obligations. Using a Monte Carlo Simulation, we performed sensitivity analysis on our projections by varying our assumptions over a range of potential values. Based on our forecasts, Frontier has a 70.6% probability of a net cash deficit greater than \$100 million in 2020, triggering Frontier to file for bankruptcy. Frontier Communications is over-priced, over-leveraged, and will declare bankruptcy by 2020.

Company Overview

Frontier Communications Corporation (Frontier) is a communications company that provides voice, data and television services to residential, business and wholesale customers in the United States. Founded in 1927, Frontier has grown to a several billion-dollar company serving 28 states, trading on the NASDAQ with the ticker symbol FTR. Serving 3.1 million customers at the end of 2013, Frontier is the fourth largest Incumbent Local Exchange Carrier (ILEC) in the United States (Yahoo Finance, 2015).



Frontier has a history of growing through acquisitions, and has bought assets from competitors several times in the past. Trading at a market capitalization of \$8.4 Billion, and rallying 25.39 percent since the beginning of February, it is clear that investors see potential for Frontier to perform well in the future. It has recently announced the purchase of \$10.5 billion of assets from Verizon Communications Inc., indicating yet another growth initiative. Taking on these assets will require issuing of additional equity and debt to a company that is already highly leveraged. This acquisition will be what sets Frontier on the path to filing for bankruptcy by 2020.

Industry

The telecommunications industry in the United States faces a significant upcoming challenge as the demand for connectivity and speed increases. Technological changes are inciting the transition to new platforms for communication and companies will be forced to adapt to remain competitive.

Landline Use

The use of landline phones in the United States has been declining over the past decade as people switch to mobile or Voice over Internet Protocol (VoIP) technology. Incumbent Local Exchange Carrier (ILEC) landline use has decreased at a compound annual growth rate of -11.63% from 2003-2013 (Brogan, 2014). This trend is expected to continue as mobile reception improves and consumers continue to use VoIP to communicate. Industry-wide decreases in minute usage and revenue per subscriber poses significant threat to the industry, as users abandon their landline phones for mobile (Business Monitor, 2015).



This has a major impact on Frontier and its overall profitability, as 43% of its revenue is from ILEC subscribers. The above-mentioned rapid decline in the use of landline phones must be addressed in order to stay competitive.

Television Provider Industry

The TV market has been declining over the past few years with sales decreasing year over year by -1.5%, -1.6% and -1.2% the past 3 years respectively (Barnes Reports, 2013). The decline in sales stems from households switching from traditional television providers to other forms of media consumption, such as streaming. With streaming applications and websites such as Netflix and CBS NOW, the need and appeal for cable and satellite television will diminish, as the Internet becomes an even more prominent fixture in society. Companies such as AT&T have developed their own streaming TV services in order to compete with the growing availability of streamed content. The provision of television is often bundled with other services such as broadband and telephone; this package offers a large incentive for customers to continue subscribing to television despite online competition.

With the expansion of streaming services, customers are moving away from cable TV, causing an overall decline in the television provider industry. This negative outlook will not drastically affect Frontier, as TV services contribute less than 18% of its total revenue.

Broadband Internet

There are several opportunities and threats facing the broadband Internet providers in the United States from disruptive technologies. Fiber optic data transfer offers faster and more reliable speeds than the current standard of cable or Digital Subscriber Line (DSL). Given that consumer demand is trending towards faster data transfer speeds (Nichols, 2014), fiber optics present a

threat to many of the service providers. Several companies, such as AT&T and Grande have positioned themselves to be ready for the integration of fiber optic into the market. These providers are at an advantage to their competitors, as this presents an opportunity rather than a threat. Another opportunity is to include increasing broadband use as landline users switch to VoIP.

As technology advances and consumer demand increases, data transfer rates become increasingly important. Frontier is not currently positioned well to deliver competitive speeds to its customers and this will negatively impact its future revenue growth rates.

Competitive Landscape

The telecommunications industry is ever changing with disruptive technologies, new services and competitors adding complexity to the competitive landscape. Fiber optics data transfer will be the future of the industry, as consumers drive the need for faster Internet speeds. The industry competes fiercely on price and service offerings, as consumers are price-sensitive and willing to switch providers for a better package. Consumers place high value on customer service, and show little brand loyalty when dissatisfied (Frontier Communications , 2015). The threat of new entrants into the landscape is very low because of the high capital expenditure that is required to start up a firm in this industry. This high infrastructure cost creates a barrier to exit the industry, as liquidation of assets can be challenging in comparison to other industries. This causes a higher level of competition.

Frontier's Position

At the end of 2013, Frontier Communications had nearly 3.1 million subscribers. This consisted of 1,866,670 Broadband subscriptions, 385,353 Video subscriptions, and 822,257 local and long-

distance telephone subscriptions (Frontier Communications Corporation, 2013). Many of the subscribers have a 'bundle' of 2 or more of Frontier's services. In 2012, Frontier experienced a net loss of 7% of their subscribers, and in 2013, a net loss of 3%. Frontier has used outreach programs to address its loss of subscribers, attributing these initiatives to the reduced attrition. However, the largest declines in customers are from its business customers (see Figure 1), which contribute significantly more to Frontier's revenue.

Figure 1

	Average Monthly Revenue/Customer	2012-2013 % change	Total Customers	2012-2013% change
Residential	\$ 59.30	-2 %	2,803,500	-2.87 %
Business	\$ 653.26	2 %	270,800	-5.35 %

Acquisition History

In 2009 Frontier made an \$8.6 Billion wireline asset acquisition from Verizon, which promised to be a step forward for the company. Synergies that were supposed to be gained through this acquisition were not realized. As shown in Figure 2, growth of the company's net income left much to be desired with a small increase from 2009-2010, with a subsequent decrease in 2011. After the acquisition in 2009 Frontier's subscriber base was 7.9 million, which declined to 5.3 million by Q3 2014 (Evans, 2015). The 2009 Verizon acquisition fell far short of Frontier's expectations, yet Frontier has set itself up to try again with its 2016 purchase.

Figure 2

(\$ in thousands, except per share amounts)

	Year Ended December 31, ⁽¹⁾				
	2011	2010	2009	2008	2007
Revenue	\$ 5,243,043	\$ 3,797,675	\$ 2,117,894	\$ 2,237,018	\$ 2,288,015
Income from continuing operations ⁽²⁾	\$ 157,608 ⁽⁵⁾	\$ 155,717 ⁽⁵⁾	\$ 123,181 ⁽⁵⁾	\$ 184,274	\$ 216,514
Net income attributable to common shareholders of Frontier ⁽²⁾	\$ 149,614 ⁽⁵⁾	\$ 152,673 ⁽⁵⁾	\$ 120,783 ⁽⁵⁾	\$ 182,660	\$ 214,654
Net income attributable to common shareholders of Frontier per basic and diluted share ⁽²⁾	\$ 0.15 ⁽⁵⁾	\$ 0.23 ⁽⁵⁾	\$ 0.38 ⁽⁵⁾	\$ 0.57	\$ 0.64
Cash dividends declared (and paid) per common share	\$ 0.75	\$ 0.875	\$ 1.00	\$ 1.00	\$ 1.00

	As of December 31,				
	2011	2010	2009	2008	2007
Total assets	\$ 17,460,768	\$ 17,890,230	\$ 6,878,255	\$ 6,888,676	\$ 7,256,069
Long-term debt	\$ 8,205,841	\$ 7,983,614	\$ 4,794,129	\$ 4,721,685	\$ 4,736,897
Total shareholders' equity of Frontier	\$ 4,455,137	\$ 5,196,740	\$ 327,611	\$ 519,045	\$ 997,899

(Frontier Communications Corporation, 2012)

In 2014 Frontier acquired wireline, fiber and U-Verse operations in Connecticut from AT&T.

This purchase allowed Frontier to grow its operations by roughly 1.5 million new connections. If 2015 results follow trends that Frontier is accustomed to with acquisitions, this number will have fallen to roughly 1.36 million by the end of the year (Evans, 2015).

In 2016 the largest acquisition purchase yet by Frontier will occur, from Verizon for \$10.5 Billion. This acquisition will be of Verizon infrastructure in Florida, California and Texas and will contain the hand-over of Internet, TV and phone services (Lawler, 2015). The deal will add 8.7 million connections (Evans, 2015) to Frontier and increase its percentage of subscribers with access to fiber from 14% to 31% (Knutson, 2015).

Frontier's Competition

Frontier's direct competitors are AT&T, CenturyLink and Fairpoint Communications (Yahoo Finance, 2015). Google Fiber will be a future competitor as it gains geographic reach in the United States. Frontier Communications is relatively small in terms of market capitalization, compared to its competitors.

Frontier's Competitive Advantage

Frontier Communications is poorly strategically positioned, due to its heavy reliance on landline subscribers, and wired technology. Frontier's new Verizon FiOS infrastructure acquisition will vastly improve connection speeds it can provide to its customers. However, the new speed will only allow Frontier to keep up in the industry, rather than gain any competitive advantage. Both AT&T and CenturyLink, Frontier's main competitors are rapidly expanding 1Gbps service across the country, which Frontier cannot keep up with. The FiOS lines that Frontier will purchase are capable of only half the speeds of 1Gbps lines. According to a statement by Maggie Wilderotter, CEO of Frontier Communications, "consumers don't need a gig, selling 1 gig is "disrespectful" because it enters a language that consumers "don't understand.", showing the management's complete lack of interest in adapting to new consumer demands (Nichols, 2014).

Frontier Communications has set its sights on becoming the premier wireline provider, yet it shows little regard for changes and advances of technology in the industry. Verizon is divesting these assets as they have been identified as less profitable than the remainder of its portfolio (Darrell, 2015). Frontier's choice to acquire them indicates a dedication to wireline service, while its competitors are focused on the future with fiber optics and wireless communication. The company has agreed to spend a large sum of money to put itself in a position that guarantees a sustainable competitive disadvantage.

Strengths & Weaknesses

It is clear that Frontier's greatest strength is its margins; both its gross and operating margins are much higher than its competition and industry average (Yahoo Finance, 2015). As of 2013 its gross margin is 91% and has an operating margin of 22%, compared to the industry average of

54% and 11% respectively. The margins obtained by Frontier equate to being roughly 68% and 100% higher than the industry and its nearest competition. However, profit margins for Frontier are within 1% of its closest competitors. Margins don't solely create the success of a company and there are glaring issues in other aspects of its business.

We believe Frontier Communications weaknesses stem from sources that are both strategic and financially based. Strategically the company has positioned itself to become stagnant in an industry that is evolving rapidly. The company is borrowing to invest heavily into infrastructure that provides no competitive advantage, eliminating its future potential to outperform competitors because of its now overbearing debt obligations. For these reasons, it is fair to say the main weakness of Frontier is its management, who are responsible for the decisions being made, which will cause the company to fail within the next 5 years.

Financials

Frontier Communications' stock is overvalued. Its financial statements are far from indicative of future booming success. With a current debt to equity ratio of 242.73, Frontier is highly leveraged and will become even more so with the Verizon acquisition (Yahoo Finance, 2015). Based on industry and company analysis, we estimated future income statements and cash flows (see appendices A, B and C), which illustrate the dismal future of Frontier. In 2020, Frontier will experience a cash deficit that will trigger its filing for Chapter 11 bankruptcy.

Declining Revenue Growth

Based off our analysis of industry growth rates of Frontier's service divisions, there will be a net decline in the company's year over year growth. Over the last 3 years, Frontier has underperformed relative to its competitors (Yahoo Finance, 2015). Therefore, in this analysis, we

have applied a penalty of 1.5% to Frontier's growth rates to account for the company's sub-par customer reviews (Frontier Communications , 2015) and its future ability to compete with increasing broadband speeds (Nichols, 2014). As Frontier begins to struggle to maintain cash flows, and cut dividends, it will need to cut costs in other areas. This will negatively affect customer experience and cause even greater rates of subscriber attrition, and therefore result in loss of revenue. We have incorporated this into our forecast, projecting that revenues will decrease at a faster rate in the latter years. Our forecast is designed to be conservative with respect to subscriber attrition, maintaining levels near to the aforementioned industry growth rates.

Sources of Financing

Frontier intends to finance its new Verizon acquisition through issuance of debt and equity (Blessing, 2015). This will entail \$7.9 billion of new debt and the sale of \$2.6 billion of new shares. The companies projected diluted share value will be \$5.37 if the company is to maintain its current P/E ratio (see Appendix E). The diluted share value does not take into account investor sentiment to the drastic reduction in share price from the release of additional common stock. With this information we used an average share sale price of \$5, which equates to 520 million shares needing to be sold. The sale of 520 million shares will increase the current float by 52%.

Frontier will use issue new equity in 2015, and debt in the beginning of 2017. It has announced that it intends to issue long-dated bonds in the junk market, as unsecured debentures in the public market (Blessing, 2015).

Cash Flow

As illustrated in Appendix B, cash available to Frontier in the upcoming years is going to be the cause of its bankruptcy. Frontier has a 2013 balance of \$880 million in cash, which will be increased significantly by the upcoming share issuance in 2015, in preparation for the Verizon deal completion. This cash injection will be supplemented with cash from debt issuance in 2016 to cover the \$10.5 billion purchase of assets from Verizon. In 2017, Frontier will not have the cash required to completely meet its maturing debt obligation of \$2.2 billion and will need to refinance, which may lead to even further cash depletion going forward due to potentially higher than forecasted interest rates. In Appendix B, Frontier has been projected to maintain its forecasted interest rate of 9.5% after refinancing, even though this outcome is highly improbable. In 2020, following the refinancing in 2016, Frontier will again lack required cash to meet its \$3.2 billion in maturing debt obligations. When the second cash deficit occurs Frontier will have no other option but to file for bankruptcy.

Debt and Interest

Frontier already carries a high debt load: \$9.45 billion. Increasing total debt to cover the cost of the Verizon acquisition in 2016 is going to put an immense strain on the company's ability to cover its interest payments. Frontier has announced that it will be financing the acquisition partially using debt, equating to an additional \$7.9 billion. Currently, the interest rate on Frontier's debt is roughly 8% (Frontier Communications Corporation, 2013, p. 52) with the addition of new debt to the company a decline in its credit rating will occur (Business Wire, 2015), leaving the interest rate on the new debt to be a projected 9.5% (Damodaran, 2015).

Stock Valuation

At the time of writing, Frontier had a Price/Earning (P/E) ratio of 45.30, in comparison to the industry average of 20.46. (Yahoo Finance, 2015) The announcement of the upcoming acquisition has spurred a rally in the stocks price and it increased by 25.39% since the beginning of February 2015. Using relative valuation, Frontier's stock is greatly overvalued. Furthermore, the hype behind this growth is unwarranted, as Frontier will likely fail to realize the synergies that it is expecting. If Frontier's P/E matched the industry average of 20.46, its share price would be a mere \$3.78.

We determined that an estimated decline in dividend growth of 30% will be needed to allow Frontier to maintain a positive free cash flow over the upcoming years. This will send a strong negative signal to the market, and consequently the cost of financing will increase and share prices will decline. Using the Dividend Discount Model, the company's stock would have a value of \$1.26. Based on our cash flow forecasts, we consider even this price to be 100% higher than what the company's stock should be valued. See Appendix D for further details on valuation methodology.

Sensitivity Analysis

Our projections indicate a net cash deficit of \$247,958,000 in 2020 if Frontier covers its maturing bonds. Frontier will not have access to funds to cover this obligation, and will be forced to file for Chapter 11 bankruptcy.

Based on a Monte Carlo Simulation of our projections, Frontier has a 70.6% probability of a net cash deficit of greater than \$100 million in 2020. The Monte Carlo Simulation is a statistical analysis technique used to understand the impact of risk and uncertainty in financial forecasting

models. Inputs into the simulation include an expected future outcome, as well as ranges of values for each assumption made within the model. By using a range rather than a specific number, we determined a more realistic prediction of future outcomes, given the inherent uncertainty of our assumptions. The simulation samples within the range of each assumption, and determines a probability distribution of expected future outcomes. (See Appendix F for further details)

Conclusions

Frontier is not well positioned to address the upcoming changes in the telecommunications industry, both strategically and financially. Its plan to purchase \$10.5 billion of infrastructure from Verizon in 2016 is shown to be catastrophic to Frontier's future. The intrinsic value of FTR from the company analysis contradicts its current grossly over-valued trading price. Our debt analysis illustrates Frontier's inability to service its debt obligations in 2017 and 2020.

Sensitivity analysis using the Monte Carlo Simulation supports our conclusion that Frontier has a 70.6% probability of declaring bankruptcy by 2020.

References

Barnes Reports. (2013). Television Broadcasting Services Industry. *2013 Industry & Market Series* , p. 6.

Blessing, K. (2015, February 17). *Frontier to Raise Up to \$7.9 Billion in Debt for Verizon Lines*. Retrieved from Bloomberg: <http://www.bloomberg.com/news/articles/2015-02-17/frontier-to-raise-up-to-7-9-billion-in-debt-for-verizon-lines>

Brogan, P. (2014, November 25). *Voice Competition Data Support Regulatory Modernization*. Retrieved from USTelecom:
http://www.ustelecom.org/sites/default/files/documents/National%20Voice%20Competition%202014_0.pdf

Business Monitor. (2015, January 1). Q1 2015. *United States Telecommunications Report* .

Business Wire. (2015, February 9). *Fitch Places Frontier Communications' 'BB' IDR on Rating Watch Negative*. Retrieved from CNBC: <http://www.cnbc.com/id/102410355#>.

Damodaran, A. (2015, January). *Ratings, Interest Coverage Ratios and Default Spread*. Retrieved from Damodaran Online:
http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ratings.htm

Darrell, L. (2015, February 5). *Why Verizon Communications Inc. \$10 Billion Asset Sale Could Be Disastrous For Frontier Communications*. Retrieved from Bidness Etc:
(<http://www.bidnessetc.com/34119-why-verizon-communications-10-billion-asset-sale-could-be-disastrous-for-fr/>).



Evans, M. (2015, February 9). *What Verizon Communications Inc. Deal Means for Frontier Corporation*. Retrieved from Bidness Etc: <http://www.bidnessetc.com/34378-what-verizon-communications-inc-deal-means-for-frontier-communications/>

Frontier Communications . (2015, February 13). Retrieved from Consumer Affairs: http://www.consumeraffairs.com/cell_phones/frontier.html

Frontier Communications Corporation. (2012). *Annual Report Form 10-K*.

Frontier Communications Corporation. (2013). *United States Securities and Exchange Commision Form 10-K Frontier Communications Corporation*. Stamford.

Knutson, R. (2015, February 8). *Frontier Stakes Its Claim on Landlines*. Retrieved from Global Finance: <https://www.gfmag.com/topics/syndicate/33449670-frontier-stakes-its-claim-on-landlines>

Lawler, R. (2015, February 5). *Verizon FiOs will be an East Coast exclusive as of 2016*. Retrieved from engadget: <http://www.engadget.com/2015/02/05/verizon-fios-towers-frontier/>

Nichols, B. (2014, August 13). *Google's Game-Changing Second Era Has Arrived*. Retrieved February 17, 2015, from The Motley Fool: <http://www.fool.com/investing/general/2014/08/13/googles-game-changing-second-era-has-arrived.aspx>

Nicol, R. (2014, April 24). *Verizon Report Fifth Consecutive Quarter of Double Digit Operating Income and Earnings Growth*. Retrieved from Verizon Wireless: <http://www.verizonwireless.com/news/article/2014/04/q1-2014-earnings.html>).



Yahoo Finance. (2015, February). *FTR*. Retrieved February 2015, from Yahoo Finance:

<https://ca.finance.yahoo.com/q?s=FTR>

Appendices

Appendix A- Income Statement Forecast

(thousands)	2014	2015	2016	2017	2018	2019	2020
Revenue	\$4,598,174	\$4,460,386	\$10,352,015	\$9,963,279	\$9,575,124	\$9,238,797	\$8,902,057
Cost of Revenue	<u>\$418,434</u>	<u>\$418,434</u>	<u>\$1,449,282</u>	<u>\$1,394,859</u>	<u>\$1,340,517</u>	<u>\$1,293,432</u>	<u>\$1,246,288</u>
Gross Operating Profit	\$4,179,740	\$4,041,952	\$8,902,733	\$8,568,420	\$8,234,607	\$7,945,366	\$7,655,769
Operating Expenses							
SG&A	\$2,115,160	\$2,115,160	\$4,761,927	\$4,583,108	\$4,404,557	\$4,249,847	\$4,094,946
EBITDA	\$2,064,580	\$1,926,792	\$4,140,806	\$3,985,312	\$3,830,050	\$3,695,519	\$3,560,823
Depreciation	\$1,088,100	\$1,088,100	\$1,351,600	\$1,615,100	\$1,615,100	\$1,615,100	\$1,615,100
Other Expenses	<u>\$70,000</u>	<u>\$70,000</u>	<u>\$70,000</u>	<u>\$70,000</u>	<u>\$70,000</u>	<u>\$70,000</u>	<u>\$70,000</u>
EBIT	\$906,480	\$768,692	\$2,719,206	\$2,300,212	\$2,144,950	\$2,010,419	\$1,875,723
Interest Expense	\$758,400	\$1,133,650	\$1,508,900	\$1,508,900	\$1,508,900	\$1,508,900	\$1,508,900
Pre-Tax Income	\$148,080	-\$364,958	\$1,210,306	\$791,312	\$636,050	\$501,519	\$366,823
Income Tax	<u>\$42,943</u>	<u>\$0</u>	<u>\$350,989</u>	<u>\$229,480</u>	<u>\$184,454</u>	<u>\$145,441</u>	<u>\$106,379</u>
Net Income	<u>\$105,137</u>	<u>-\$364,958</u>	<u>\$859,317</u>	<u>\$561,831</u>	<u>\$451,595</u>	<u>\$356,078</u>	<u>\$260,444</u>
Dividend Obligation	<u>\$400,000</u>	<u>\$400,000</u>	<u>\$425,600</u>	<u>\$297,920</u>	<u>\$208,544</u>	<u>\$145,981</u>	<u>\$0</u>
After Payout Earnings	-\$294,863	-\$764,958	\$433,717	\$263,911	\$243,051	\$210,098	\$260,444

Appendix B- Cash Flow Forecast

(thousands)	2014	2015	2016	2017	2018	2019	2020
Net Income	\$105,137	-\$364,958	\$859,317	\$561,831	\$451,595	\$356,078	\$260,444
Operating Activities							
Depreciation	\$1,088,100	\$1,088,100	\$1,351,600	\$1,615,100	\$1,615,100	\$1,615,100	\$1,615,100
Adjustments To Net Income	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$250,000</u>
Net Cash from Operations	\$1,338,100	\$1,338,100	\$1,601,600	\$1,865,100	\$1,865,100	\$1,865,100	\$1,865,100
Investing Activities							
Cap Ex	-\$700,000	-\$700,000	-\$10,450,000	-\$700,000	-\$700,000	-\$700,000	-\$700,000
Financing Activities							
Dividends Paid	-\$400,000	-\$400,000	-\$425,600	-\$297,920	-\$208,544	-\$145,981	\$0
Net Borrowing	-\$1,137,180	-\$1,018,083	\$6,881,917	-\$2,200,000	-\$144,212	-\$350,000	-\$3,200,000
Proceeds from Share Issue	\$0	\$2,600,000	\$0	\$0	\$0	\$0	\$0
Change In Cash and Cash Equivalents	<u>-\$793,943</u>	<u>\$1,455,059</u>	<u>-\$1,532,766</u>	<u>-\$770,989</u>	<u>\$1,263,939</u>	<u>\$1,025,198</u>	<u>-\$1,774,456</u>
Ending Cash Balance	\$86,057	\$1,541,116	\$8,350	-\$762,639	\$501,301	\$1,526,498	-\$247,958

Appendix C- Assumptions for Income Statement and Cash Flow Forecasts

Assumptions

Cost of Revenue 2014-2016	9.10%	This was the cost of revenue for 2013, which was consistent with prior years (Yahoo Finance, 2015).
Cost of Revenue 2016-2020	14%	We anticipate an increase in the cost of revenue following the Verizon acquisition based on the operating margins of the assets, as indicated by Verizon. As of Q1 2014, Verizon's wireline sector, which Frontier will acquire, had an operating margin of 1.5% (Nicol, 2014). Comparing this margin to the current operating margin of Frontier at 21% it is easy to foresee a reduction in the companies operating profit. This reduction is accounted for in our forecasts through a percentage point increase in the cost of revenue after the acquisition.
SG&A (% of Revenue)	46%	Based on historical Selling, General and Administrative expenses over the last 3 years, we used the average percentage of revenue (Yahoo Finance, 2015).
Tax rate	29%	We used the lowest tax rate that Frontier experienced in the last 3 years as a conservative estimate of future taxation (Yahoo Finance, 2015)
Interest rate 2014-2015	7.95%	This is based on an average composite borrowing rate of 7.95% as indicated in Frontier's 2013 Annual Report (Frontier Communications Corporation, 2013).
Interest rate 2016-2020	9.5%	The interest rate in our predictions refers to the rate that Frontier will qualify for on the debt to finance the Verizon acquisition in 2015. This interest rate applies to years 2016 through 2020 in our projections. Frontier's 2013 composite average borrowing rate was 7.95%, (Frontier Communications Corporation, 2013) and the company has since been downgraded by Fitch's bond ratings (Business Wire, 2015). Frontier has also indicated that it will be financing part of the Verizon purchase with junk bond issues. Because of the downgrade, and the additional debt that Frontier will be taking on, and anticipated junk bond issuance, we expect the rate to be between 8 and 12% on future debts.
Additional Revenue from Verizon Acquisition	\$5,700,000	This additional revenue projection was indicated in a statement by Frontier in 2015 (Evans, 2015)
Additional Depreciation from Verizon Acquisition	\$527,000	Depreciation was calculated based on a straight-line amortization over 20 years of the \$10.5 billion asset acquisition.
Dividend Growth Rate (2016-2020)	-30%	Frontier has indicated that it is committed to maintaining its dividend into the future. Our projections incorporate Frontier maintaining its dividend at its current rate until 2017, when cash shortages will force it to decrease its dividends. After this point, we projected an annual dividend growth rate of 30% until 2020, when Frontier will declare bankruptcy and pay zero dividends.
Capital Expenditure	\$700,000,000	\$700 million was selected as a consistent capital expenditure amount in all years except 2016. This value is consistent with capital expenditures over the previous 3 years. Frontier must maintain a certain level capital expenditures each year to remain competitive, or risk even quicker decline in revenue.
Adjustments to Net Income	\$250,000,000	Given the amount of variables contained in Adjustments to Net Income, we chose a conservative positive adjustment of \$250 million, which reflects historical standards for Frontier's best recent years. According to 2014 Q1-Q3 cash flow statements for Frontier, it is likely that the 2014 earnings results will show negative adjustment to net income, which would depress Frontiers cash flow position even further.

Revenue Growth Rates	See below	Revenue growth rates are based on static revenue per customer per division. Declining subscribers through attrition year over year will cause overall revenues to decline. Below are the attrition rates, by division:
Attrition Rate- Phone Subscribers	10%	Over the last 10 years, the compound annual growth rate of landline users is -11.63% (Brogan, 2014). In order to provide a conservative estimate, we used 10% as our beginning attrition rate, and made the assumption that this rate will slow over time, by .5% per year.
Attrition Rate- TV& Other Subscribers	0%	The TV broadcasting industry has reported sales decreasing year over year by at least 1.2% (Barnes Reports, 2013). Frontier's reporting indicates that it has been outperforming the industry, with net additions of TV subscribers. Therefore, we projected a growth rate of 0% for the first two years, decreasing gradually as we approach 2020.
Attrition Rate- Broadband Subscribers	5%	We are predicting a net gain in broadband subscribers year over year for Frontier going forwards. This was based on historical data from Frontier's annual reports, as well as a forecasted industry growth rate of 6% (Frontier Communications Corporation, 2013). The forecasts indicated that the pace of growth in the industry would decrease by 2 percentage points each year. Because of competitive forces in the market, industry predictions, and Frontiers relative position, we anticipated that Frontier's broadband subscriber growth rate would decrease each year between 2015 and 2020 by one percentage point.
Growth Penalty to Frontier	1.5%	Frontier has experienced declining net income over the last 3 years, as well as larger year over year subscriber attrition than its competitors. Strategically, Frontier is not positioned to be competitive with respect to speed and customer service policies. Based on consumer reviews, Frontier's subscriber loss can be partially contributed to its poor customer service. This penalty is to reflect Frontier's underperformance in the industry, which we expect will continue.



Appendix D- Stock Valuation Methodology

Price-Earnings Ratio

At a stock price of \$8.38, Frontier has a P/E ratio of 45.30. Comparing FTR to the industry average P/E ratio of 20.46, if Frontier was valued similarly, its stock price would be \$3.78.

Dividend Discount Model & Weighted Average Cost of Capital

We used a two-stage dividend discount model (DDM) to calculate the intrinsic value of the share based on the forecasted dividend payments. The growth rate (g) used in the DDM was derived from the -30% dividend growth rate used in our forecasting. The discount rate of 10.51% (k) was derived from the Capital Asset Pricing Model, using a risk free rate of a 5-year Treasury Note of 1.53% and a market return of 15.35% based on the trailing twelve months of the NASDAQ stock exchange. We used the current dividend of \$0.40, and the listed beta of .65 of FTR from Yahoo Finance (Yahoo Finance, 2015).

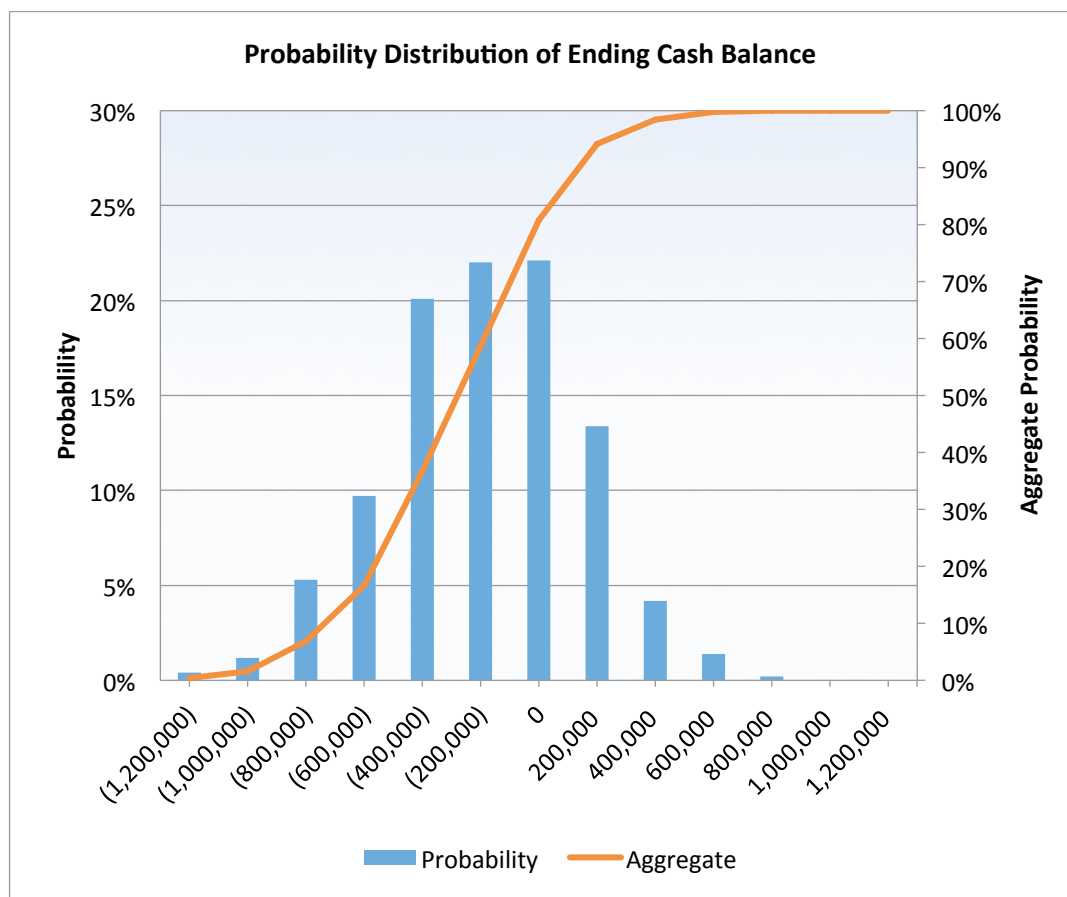
Appendix E- Share Dilution Value

In 2016, Frontier will need to raise \$2.6 Billion from the issuance of new shares to finance the Verizon asset acquisition (Blessing, 2015). Current Earnings per Share is .19 with 1 billion shares outstanding, and a P/E ratio of 45.30. If FTR maintains this P/E ratio through the issuance of new shares, the new diluted share value would be \$5.37.

Appendix F- Monte Carlo Simulation

		Minimum	Most Likely	Maximum
Attrition Rates				
¹	Phone Subscribers	-12%	-10%	-9%
²	TV& Other Subscribers	-1%	0%	1%
³	Broadband Subscribers	4.5%	5%	6%
⁴	Interest Rate	8%	9.50%	12%
⁵	Penalty to Frontier	1.00%	1.50%	2.50%
⁶	Dividend Growth Rate	-50%	-30%	-25%

The above table illustrates the range of each variable that was analysed through the simulation. These variables are inputs that were used in the cash flow and income statement projects through 2020 (Appendices A & B). The Monte Carlo Simulation normalizes the range of each of these variables, and samples within these ranges in order to substitute these values into our projection data. Over 500 iterations, the simulation provided the following probability distribution of the ending cash balance for Frontier in 2020.



This data table illustrates the aggregate probability of the ending cash balance, supporting our prediction of the bankruptcy of Frontier. With 81% confidence, we predict that Frontier will have less than 0 cash available in 2020, which will force it to file for Chapter 11 bankruptcy.

Cash Balance at 2020 (thousands \$)	Probability	Aggregate
(1,200,000)	0%	0%
(1,000,000)	1%	2%
(800,000)	5%	7%
(600,000)	10%	17%
(400,000)	20%	37%
(200,000)	22%	59%
0	22%	81%
200,000	13%	94%
400,000	4%	98%
600,000	1%	100%
800,000	0%	100%
1,000,000	0%	100%
1,200,000	0%	100%

Based on our simulation, the mean ending cash balance is (\$287,712,000). Our projections indicated an ending cash balance of slightly more than this, at (\$247,948,000), giving us confidence that our projection is relatively conservative.

With respect to the variables that we used in the simulation, we based our estimates of ranges on data from company and market analysis, and industry trends.

¹	Attrition Rate- Phone Subscribers	Over the last 10 years, the compound annual growth rate of landline users is -11.63% (Brogan, 2014). In order to provide a conservative estimate, we used 10% as our beginning attrition rate, and made the assumption that this rate will slow over time, by .5% per year. The range selected for our simulation was a minimum of -12% attrition rate in 2014, and a maximum value of -9%. The minimum was selected based on reports that indicated that the landline use had potential to decline more rapidly in the next 5 years. The maximum value was selected in order to account for the possibility that Frontier would be able to maintain subscribers at a rate slightly higher than that of the overall industry.
²	Attrition Rate- TV& Other Subscribers	The TV broadcasting industry has reported sales decreasing year over year by at least 1.2% (Barnes Reports, 2013). Frontier's reporting indicates that it has been outperforming the industry, with net additions of TV subscribers. Therefore, we projected a growth rate of 0% for the first two years, decreasing gradually as we approach 2020. We allowed a range from -1% to 1% in the simulation, which provides room for more or less growth than predicted, within the bounds of the historical decline for TV.

3	Attrition Rate- Broadband Subscribers	We are predicting a net gain in broadband subscribers year over year for Frontier going forwards. This was based on historical data from Frontier's annual reports, as well as a forecasted industry growth rate of 6% (Frontier Communications Corporation, 2013). The forecasts indicated that the pace of growth in the industry would decrease by 2 percentage points each year. The range we estimated for this growth is an initial growth rate between 4.5% and 6%. Because of competitive forces in the market, industry predictions, and Frontiers relative position, we anticipated that Frontier's broadband subscriber growth rate would decrease each year between 2015 and 2020.
4	Interest Rate	The interest rate in our predictions refers to the rate that Frontier will get on the debt it uses to finance the Verizon acquisition in 2015. This interest rate applies to years 2016 through 2020 in our projections. Frontier's 2013 composite average borrowing rate was 7.95%, and the company has since been downgraded by Fitch's bond ratings (Business Wire, 2015). Frontier has also indicated that it will be financing part of the Verizon purchase with junk bond issues. Because of the downgrade, and the additional debt that Frontier will be taking on, and anticipated junk bond issuance, we expect the rate to be between 8 and 12% on future debts.
5	Penalty to Frontier	Frontier has experienced declining net income over the last 3 years, as well as larger year over year subscriber attrition than its competitors. Strategically, Frontier is not positioned to be competitive with respect to speed and customer service policies. Based on consumer reviews, Frontier's subscriber loss can be partially contributed to its poor customer service. The range of penalties sampled in the simulation is from 1% to 2.5%, and we based this range on historical performance relative to competitors, as well as the future strategic direction of Frontier.
6	Dividend Growth Rate	Frontier has indicated that it is committed to maintaining its dividend into the future. Our projections incorporate Frontier maintaining its dividend at its current rate until 2017, when cash shortages will force it to decrease its dividends. After this point, we projected an annual dividend growth rate of 30% until 2020, when Frontier will declare bankruptcy and pay zero dividends. The range we selected is between -50% and -25%. We based this range on how Frontier will need to react in order to maintain a positive cash balance through the next 5 years, and dividend cuts at a minimum of -25% would be necessary to maintain solvency past 2017.