

A Work Project, presented as part of the requirements for the Award of a master's degree in
Finance from the Nova School of Business and Economics.

**An Integrated Restructuring and Liquidation Case Study of Frontier
Communications**

Work project developed by:

Salvador Caetano Matos

Under the supervision of:

Stefano Sacchetto

17/12/2025

1. ABSTRACT

This thesis examines Frontier Communications' 2020 financial distress with a focus on liquidation outcomes and their implications for creditor recoveries. Using valuation-based recovery waterfalls, the analysis estimates stakeholder recoveries under a Chapter 7 scenario by constructing an asset-level liquidation model that incorporates recovery haircuts, administrative costs, and priority claims. The results indicate net liquidation values substantially below total liabilities, implying that recoverable value would be largely absorbed by secured and priority creditors. Under base-case assumptions, unsecured creditors receive limited recoveries, while equity holders are fully impaired.

To contextualize these findings, liquidation outcomes are compared with restructuring-based alternatives, highlighting the extent of value destruction associated with forced asset sales. Sensitivity analyses show that recovery outcomes are primarily driven by fixed-asset realizations and liquidation costs, reinforcing the fragility of recoveries in downside scenarios. Overall, the thesis demonstrates that liquidation represents a lower-bound valuation benchmark and underscores the importance of capital structure design in determining creditor outcomes during financial distress

Keywords: *Financial Restructuring, Financial Distress, Liquidation Value, Value Recovery*

2. CASE STUDY INTRODUCTION

2.1. Framework

Today is May 15th, 2020, and Frontier Communications, a US multi-state telecommunications company, is now a month into its bankruptcy proceedings. They have just released their Disclosure Statement, which summarizes the background on how the company reached this point, and what led them to filing for court protection under Chapter 11.

At this point, the management team has been focused on developing various business plans for the potential outcome of the company post-emergence, as well as continuously monitoring the Covid-19 virus evolution and its implications in said business plan.

With this, the company must consider the potential exit strategies for these proceedings, and the CEO asked the Finance Department to provide him with a clear picture of the potential value creation paths, so that he can make an informed decision on how to proceed.

2.2. Company Overview

2.2.1. Company History

Frontier Communications' incorporation traces back to the incorporation of Citizens Utilities Company in 1935 as a utility company, distributing water, natural gas, electric and telephone services. (Frontier Communications Corporation 2020c)

In 1945, Richard Rosenthal became president of Citizens and led a period of ambitious national expansion, marked by the acquisition of multiple utility and telecommunications assets. This diversification strategy allowed Citizens to grow into a multi-utility enterprise operating across several states (Reference for Business 2004). A major milestone occurred in 1969, when the company completed its largest acquisition to date: the purchase of Kauai Electric Company, signaling its first substantial entry into the telecommunications sector. Over the following

decades, Citizens progressively narrowed its focus, and its telecommunications business grew after the breakup of the Bell System, owned by AT&T (Funding Universe 1993).

By the early 2000s, the company had completed its transition into a pure-play telecom provider, and in 2008, Citizens formally rebranded as Frontier Communications Corporation (Frontier Communications Corporation 2009a).

Frontier soon embarked on an expansion strategy through large-scale acquisitions. In 2010, it acquired Verizon's landline operations, effectively tripling its customer base and expanding across rural and suburban markets in the US (Frontier Communications Corporation 2011).

Continuing this growth trajectory, Frontier acquired AT&T's operations in Connecticut in 2014, adding wireline, DSL, U-verse video, and satellite television services to its portfolio. Around this time, the company also relocated its corporate headquarters from Stamford to Norwalk, Connecticut (Frontier Communications Corporation 2015a).

Finally, completing its growth through acquisitions, Frontier acquired Verizon's landline operations, in 2016, the "CTF transaction". This acquisition doubled the company's size for the second time in six years (Frontier Communications Corporation 2020g).

Following these transactions, Frontier focused on integrating its newly acquired operations and enhancing the quality and efficiency of its services. To accompany market evolution, the company started to shift its strategy towards fiber-optic development, as well as digital video and data services. The traditional copper-based telephone business was becoming progressively less central to its growth model, as the company sought to position itself as a leading broadband provider in its regional markets (Frontier Communications Corporation 2020c)

This period marked a clear turning point in Frontier's corporate history. Having completed a series of transformative acquisitions and divestitures, the company entered the final months of 2019 as a significantly reshaped organization. Frontier went from a rural telephone and DSL

internet provider to a national telecommunications company, with presence across urban, suburban and rural areas across the country.

2.2.2. Company Business Model and Operations

Frontier's regional footprint is concentrated in lower-density and legacy wireline territories across 29 states [**Appendix 1**]. The company serves two different customer groups: consumer, representing approximately 50% of revenues and contracting a combination of services through fiber and copper networks; and commercial, which include small, medium and large businesses in the US, as well as wholesale clients. (Frontier Communications Corporation 2020c).

Their business model serves two client groups through four main revenue streams: Data and Internet Services, Video Services, Voice Services, and other services (including Access Services and Advanced Hardware/Network Solutions). Services are offered individually or in bundles, with over 50% of broadband customers subscribing multiple offerings (Frontier Communications Corporation 2020c).

The Data and Internet Services segment primarily covers broadband internet for consumers. For commercial customers, Frontier offers ethernet, internet, SD-WAN, managed Wi-Fi, TDM data transport, and optical transport services. (Frontier Communications Corporation 2020c).

Through its Video Services segment, Frontier provides digital TV, often via streaming partners like YouTube TV, using the FiOS and Vantage brands across several U.S. states. It also offers satellite TV through a partnership with Dish Network Corp (Frontier Communications Corporation 2020c).

Besides offering legacy long-distance and voice messaging services, Frontier's Voice Services segment provides customers with data-based VoIP (Voice over Internet Protocol), a technology that allows users to transmit voice calls over the internet instead of traditional phone lines. This offers basic calling features like hold, transfer, and voicemail, and UCaaS (Unified

Communications as a services), a comprehensive cloud-based service which combines multiple communication tools in one and is offered to commercial clients. It also provides long-distance services to and from points outside Frontier's operating properties by interconnection with the facilities of interexchange carriers (Frontier Communications Corporation 2020c).

Frontier's network is focused on a system of central offices, which are connected to the customers through a mix of copper, fiber-optic and wireless infrastructures (Frontier Communications Corporation 2020c).

The consumer segment is served through a combination of Fiber-to-the-Home (FTTH) and Fiber-to-the-Node (FTTN), with the main difference being how far the fiber connection goes towards the customer, and where it starts being a hybrid copper-fiber system (on the FTTN system, the fiber cables carry the traffic to intermediate locations, where the signal is converted into copper wire for final delivery) (Frontier Communications Corporation 2020c). The fixed wireless broadband (FWB) technology works by transmitting the signal from an antenna on the company's base to another antenna at the customer's location, and it is currently used mainly in business ethernet services (Frontier Communications Corporation 2020c).

In addition to these revenue streams, the telecommunications sector is also highly driven by government subsidies, especially for incentivizing services in rural unserved or underserved areas. Frontier is currently getting proceeds from the Connect America Fund Phase II (CFA II), which was issued by the FCC in 2015, and aims at supporting the telecommunication companies that serve high-cost unserved or underserved areas with broadband services by allocating up to \$1.98 billion over 10 years to the winning bidders of the auction (Federal Communications Commission 2017).

2.3. Pre-filing Financial Distress

2.3.1. CTF Acquisition: the leverage shock

In May 2015, Frontier Communications announced that it entered into a definitive agreement with its competitor Verizon to acquire their wireline operations in California, Florida, and Texas Frontier Communications Corporation (2015b). This transaction appeared highly promising for Frontier's future, as Management believed it would increase upside through a 35% growth in free cashflows per share and a 13-percentage point increase in the dividend payout ratio, from the already substantial 51% registered in 2014. (Frontier Communications Corporation (2015b).

The transaction closed in the first half of 2016 for a cash amount of \$10.54 billion, financed through the issue of \$8.2 billion of new debt and an equity component that generated approximately \$2.7 billion in net proceeds (Frontier Communications Corporation 2017a).

Taking all factors into consideration, the acquisition had an impact on Frontier's total debt of an additional \$8.33 million outstanding, a direct dilution of existing shareholders due to the issue of additional shares, and cash expenses totaling approximately \$1.82 billion.

However, the expectations for greatness were not reached. The integration of new geographies proved harder and more costly than initially estimated, making customer retention an extremely hard task. These difficulties hindered Frontier's ability to realize the economies of scale expected from the Growth Transactions (Frontier Communications Corporation 2020c).

In addition to integration, Frontier's weaknesses were also exposed by the macro challenges that changed the competitive landscape, such a shifting consumer preferences and growing demand for higher performance bandwidth (Frontier Communications Corporation 2020g).

By the second quarter of 2016, Frontier announced that \$250 million in cost synergies had been achieved, with an expected \$1 billion annualized effect (Frontier Communications Corporation 2016a). But, despite this optimistic projection, the Q2 results were already below expectation: while Frontier had nearly doubled its revenues, operating costs increased in a similar proportion

and resulted in a Net loss attributed to common stock of \$240 million by the end of the quarter. This trend persisted for the full year of 2016 (Frontier Communications Corporation 2017a).

On the stock side, since the transaction closed on April 1st, 2016, prices started a descending trend that would only stop with the delisting of the company with the Chapter 11 proceedings. **[Appendix 2]**. Only three months post transaction close, the stock had already dropped from the \$82.05 on April 1st to \$74.40 on July 1st – representing a decrease of 8.82% in one single quarter. The trend continued, and for 6 months post transaction the stock was priced at \$62.10. Finally, on the one-year anniversary of the transaction, the company's stock had dropped a staggering 62.52% (Bloomberg L.P. n.d.).

After more than one year of sustained net losses and negative earnings per share between 2015 and 2016, Frontier's outlook worsened post-acquisition. The company's last quarter with positive diluted earnings per share was Q4 2014, which marked the beginning of a prolonged period of continuous losses that extended until April 2020.

By May 2017, the stock had already dropped 41% year-to-date, and 60% on a trailing 12-month basis. (Bloomberg L.P. n.d.) On May 2nd, 2016, the non-adjusted stock price was \$1.68, and the company announced that it would be performing a reverse stock split with a 15:1 ratio with the goal of avoiding dropping below the minimum bid price for the NASDAQ stock exchange, (\$1 per stock), leading to the stock getting delisted (Frontier Communications Corporation 2017b).

This action became effective on the 10th of July 2017, where the price pre-stock split adjustment was \$0.9 at close, representing a 68% drop year-to-date and 77% on a trailing 12-month basis. Once prices were adjusted, stock was worth \$13.44 and FTR was no longer non-compliant with the minimum requirements for NASDAQ (Bloomberg L.P. n.d.).

2.3.2. Post acquisition strategy: Debt-focused management

Following the bold highly leveraged CTF acquisition, and an already less than optimal financial outlook, Frontier entered a continuous period of chronic instability and quick fixes. After the transaction, in October 2016, Frontier issued an additional \$315 million in a senior unsecured loan facility (due in 2021), mainly used for the repayment of other existing senior secured facilities (Frontier Communications Corporation 2016b). This was the first of a series of new debt issues to repay older notes which maturity would expire soon, laying out a clear picture of low short-term liquidity and the need to delay obligations to assess longer term liquidity solutions. (Frontier Communications Corporation 2020g).

In total, the company refinanced and issued additional \$3.81 billion to repay upcoming obligations, pushing back the maturity wall from 2021 to 2024, in a search for breathing room. After that, between March and April 2019, Frontier entered into amendments to its credit agreements, mainly with its bigger creditors JP Morgan Chase Bank and CoBank, ABC. And finally, finishing a saga of out-of-court deleveraging transactions, Frontier announced in May 2019 that they entered into a definitive agreement for the sale of its operations in Washington, Oregon, Ohio, and Montana, for \$1.352 billion in cash, which was called the Pacific Northwest Transaction (Frontier Communications Corporation 2020g).

Despite all efforts of clearing the runway period, inflating stock price artificially, and cleaning up the debt cap table, on December 16th, 2019, Frontier was notified by NASDAQ of its non-compliance with the minimum bid price. With this, Frontier entered a grace period of 180 days whereby it would be delisted by June 15th, 2020, if it had not been able by that point to maintain the stock price above \$1 for 10 days (Frontier Communications Corporation 2019d).

2020: the point of no return. At this point, the company had a knot around its neck: a very high leverage ratio, high interest payments due and the inability to raise capital on either debt or equity markets.

In March 2020, coinciding with the worldwide spread of the Covid-19 Virus, Frontier Communications performed its first interest payment deferral, in the amount of \$322 million regarding 4 different secured notes, due on the 16th, and thus entered a 60-day grace period for its payment (Frontier Communications Corporation 2020a).

Only 10 days later, the company announced that it had been in discussions with unsecured noteholders about potential deleveraging and restructuring options since January 2020. This announcement represented the company's first mention of a possible entry into a Chapter 11 legal procedure (Frontier Communications Corporation 2020b).

Under this notice, it was announced that the Board had approved the beginning of restructuring negotiations with advisories in September of 2019, culminating in a restructuring plan. This plan was based on a strong business shift from a legacy telecom provider to a next generation broadband provider with a fiber-based infrastructure, as it is right ahead assumed that a restructure based solely on debt and capital structure would not be sufficient to sustain operations and overcome the issues ahead (Frontier Communications Corporation 2020b).

Ultimately, the company ended up filing for bankruptcy under Chapter 11 of the bankruptcy code, with a pre-arranged \$10 billion debt haircut. (Randles and Kellaher 2020).

2.4. Chapter 11

2.4.1. The process: protection mechanisms and types of bankruptcy

Chapter 11 is the action of filing for court protection bankruptcy under the Title 11 of the United States Bankruptcy Code, under which cases are filled by or for companies (or individuals) in financial distress. It can be broadly viewed as an open window for a company that has reached the deep end, with the main purpose of developing a reorganization plan that allows it to emerge from the proceedings as a reorganized entity, in a way that permits its business continuity and the most beneficial outcome for the stakeholders involved (United States Courts 2024a).

This reorganization plan is a court-approved business plan developed by the debtor, that provides the creditors with a view on how the business will operate and how it plans to fulfill the outstanding liabilities at the moment of filing. Its purpose is reorganizing the current capital structure, in a way that satisfies the equilibrium between the claim holders' interests and the debtors' ability to continue operating (Edelboim Lieberman PLLC 2025).

The Chapter 11 Bankruptcy process can take one of three forms, which vary mainly on the assumed position of relevant voters on the plan: traditional bankruptcy, pre-arranged or pre-negotiated bankruptcy, or pre-packaged bankruptcy (S. Chehi et al. 2017). In a traditional Chapter 11 case, the company enters the proceedings without any clear picture of how it will emerge after bankruptcy, and with no restructuring agreement previously reviewed and/or approved by creditors. This implies a longer process, due to the months it takes to develop the restructuring plan, and the negotiating process for its approval. This is also the most detrimental option for the company, as the focus of the debtor is diverted from the company's continuity towards the lengthy obligations of the court proceeding (S. Chehi et al. 2017).

On the other hand, a pre-packaged Chapter 11 is the most certain of the three, as when the company files for bankruptcy, it files simultaneously a restructuring plan, which terms have already been pre-voted by most of the bondholders whose claims are adjusted in the plan (S. Chehi et al. 2017). This process combines protections provided by the Chapter 11 with the benefits of an out-of-court arrangement, as speed, cost efficiency and flexibility on both parts (American Bankruptcy Institute Journal 2005). However, this arrangement has limitations, as distributing impaired claims among multiple creditors can make pre-filing approval challenging and the process longer and more costly (American Bankruptcy Institute Journal, 2005).

In the middle of those, lies the pre-arranged Chapter 11. Under this type of case, there is no prior finalization of the restructuring plan or solicitation of votes and approval on it. However, there often is a Restructuring Support Agreement (RSA), or "Lock up", produced and delivered

to key stakeholders pre-filing, bidding them to support specific terms in the final restructuring plan, officialized within the proceedings (American Bankruptcy Institute Journal 2005).

The debtor is required to present multiple documents and disclosures, with the main milestones being centered around the RSA and Disclosure Statement. Following its delivery to creditors, approximately one and a half months later, the Disclosure Statement hearing takes place, where it is presented. The Plan confirmation takes place roughly one and a half months later, and this is the time where votes on the plan are solicited and cast. Finally, the period leading to emergence post-Chapter 11 is estimated at one-month post-confirmation (A. Rosenthal et al. 2019) [Appendix 3].

The end of a Chapter 11 case depends on multiple factors of the proceedings, circling back to the characteristics of the company and of the case itself. There are several exit strategies, and these must be considered by the company before entering the process. The strategy outlined can include one or more of the following: debt restructuring, whereby the company reduces the burden of debt by extending maturities or reducing interest rates and principal owed, asset sales of underperforming or non-core assets which proceeds can be used to repay the creditors, equity infusion of new capital equity, or equity swaps from debt, converting creditor claims into equity ownership, and even sale of the whole business as a going concern (liquidation under chapter 11). As a last resort act, the Chapter 11 case can be converted into a classic liquidation case, which is protected in the US Bankruptcy code by Chapter 7 (Berger 2023).

2.4.2. Management restructuring plan

Frontier Communications' Chapter 11 bankruptcy was pre-negotiated with a Restructuring Support Agreement (RSA) that was entered by more than 75% of the unsecured bondholders referred to as Consenting Noteholders (Frontier Communications Corporation 2020e). These Creditors were bound to accept the RSA to support and not impair in any way the agreement to

be filled under Chapter 11. (Frontier Communications Corporation 2020f). The conditions include a set of milestones to be followed, from the DIP financing and the Sale Motion of the Northwest operations to the commitment to file for Chapter 11, and delivery of the Disclosure Statement and Management plan for approval (Frontier Communications Corporation 2020f).

Regarding financial obligations during the proceedings, the RSA imposed that the company must pursue the DIP Financing in conditions acceptable for the company and the Consenting noteholders, as well as it must include an option to convert into an exit facility on the day the restructuring plan enters into force or be fully paid in cash if they do not choose to enforce the option. Additionally, it also requires that more exit facility financing must be acquired from other third parties, in the reasonable amount that would ensure the feasibility of the plan (Frontier Communications Corporation 2020f).

Finally, in addition to defining the term sheet [**Appendix 3**] with the treatment of each class of debt and equity holders, it also provides an additional consideration for the Management of the company post-emergence. This is called the Management Incentive Plan (MIP), which consists of a pool of 6% of the new tradeable equity to be issued after the proceedings on a fully diluted basis, where up to 50% of it is eligible to be distributed as emergence awards upon emergence from bankruptcy (Frontier Communications Corporation 2020f). Additionally, the RSA defined some guidelines for the Business Plan the company will elaborate. It binds the company to deliver to the Consenting Noteholders three different business plans: the base case, the reinvestment sensitivity case and an alternative reinvestment sensitivity case.

These reinvestment business plans should be based on four main premises, including the significant deleveraging of the company, the modernization of their network and improved customer service, with heavier investment on fiber expansion, more specifically Fiber-to-the-X – FTTx upgrades and participation in next generation Government subsidies (the “RDOF” program). Up to 120 days after the RSA effective date, the company would have to provide a

report on the developments and efforts applied to each of these objectives in detail (Frontier Communications Corporation 2020f).

2.4.3. Management Business Plan

The Management Plan for business continuity was publicly shared on March 27th, 2020, and it was presented in three different financial cases: the Business As Usual (BAU), which extended the trends observed and established in 2018; the Base Case, where significant operational improvements were planned, with light levels of capex; and the Reinvestment Case, with the realization of some investment opportunities that have been identified in the past (Frontier Communications Corporation 2020b).

Across the three cases, lowering the company's dependency on Legacy services was central, as they are declining in demand and in revenue, due to the fast growth of broadband technologies (Frontier Communications Corporation 2020b). They vary, however, on how aggressively the company pursues this transition from aged copper into modern fiber infrastructures.

As mentioned, the company is at this point part of the beneficiaries of the CAF II. In June of 2015, Frontier accepted an offer by CAF II that provided them with \$280 million annually, but these revenues will expire by the end of 2021 (Frontier Communications Corporation 2020b).

However, in the regulatory segment, Frontier has the possibility to bid for the Rural Digital Opportunity Fund (RDOF) auction – a successor to the CAF II. This program is expected to start generating revenues as soon as possible, in case their bid is a winner (Frontier Communications Corporation 2020b). It is important to note that this program is highly competitive and involves a higher level of capex requirements when compared to the CAF II bidding process, making the decision to apply a more pondered one than before.

In 2018, Frontier Communications commenced, amid some restructuring operations, a Transformation plan, which they named the “Journey Forward”. This program had the objective

of improving revenues and operational efficiency and catching up with competition within a rapidly changing technology industry (Frontier Communications Corporation 2019a).

They started developing what they refer to as “next-gen architecture”, including products like SaaS based multiscreen video services, and enterprise solutions such as Unified Communications as a Service, which brings together communications through a cloud delivery model, software-defined Wide Area Network (SD-WAN), a tool used to manage and optimize company’s network, Connect-Cloud ethernet network, and managed security offerings (Simply Wi-Fi Secure) (Frontier Communications Corporation 2019a).

In the 2019 annual report, Frontier recognized the challenges faced by these programs and meeting customers’ needs, which resulted in them drastically reducing the impact of the program in their business forecasts in the second quarter of the year and rethink the strategy thereafter Frontier Communications Corporation (2020c).

2.5. Industry Overview

2.5.1. The telecommunications industry

The telecommunications industry covers all systems that allow for information to travel over distance, either via voice, text or video. That transmission can happen via different electronic infrastructure, broadly divided into wireless, wired and satellite networks (Skill-Lync, n.d.).

The main difference between wireless and wired is the means through which information travels. On a wired network, communication is done through physical cables, that connect the source to the destination (nodes), and this usually provides faster communication due to the dedicated pathway the physicality creates. The most common wired technologies are copper (DSL), fiber, and coaxial cables, and they differ mainly on their bandwidth which is the quantity and speed of data they can transmit to the destination (Skill-Lync, n.d.).

On the other hand, wireless networks work through transmission by radio waves that connect mobile and fixed devices and is often used when the wired networks are not feasible (for example, in rural areas and lower density areas). The most common wireless network in the Wi-Fi network, among others like Bluetooth and cellular networks. These provide mobility to users, allowing mobile phones and other devices to stay connected without being physically tethered. With this, wireless systems still heavily rely on wireline networks, as the main signal still requires a physical infrastructure to reach the core network (Skill-Lync, n.d.).

Satellite emerges as an alternative to the other two, being used mainly when both wired and wireless networks do not provide efficient solutions. It works via transmission of information between two artificial satellites: one at the origin of the signal (the telecom's base), and the destination (like the household or office building) (Skill-Lync, n.d.).

In another front, the telecommunications industry is also marked by the add-on services that provide additional value to their customers, which include security and managed networks, mainly for businesses, cloud-based solutions and IoT connectivity (Skill-Lync, n.d.).

The telecommunications industry provides connectivity services through fixed and mobile networks, enabling voice, data, and video transmission. Operators such as Frontier, AT&T, Verizon, and Lumen generate revenue primarily from broadband subscriptions, enterprise data services, and, to a lesser extent, voice and television bundles (Frontier Communications Corporation 2020c).

Wireline broadband spans multiple physical transmission technologies, each with different performance, cost structures, and competitive positions in the U.S. telecommunications landscape. Although grouped under a common category, these technologies rely on distinct infrastructures, and operators often combine them to optimize costs, capacity, and service reach.

Copper-based broadband: Digital Subscriber Line (DSL) delivers broadband over traditional copper telephone lines. Its performance is heavily dependent on distance from the central office, with speeds generally inadequate for modern bandwidth-intensive applications. As a result, DSL has been in secular decline throughout the 2010s, making it one of the least competitive modern broadband technologies, particularly in markets with cable or fiber alternatives (Federal Communications Commission 2018). The rapid decline in competitiveness from DSL is a constant source of concern for ILECs such as Frontier, whose legacy service areas remain deeply copper weighted. (Frontier Communications Corporation 2020c). Copper networks also carry higher maintenance costs due to aging physical plant and environmental degradation.

Hybrid-Fiber-Coaxial (HFC): HFC networks, primarily deployed by cable operators such as Comcast and Charter Communications, combines fiber backhaul with coaxial cable running to customer houses. Coaxial cable supports significantly higher bandwidth than copper twisted pair, making HFC a competitive broadband solution, with the FCC consistently reporting HFC as outperforming DSL and many FTTN deployments (Federal Communications Commission 2018). Cable operators such as Comcast and Charter, leveraged HFC to gain market share in suburban and urban markets at the expense of copper-dependent ILECs.

Fiber-to-the-Home (FTTH): FTTH delivers fiber directly to the customer, offering superior speed, reliability, and low latency. Frontier operates FTTH in select markets, but its 2019 footprint remained limited due to capital constraints, making accelerated FTTH deployment central to its restructuring strategy (FCC, 2018; Frontier Communications, 2020c).

Fiber-to-the-Node (FTTN): FTTN combines fiber backhaul with copper for the last mile, offering higher speeds than DSL but below HFC or FTTH. Frontier used FTTN where full FTTH was cost-prohibitive, though by 2019 it lagged consumer expectations in competitive markets (FCC, 2019). Operating DSL, FTTN, and FTTH added complexity, with older copper networks increasing costs, lowering ARPU, and driving churn, while fiber-rich competitors

expanded. Additionally, wireless broadband emerged in the late 2010s as a growing threat to traditional wireline providers.

Mobile wireless broadband (4G LTE and 5G): Mobile carriers such as Verizon, AT&T, and T-Mobile expanded unlimited data plans and improved network performance, enabling smartphones and mobile hotspots to substitute for fixed broadband for certain customer segments. The introduction of 5G, though still early in 2019 and the first quarter of 2020, accelerated this trend by providing higher throughput and lower latency (CTIA 2019).

5G Fixed Wireless Access (FWA): The most significant disruptive force to wireline broadband has been 5G Fixed Wireless Access, using radio links between a base station and a receiver mounted at the customer house or apartment. FWA offers much lower deployment costs than building fiber, competitive download speeds and attractive economics in rural/suburban areas where fiber deployment costs are prohibitive (GSM Association 2019).

The wired segment is the traditional telecommunication network, which operated for decades as a heavily regulated market sealed off to competition. These limitations culminated in the definition of ILECs – Incumbent Local Exchange Carriers – which held, at that time, the regional monopoly of telecommunications in specific areas. In 1996 the market was open for competition by the FCC through the Telecommunications Act of 1996, imposing obligations on ILECs, including nondiscriminatory interconnection, access to unbundled network elements, and wholesale resale requirements (Waltzman 2013).

2.5.2. Industry Drivers and Growth trends

The global telecommunications sector grew between 2014 and 2018, with total revenue increasing from \$1.10 billion to \$1.18 billion, reflecting a CAGR of approximately 1.7% (FAIST 2018). During this time, the industry was experiencing rising broadband demand and gradual modernization of network infrastructure.

Over the last ten years, there have been big transformations in the US telecom and broadband sector, especially regarding technological innovations, changes in consumer behavior, and binding regulations. In this case, the rapid evolution in fiber-optic networks, characterized by higher bandwidth, reduced latency, and improved dependability, has facilitated the movement toward gigabit-speed connectivity. (Stone 2015). Meanwhile, growing digitalization has eased both households and firms into cloud-based services, streaming, remote work, and data-intensive applications, thus reinforcing demands for last-mile infrastructure. (Stone 2015).

This is where the Fiber-to-the-Home (FTTH) advancements become essential. In the US, FTTH has started to outgrow legacy copper broadband, after surpassing DSL in the most common home internet connectivity medium, being second only to coaxial cable. Unlike copper, fibre delivers faster speeds, lower latency, and reduced maintenance costs, making it the benchmark for future broadband competitiveness (Broadband Stakeholder Group 2019).

However, despite proving all the advantages mentioned above, building and maintaining large-scale networks requires enormous upfront investment, which was not at the reach of the smaller providers in the market (KPMG 2019)

Due to the high barrier to entry of those networks, the investment in FTTH has largely been made by incumbents in the industry, representing over 70% of all connections, and its adoption is expected to continue. In 2018, it was estimated that 39 million houses in the United States were already passed by fiber (Engebretson 2019).

It is important to note, however, that the value of a network is not determined solely by the number of houses passed with fiber, but also by how many of those households adopt the service. Higher penetration rates strengthen revenue stability and spread the costs of network deployment across a larger base of subscribers. In this sense, fiber penetration is both a measure of competitive strength and a key driver of future cash flow.

This implies that the upside potential that FTTH updates provide is not solely based on capital availability, but also on the ability of the company to appropriately acquire and maintain the households the infrastructures pass by. This dynamic impacts especially the rural and less populated areas, as they are seen by players as non-profitable, since they do not allow for this extremely important cost dilution factor.

The need for broadband and resilient networks is evident, as preferences are shifting, and the consumer is demanding better quality connections. According to Cisco's Annual Internet Report, by 2023 the number of devices connected to IP networks (Internet Protocol Networks) will be three times the global population, with staggering 3.6 networked devices per capita across the world, up from 2.4 in 2018, with the consumer segment representing 75% of total devices (Cisco 2020). This is a clear indication that the usage consumers are aiming for is not possible without a deep modernization of the main infrastructure.

It is to note that, although consumer is currently and is expected to continue being the biggest share of the market, the commercial segment will grow the fastest, at a 12% CAGR in the 5-year period studied in the report, compared to the 9.2% of consumer segment. Despite the visible explosion worldwide, North America is the region with the most stable number of internet users between 2018 and 2023, from 90% to 92% of internet users as a percentage of population. (Cisco 2020).

Today, the number of networked devices per capita is expected to grow by 63% in 5 years, from 8.2 in 2018 to 9.4 devices per inhabitant in 2023. Additionally, by 2023, it is expected that c. 66% of all flat-panel televisions are 4K in video definition, which represents a 27% CAGR from 2018 to 2023. (Cisco 2020).

This evolution in connected devices is an added indication that FTTH is the path to follow, as it is the network that is expected to support the full length of data required by consumers.

Additionally, a huge trend in telecom, specifically in the value-add sector, is the accelerated growth of Internet of Things (IoT) applications, driven by the growth of M2M (Machine to Machine). M2M corresponds to the connectivity between machines/devices, without human intervention, and it has multiple practical applications, such as smart homes, industrial automation, security monitoring, among others, with applicability across all sectors of activity. (Matooma 2012). According to the Report, the smart home applications will represent nearly half of all M2M connections in 2023, with M2M applications in general reaching 50% of all connected devices by 2023 (Cisco 2020).

On the wireless side, with the increased demand for mobility, mobile devices are evolving from the most basic network connectivity with 2G, to the most advanced next generation 4G and new 5G. This puts a lot of pressure on providers to be able to match the needs of the new applications and growing number of end users with an optimized bandwidth management new monetization practice that allows the implementation of the most advanced protocols (Cisco 2020).

Outside of the product and service scope, the industry is further shaped by external forces such as regulation and competition. Public policy and government subsidies play a central role (Gillett and Tseng 2001), particularly in rural markets where Frontier is most active. Access to federal and state broadband programs can create opportunities to expand coverage, but reliance on subsidies also introduces uncertainty. At the same time, competition from cable providers, wireless broadband, and new satellite-based services has intensified, putting pressure on prices and customer retention “Competition Issues in Television and Broadcasting 2013” (n.d.).

Finally, customer loyalty remains an enduring source of value. Companies that can minimize churn and deliver reliable service enjoy a more stable cash flow base and lower acquisition costs. Here again, the copper-to-fiber transition is critical, as legacy customers tied to older networks are more likely to leave due to lagging services, while fiber adoption strengthens retention (McKinsey & Company 2019).

2.5.1. Competitive Dynamics and Peers

The U.S. broadband market is characterized by high capital intensity, requiring substantial upfront investment in infrastructure with long payback periods. This creates significant barriers to entry, giving established players a competitive advantage. These structural barriers continue to reinforce the dominance of established players, particularly incumbent local exchange carriers (ILECs) and cable multi-system operators (MSOs). Regulatory frameworks historically favored incumbents through spectrum allocations, rights-of-way access, and universal service obligations, while the complexity and expense of building facilities-based networks further deter new entrants (Taylor 2006).

However, the same high capital requirements also pose substantial financial risks, particularly for companies with large debt loads or declining user bases. Moreover, technological advances such as 5G Fixed Wireline Access (FWA) and satellite broadband have intensified competitive pressures on traditional wireline carriers.

[Appendix 4] provides a peer comparison divided into four tiers, ranked by strategic and operational similarity to Frontier Communications. The table also presents selected financial metrics used to benchmark Frontier's performance against relevant industry counterparts.

Tier, I consist of regional ILECs whose business models most closely resemble Frontier's legacy operations. Unlike national carriers such as AT&T or Verizon, these companies operate highly localized wireline networks (such as Alaska Communications operating solely in the state of Alaska), often inherited from historical monopoly territories. They typically manage a mixed asset base that includes legacy copper (DSL), partial fiber deployments (FTTN/FTTH), and enterprise transport networks. It is worth noting that, Windstream underwent a similar restructuring process being faced by Frontier at the present, giving indication that the financial woes are possibly industry-wide (Windstream Holdings, Inc. 2019).

Tier II contains broader telecom carriers, which operate nationally across both wireless and wireline segments. The “big three”, AT&T, Verizon, T-Mobile and Telephone and Data Systems compete with Frontier through overlapping wireline networks, while benefiting from diversified wireless revenues. They are structurally different peers but increasingly relevant as 5G Fixed Wireless Access (FWA) directly challenges traditional wireline providers like Frontier (GSM Association, 2019).

Tier III comprises cable companies and alternative broadband providers whose infrastructures differ fundamentally from ILECs. Cable MSOs such as Charter and Comcast operate HFC networks, enabling gigabit-capable downstream speeds at comparatively low incremental cost. These operators have consistently gained broadband market share from telecom companies over the last decade, driven by superior speeds relative to DSL and many FTTN deployments (Federal Communications Commission 2018).

Competitive broadband operators within this tier (i.e., CableOne) deploy targeted broadband infrastructure in suburban, exurban, and rural markets (markets targeted by Frontier). Their business models rely on high-ARPU geographies and efficient capital allocation, often positioning them favorably against capital-constrained traditional wireline carriers.

Tier IV encompasses satellite broadband operators that use geostationary (GEO) or low-earth-orbit (LEO) systems to deliver connectivity. While not direct competitors in most urban and suburban markets, these providers serve as substitutes in remote or underserved regions, where Frontier maintains presence. Satellite broadband carries higher latency and lower throughput than terrestrial networks (except emerging LEO solutions), making Tier IV less relevant as a financial or operational benchmark. However, their role in universal service markets and FCC rural funding programs means they exert competitive pressure on Frontier’s rural subscriber base (Federal Communications Commission 2018).

Profitability in telecom is closely tied to customer revenues. The ability to increase average revenue per user whether through premium speed tiers, bundled services, or added features creates opportunities to enhance margins and support reinvestment. Frontier struggled to achieve the same revenue intensity as some of its larger peers [Appendix 5], which left it with fewer resources to fund network upgrades and, reduced its ability to compete with the most advanced players in the market (Frontier Communications Corporation (2020c).

At the same time, Frontier has been facing a growing customer churn across all products and customer segments, being linked to the lack of speed in most of their products, related to their high dependence on slow and out of date copper connections.

Taken together, all these factors highlight the dual challenge that Frontier faced within the U.S. telecommunications landscape. Success in the industry increasingly depended not only on large-scale technological investment, particularly in fiber, but also on the financial flexibility required to sustain such capital-intensive projects over time. While national peers like Verizon, AT&T, and Charter leveraged stronger balance sheets and economies of scale to accelerate fiber deployment (and sometimes even the cheaper option of FWA rollout), Frontier's constrained financial position limited its ability to keep pace.

In parallel, Frontier's legacy revenue streams in video and voice, once core pillars of its business model, were undergoing a structural and irreversible decline (Frontier Communications Corporation 2020c). The company's traditional pay-tv offerings, provided both under its own brands and through its partnership with Dish Network, faced intensifying competition from over-the-top (OTT) streaming platforms such as Netflix, Hulu, and Amazon Prime Video. These digital services, which operate outside traditional broadcast regulations and benefit from substantially lower cost structures were being adopted really fast, especially in the outset of the Covid-19 pandemic.

Likewise, the fixed-line voice segment continued to contract as consumers increasingly shifted toward mobile and internet-based communication platforms such as FaceTime, WhatsApp, and Zoom, which offer greater flexibility, integration, and lower costs compared with legacy landline services. While voice services retained some relevance in the enterprise market particularly for business continuity and security reasons overall demand contraction further constrained Frontier's cash flows and strategic flexibility. These combined technological and structural headwinds ultimately weakened Frontier's competitive position and contributed to its eventual need for restructuring.

Compared to its national peers, Frontier remains considerably smaller in both revenue and customer base. In 2019, Frontier generated approximately \$8 billion in revenue (Frontier Communications Corporation 2020c), compared to AT&T's \$181 billion (AT&T 2019), Verizon's \$131 billion (Verizon 2019) and Charter's \$45 billion (Charter Communications 2019). This disparity reflects Frontier's regional footprint focused on secondary and rural markets, while competitors operate nationwide with diversified ...divisions.

Among peers, Lumen Technologies (formerly CenturyLink) represents the most comparable operator, sharing a focus on wireline and enterprise broadband services. However, even Lumen's broader fiber reach and enterprise client base supported a more stable cash flow generation relative to Frontier's declining copper network.

As mentioned, Frontier's infrastructure in 2019 was predominantly copper based, resulting in slower speeds, higher maintenance costs, and lower customer retention. In contrast, AT&T had 3.8 million fiber connections (AT&T 2019), Charter nearly 30 million broadband customers (via a hybrid fiber-coaxial network) (Charter Communications 2019). These operators leveraged greater fiber penetration to sustain stronger pricing power and lower churn, key determinants of long-term profitability in the sector.

2.6. Financial Overview

2.6.1. Operating Performance

[Appendix 6] and **[Appendix 7]** display the company's reported financials up to FY 2019. Frontier's financial performance in the previous five years is a textbook case of a highly leveraged corporate finance strategy, where aggressive, large-scale acquisitions ultimately failed to offset structural operational decay, precipitating a distressed investment situation recording massive asset impairments and profound liquidity challenges. **[Appendix 8]** provides the company's reported revenue breakdown by year and except for 2016, Frontier recorded a topline decline every year since 2015. At a superficial level this could potentially be attributed to an underperformance of voice and video services, their second and third largest segments, while Data and Internet Services was stable, even recording a growth from 2016 to 2017.

Despite the massive infusion of customers and revenue from the CTF acquisition, the enterprise quickly displayed severe operational leakage, a common characteristic in roll-up strategies that fail to realize expected synergies. Total consolidated revenue peaked at \$9,128 million in 2017, driven largely by recognizing a full year of CTF operations compared to only nine months in 2016. However, the core underlying business showed continuous erosion. Excluding the CTF operations, the legacy business saw revenue decline by \$302 million, or 5%, in 2016 compared to 2015. This decline was structurally driven by ongoing net customer losses, particularly the continuing erosion of voice services revenue due to competition and the availability of substitutes as previously described. Consumer customer churn notably increased from 1.98% in 2016 to 2.17% in 2017. By 2019, this compounding operational decline resulted in consolidated revenues falling to \$8,107 million.

Another evidence of Frontier's structural issues lies on its customer numbers, **[Appendix 9]** provides the breakdown of Frontier's reported customers and customer-related metric per year

between 2015 and 2019. Since before the CTF acquisition, Frontier was losing customers across all its business lines. Between 2016 and 2019 Frontier lost 1,858 thousand customers. As a basis for comparison, 2,533 thousand customers were acquired at the time of the CTF acquisition, meaning that Frontier lost the equivalent of approximately 78% of all customers acquired just three years after the acquisition.

The failure of the acquired assets to perform as modeled, coupled with the persistent decline in legacy operations, directly impacted profitability and led to significant write-downs, which are critical indicators of distress for special situations investors. The net loss attributable to shareholders accelerated from \$316 million in 2015 to \$587 million in 2016. Most starkly, Frontier recorded massive goodwill impairment charges, totaling \$2,748 million in 2017 and a further \$641 million in 2018, amounting to approximately \$3.4 billion in two years. These impairments signal a material acknowledgment that the enterprise value and expected cash flows generated by the acquired assets were drastically lower than the purchase price premiums paid, confirming that the CTF deal, the central element of Frontier's expansion strategy, failed to increase value for shareholders.

3. GROUP ANALYSIS

3.1. Financial Analysis

To properly value Frontier Communication as a going-concern, investors, creditors, and management must normalize, or adjust past financial statements to ensure that the company's reported financial statements faithfully represent its core economics and purely operational reality. This is particularly important in distress situations, where reported earnings, balance sheets, and cash flows often reflect one-off impairments, or legacy accounting distortions.

According to (Koller et al. 2020, 211–46), restating historical financials is a necessary first step to isolate the company’s “normalized performance,” remove non-operating distortions, and establish a credible basis for forecasting.

To restate or “normalize” the financial statements, one must make reasonable assumptions on what items are operational and recurring, and which are either non-operational (such as unfunded pension contributions) or non-recurring such as restructuring charges, which, all things considered, shouldn’t be expected to be incurred in the long-term, unless there is something structurally wrong with the company and thus maybe exploring a liquidation may be the best avenue to generate value to stakeholders. **[Appendix 10]**, **[Appendix 11]** and **[Appendix 12]** present Frontier Communication’s normalized Income Statement, Balance sheet, and Free Cash Flow Bridge, respectively.

The adjustments to the income statement are straight forward: goodwill impairments, acquisition and integration costs, losses on the disposal of the Northwestern Operations, and restructuring costs and other charges are all related to Frontier Communications’ past and current M&A transactions. Given its financial woes and the reality of a Chapter 11 bankruptcy filing, it is reasonable to assume the company will not pursue future acquisitions in the foreseeable future. Moreover, as is the case with the goodwill impairments, we assumed that no additional charges will be incurred going forward as goodwill approach zero in 2019.

As for the balance sheet adjustments: Assets and liabilities held for sale (primarily tied to the Northwest divestiture) were excluded from invested capital. Additionally, we removed pension and postretirement liabilities, as well as certain long-dated regulatory and environmental accruals that are better treated as non-operating.

It is important to note that the normalized statements presented here still include the results of the Northwest Operations on a historical basis, whereas the pro forma operating model

developed in later sections reflects Frontier’s post-divestiture financials. As a result, users should be cautious in comparing trends between the restated financials and forward-looking forecasts. **[Appendix 13]** summarizes the main profitability, liquidity and leverage ratios on a pro forma basis.

A review of Frontier’s normalized financials reveals the nature of its distress. While EBITDA margins and free cash flow margins remained relatively stable, topline performance steadily deteriorated. Between 2017 and the trailing twelve months ending March 31, 2020, revenue declined at a compound annual rate of approximately –4%, while free cash flow fell by 9% over the same period. These figures indicate that Frontier’s core issue was not profitability but structural revenue erosion, rooted in declining legacy wireline operations, operational leakage from past acquisitions, and lack of investments legacy infrastructure due to the high debt load.

This revenue pressure was compounded by an unsustainable capital structure. As of March 31, 2020, Frontier’s debt-to-pro forma EBITDA and net debt-to-pro forma EBITDA ratios stood at 5.7 times and 5.4 times, respectively. From **[Appendix 4]** it is possible to derive the Debt-to-EBITDA multiples from Frontier’s peers from tiers I to III, and from this assessment we can see that the mean and median Debt-to-TTM EBITDA lie between 2.8 – 4.2x. Furthermore, Moody’s Telecommunications Service Provider rating methodology (Moody's 2025) assigns credit ratings in part passed on such leverage ratios, with a Baa rating for firms between 2 – 3x, Ba for 3 – 4x, and B for 4 – 6x. This would imply that Frontier’s capital structure would align with non-investment grade or “junk” status credit rating.

Taken together with successive credit downgrades and constrained liquidity leading up to the Chapter 11 filing, the company’s financial position by early 2020 had become unsustainable. However, this does not necessarily imply that liquidation was the optimal course. A critical indicator of going-concern value is the company’s return on invested capital (ROIC). In

Frontier's case, ROIC stood at 12.21% for the trailing twelve months which was still below its 2017 level of 14.75%, but recovering and, even more importantly, trending upward.

When a firm's ROIC exceeds its weighted average cost of capital (WACC), the company is creating value for its stakeholders, and continuing as a going-concern or restructuring should be preferred to liquidation (Koller et al. 2020, 17–25, 211–46). Therefore, further exploring is warranted in order to confirm whether Frontier's ROIC remained above likely post-restructuring WACC thresholds. Thus, supporting the case for a Chapter 11 restructuring as a value-maximizing alternative to liquidation or sale.

3.2. Operating Model (management case is going concern)

To properly compare the value generated by each restructuring option – i.e. emergence from Chapter 11, out-of-court restructuring, or sale to a PE firm –it is important to benchmark each option against a theoretical going-concern (we'll also weight each option against a potential liquidation, book value of debt, and market value of debt). As part of the Chapter 11 filing, management has 120 days to file a plan and give sufficient information for creditors to appropriately weight their options when voting to accept or reject such plan (United States Courts 2024b). In Frontier Communications presentation to bondholders (Frontier Communications Corporation 2020b). Frontier's management team provided several operational assumptions for a theoretical going concern scenario, we have named this set of assumptions as "the management plan".

Given the unique impact of the COVID-19 pandemic and the reputational and operational challenges of a potential Chapter 11 filing, we constructed a separate, more conservative "Base Case." This model adjusts selected operating lines to reflect heightened near-term uncertainty. In all instances, revenue, subscriber, and cost projections exclude the Pacific Northwest operations divested in early 2020 and are adjusted accordingly. Due to these changes, historical

financials in the operating model are different from those in the restated financial statements shown earlier. These operating scenarios will be further adjusted depending on the path chosen by the company, be it due to the PE investor projecting additional synergies, higher customer churn projected from a long Chapter 11 process, or other considerations.

As Covid spreads across the world, countries have started to implement emergency measures that affected directly the population and the nation's economy. In the United States, on March 19th, 2020, the first state of the United States emitted a state-wide order for the population to stay home (Kates, Michaud, and Tolbert 2020).

However, consistent with the observed in prior economic downturns, telecommunications is a resilient industry (Frontier Communications Corporation 2020f). As a statement to the relevance of the sector, the Federal Communications Commission (FCC) announced on March 13th, 2020, the Keep Americans Connected Pledge (KACP), which ensures connectivity of all consumers, regardless of their ability to pay for services during the harsh reality of the Covid-19 pandemic. The pledge was signed by more than 800 telecommunications providers and supports that customers (both residential and small businesses) shall not see their services terminated due to their inability to comply with payments, derived from difficulties of the pandemic, and that late fees related to the pandemic circumstances must be waived (Federal Communications Commission 2020).

Accordingly, these circumstances will affect Frontier, specifically in customer acquisition and services requiring home installment, but the base case model assumes short-term impact with a longer recovery and assumes no direct impact on the following years (Frontier Communications Corporation 2020f). However, it is relevant to note that the company's bankruptcy will create a harsher environment, as the negative reputation effects on customers and suppliers are compounded with difficulties of the specific period.

3.2.1. Consumer segment revenues

A bottom-up approach was used when building the projections for Frontier's consumer segment – subdivided into Fiber broadband, Copper broadband, TDM Voice, VoIP, TV Blend, and Other) – representing 51% of the company's revenues in 2019 pro forma of the Pacific Northwest sale (Frontier Communications Corporation 2020c). Revenue was constructed as Average Revenue Per User (ARPU) multiplied by the number of subscribers for each service line. The model assumes the ARPU will grow at the expected inflation for each year, sourced from the IMF (International Monetary Fund 2019). This assumption is based on Frontier's management commentary about the difficulties in raising prices given competition.

Within the consumer segment, more specifically Fiber broadband, management projected a slowdown in churn, followed by an increase in subscribers by 2022. Considering the stay-at-home orders and the necessity of working from home, access to high-speed internet and reliable communication services becomes crucial to all householders in the United States. This creates a true driver of fiber revenues, as it is the most advanced way to provide these services. This assumption is further supported by its 2020 first quarter performance, where Frontier experienced a 10% rise in gross subscriber additions immediately after the lockdown was imposed. (Frontier Communications Corporation 2020f).

The company's network currently passes 14 million broadband capable houses, of which only 3 million are fiber, representing only 21% of their total broadband network. Despite having a low presence of this technology in their network, Frontier's fiber penetration rate of 40% in 2019 (Frontier Communications Corporation 2020f) is in line with the industry's 44%, according to the Fiber Broadband Associates 2019 report (Engebretson 2019). Furthermore, in this report, it is mentioned that penetration rate is expected to decrease slightly in the short run, given the high levels of fiber deployment expected, and given that the take rate takes some years to catch up (Engebretson 2019).

Management's assumption on fiber subscriber count implies a decrease in penetration rates in the next 5 years, which is not aligned with the broad market trend. This is especially relevant considering that take rates are expected to go down in general due to a dilution effect derived from high fiber deployment, which Frontier will not experience, as no significant capex expansion is assumed in the management plan. The base case model adjusts for the balance between the economic turmoil of the pandemic and the increasing need for high-speed fiber services and expects resistance from this segment. These adjustments yield a 0.43% 5-year subscriber CAGR, versus -0.34% in management's case.

On copper, the effect is expected to be symmetrical to the fiber-based service line. For this segment, Covid arrives as a double sword, whereas customer purchasing power starts decreasing, and at the same time their expectations and demand for better internet and phone services continue to grow exponentially. Maintaining the same level of infrastructure, penetration for this segment is expected to decrease from c. 13% in 2019 to 9.3% by 2024, which reflects a -7,50% 5-year CAGR, compared to the -6.5% 5-year CAGR expected in the management case.

The TDM Voice market had been experiencing a substitution effect, as customers switch to the more flexible and lower maintenance option of VoIP services, which the current trend of demand for better products suggests will intensify. Due to the easier and generally remote installation, VoIP will experience a much lower churn. However, since this service is not considered as essential as fiber broadband in current circumstances, the positive effect of improvement is not expected to override the reputational issues of a potential chapter 11 filing, which will drive consumers to search for alternative providers with lower continuity uncertainty. Based on this, the model reflects growing gross adds, but net continuous churn.

Lastly, the TV and Video services were identified by the company as margin slimming offerings, with decreasing demand for traditional TV, and growing COGS for those products

(Frontier Communications Corporation 2020b). In accordance, they have expressed their intent to move towards more digital and streaming-like services, which are growing in demand expected to continue, as people are forced to stay at home. However, it is relevant to consider that these services offer low resistance to change on the consumer side, which implies that it is highly sensitive to performance and reputational concerns. On the basis of these dynamics, the operating model reflects a continues churn, with lower intensity than management considerations, generating a -12% 5-year CAGR in customer growth in our base case, compared to a -13,21% 5-year CAGR on the management case.

3.2.2. Commercial segment revenues

On the commercial customer segment, the effects of the pandemic are expected to generate significant impact, especially on the small business bookings, but with limited effect due to the relative insulation of industries serviced. Frontier performed an analysis on its commercial client composition, rating each industry based on the ARPU and churn risk they are exposed to. From this analysis, they have identified that only 20% of total commercial revenues is at high risk, and 25% considering just the small business segment (Frontier Communications Corporation 2020f).

To contradict this, the FCC's KAPT was applied to both residential and small business customers, which has the potential to shield the company from a significantly higher customer churn. However, general small business behavior, especially in the rural area, which represents the majority of Frontier footprint, tends to react harder and faster, and is expected to experience more difficulties due to lack of cash buffers and direct reduction of customers. Accordingly, the commercial revenues are expected to decrease significantly and permanently, as small businesses represent a significant share of total customers.

The fiber broadband commercial segment will experience a dual effect. Management shall focus on the retention of large resilient enterprises, in order to overcome the sharp decrease in first years, driven by the decline of small business customers, which will be impacted by the higher demand for faster broadband connectivity, at par with the consumer segment.

Therefore, for the purposes of the base case, this segment will suffer from an initial shock in revenues, with a neutral net change from 2019, followed by a slow recovery, as a significant portion of small business loss is expected to be permanent. This culminates in a 5-year CAGR of 0.77%, contrasting with the initial management projections of 2.94%.

Considering the same dynamics as in the consumer segment copper broadband, the combination of low performance and bad customer experience with the growing lack of trust from the bankruptcy proceedings, leads to a decrease in copper broadband revenue close to 11% in 2020, culminating to a gross loss in revenues of c. \$41 million from 2019 to 2024.

The deterioration in copper revenues will be similarly reflected in the significant loss of TDM voice revenues, with double digit losses from the first projected year. In the commercial segment, the substitution effect of VoIP is higher than in consumer segment, as the magnitude of its efficiencies is intensified. The ability to remotely monitor the system and the necessity of lower maintenance efforts create clear benefits for businesses, motivating the switch towards the alternative, and sometimes towards competition (Yeastar 2020).

On the other hand, the data business line, which includes both legacy and ethernet products, is expected to be a pillar of company's functioning in this environment. In addition to the already deployed efforts to increase penetration of ethernet services, and to upgrade the customer's hardware, this segment's contribution to total revenue is expected to grow in the forecasted period, in accordance to management projections (Frontier Communications Corporation 2020b).

This market behavior reflects positively on the last line of commercial products – what frontier mentions as next-gen products. As companies close their offices and the work from home trend intensifies, the demand for cloud-based solutions and optimized online video, call and chat software is expected to spike. Nevertheless, it is important to note that, as companies switch to these business solutions, they may prefer more stable and predictable providers to ensure longer-term service, which makes the Chapter 11 proceedings a significant halter of this growth. With this, considering both effects, the model incorporates management expectation of tripling revenues between revenues in 2019 and 2020 (from \$5 million to \$15 million).

3.2.3. Wholesale segment revenues

Lastly, the company offers wholesale services, which comprise services between telecommunication peers. As several contracts in these products are expected to expire in the following year, management’s business plan reflects a allow reduction of these services, supported by the belief that it will allow for price increases and improved margins (Frontier Communications Corporation 2020b).

However, considering the current harsh environment, which does not provide head room for price increases, and the bankrupt status of the organization, the base case operating model expects a harsher decrease in this segment, as the expired contracts constitute an opportunity for consumers to switch to competitors with very low resistance.

3.2.4. Costs

The cost structure projections presented by management are based on several efficiency improving assumptions, which execution will not be further impacted by the covid pandemic or the chapter 11 proceedings. As these efficiencies are tied to structural internal optimizations and do not demand increased spending. The Chapter 11 mechanism provide environmental protections, which allow for the execution of operational improvements through additional

liquidity and reduction of pressure from creditors, thus allowing the company to truly focus on operational management.

Covid, on the other hand, is assumed to have an impact on costs, but not on the overall margins. The model incorporates the Cost of Goods sold and Selling, General and Administrative margins to remain stable and as projected by management. However, since covid impact is reflected as a bad credit event rather than an operating disturbance, the bad debt expenses will generate negative impact both in the Profit and Loss cost structure and on the working capital needs. While not significant on a stand-alone basis, the KACP protections, combined with Covid-related customer paying behavior, the company's collection of accounts payables capabilities will be severely hindered, especially in 2020.

Despite the current market behavior suggesting an increase on the sales made on credit, reflected in an increase of gross accounts receivable to 15% of sales, compared to the stable 10% of the past, most of sales made on account are considered as bad debt expense, due to the low probability of collection. Therefore, the gross increase in 35% of the accounts receivables is fully be absorbed by the 5 times increase of bad debt expense, which increases allowance for bad creditors by more than 300%. Overall, this reflects the bad credit characteristic of a covid pandemic environment, combined with the reduction in the ability of the company to collect its credits, associated with bankruptcy effects.

In 2021, the balance sheet will inherit the significantly high allowance for bad credits, which will be mostly written out, confirming the no collectability of half the gross accounts receivable registered the prior year. The combined effect of the expiry of the KACP and the conclusion of the chapter 11 proceedings are indicative that Frontier will regain the ability to enforce harsher payment conditions, reducing sales on credit, while at the same time improving its ability to collect accounts receivable, reflected both in the stabilization of gross accounts receivable as ca. 10% of sales, and normalization of the bad debt expense amounts.

3.2.5. Capex

Finally, the base case does not include any heavy capital expenditures towards network modernization. The levels of capex in this case are mainly focused on customer retention and network maintenance, so the model assumes the capital expenditures projected by management to be the maintenance capex of the business.

The tax treatment under Chapter 11 depends on the fiscal characterization of the transaction, specifically if it represents an ownership change. When an ownership change is recognized, the ability of the Debtor to benefit from its Net Operating Losses for tax deduction is limited by section 382 of the U.S. Internal Revenue Code, providing either a yearly cap or eliminating the ability to use it at all (United States Courts 2024b). By March of 2021 and prior to the closing of the Northwest operations sale, Frontier had accumulated a total of \$2.2 billion NOLs available for future deduction federal taxable income. In order to preserve this potential tax benefit, they have proposed to structure the restructuring agreement as a Bruno's Transaction, whereby the reorganization is classified as a taxable sale of the company's assets to its creditors, and thus the limitations of Section 382 do not apply. However, since the company itself cannot guarantee the terms under which the transaction will be considered for tax purposes, and this cannot be determined ex ante, the model assumes the conservative scenario of no NOL tax shields post emergence, and the federal corporate tax rate of 21% (Trading Economics n.d.).

3.3. WACC & Debt market value

In order to properly value Frontier Communications under different scenarios (i.e. Going-Concern, Chapter 11 Restructuring, Out-of-Court Restructuring, Distressed Acquisition) it is crucial to define how to discount the projected future cash flows. The choice of the discount rate is not mechanical as it depends on several assumptions regarding very sensitive inputs. As

previously mentioned, in order for restructuring to be the value-maximizing alternative to stakeholders, a company's ROIC needs to consistently be above the firm's cost of capital.

The standard method for discounting operating cash flows is the Weighted Average Cost of Capital (WACC). However, applying a textbook WACC to a distressed company is often inappropriate because several underlying assumptions break down under financial distress. WACC assumes a stable capital structure, debt that trades near par, and cash flows that are generated by a solvent firm operating without significant risk of default, all of which are not verified in the case of Frontier Communications. Its capital structure was not only unstable but unsustainable and will drastically change upon emergence from bankruptcy. Moreover, Frontier's bonds traded at severely distressed levels in the months prior to the Chapter 11 filing as shown in **[Appendix 14]**. Therefore, several adjustments and assumptions are needed in order to calculate Frontier's cost of capital. The subsections below discuss: (i) the cost of equity under the Capital Asset Pricing Model (CAPM), (ii) relevered beta assumptions based on peer comparables, (iii) debt-to-equity ratios and tax assumptions, and (iv) alternative methods for estimating the cost of debt.

As described in (Altman, Hotchkiss, and Wang 2019, 91–111), for distressed firms, measuring the equity beta from past stock returns will lead to unreliable results. As companies approach bankruptcy, they are delisted from major exchanges, and trade OTC (over-the-counter) which severely constrains the liquidity of shares traded. Hence, the most appropriate alternative is to estimate the company's equity beta from a selection of its peers, then unlevering the beta and relevering it at the target debt-to-equity ratio. **[Appendix 15]** provides the main assumptions which were used to derive Frontier's WACC.

In order to calculate Frontier's cost of equity, we opted to use the Capital Asset Pricing Model (CAPM), as is usual for industry practitioners. Telecom providers, given their large tangible asset base, stable and predictive revenues, and overall large barriers to entry, trade at relatively

low unlevered betas, hence, we estimated the mean unlevered beta of 0.35 to be relevered at Frontier's target debt-to-equity ratio. We selected peers from groups I and II as they are the most closely related to Frontier's operations. We further elected to not include Verizon, T-Mobile, and AT&T given the considerable difference in size, and the fact that these companies, as major contributors of the S&P 500 index, are considerably more liquid than the remaining peers. From the peer analysis. The market risk premium was further assumed at 8.1% based on the S&P 500 index returns over 10-year U.S. treasuries from 1982 until 2020, and the risk-free rate was assumed as the 10-year U.S. treasury yield recorded on the 15th of May, 2020 of 0.64%. With this, we arrive at a cost of equity of 10.1%.

As for the target debt-to-equity ratio, we opted for a 300% ratio, in line with the peer range between 285 – 317%. Given how hard to estimate the emergence capital structure and cost of debt (as will be further discussed in the sections below) a sensitivity analysis on the capital structure and cost of debt was performed, regarding the D/E, we wanted to measure changes in WACC given debt-to-equity ratios between 233 – 400%, this analysis is presented in **[Appendix 15]**. The marginal tax rate of 21% was held constant across scenarios, in line with U.S. federal corporate tax policy.

Estimating the cost of debt for a distressed company is considerably more complex. And three main approaches were considered for Frontier, each with its own special considerations: (a) implied market yields on existing debt, (b) high-yield index Option-adjusted spreads (OAS), and (c) through a synthetic rating approach.

The intuition for the first method is that, the yield-to-maturity (YTM) on a firm's outstanding debt should reflect its marginal cost of borrowing. However, in distress situations, debt – especially the most junior liens – often trades at deep discounts reflecting expected recovery, not contractual cash flows. In the 1st quarter of 2020, Frontier reported a book value of \$17.5 billion in outstanding debt, yet its market value was only \$10.2 billion representing an average

price of approximately 58 cents on the dollar, a 42-cent discount to par (Frontier Communications Corporation 2020d). Using such yields as discount rates would imply a cost of debt exceeding 30%, which is inappropriate for going-concern valuations.

To demonstrate this, **[Appendix 16]** provides a bond-level pricing analysis of Frontier's most actively traded debt pre-bankruptcy, as a proxy of liquidity, we considered only bonds which traded at least once in the last three months prior to May 15th, 2020. The outstanding balance of these bonds represent 73% of the total face value reported by Frontier Communications in their first quarter 2020 10-Q filing (Frontier Communications Corporation 2020d), making it a good proxy for the overall debt structure. Secured bonds traded at a premium (c. \$104) and a YTM of 7.51%, while unsecured bonds traded at c. \$48 with an implied YTM of 32%. We extended this by reconstructing all future contractual cash flows by tranche **[Appendix 17]** and solving via Excel's Goal Seek for the discount rate consistent with a market value of \$10.2 billion. The output confirmed a 32% blended cost for unsecured debt.

Thus, while secured debt may inform post-restructuring pricing assumptions, market-based YTM for distressed unsecured debt primarily reflect recovery, and not funding costs, and should be excluded from WACC.

A more robust proxy is to reference Option-Adjusted Spreads (OAS) on high-yield bond indices, which reflect the average credit risk premia demanded by the market for similarly rated non-investment grade issuers. This approach avoids issuer-specific pricing anomalies and captures general credit market conditions. The OAS spread can be added to the risk-free rate to derive an appropriate cost of debt for a restructured or newly issued tranche. **[Appendix 18]** presents Bloomberg OAS data over rolling 3-, 6-, and 12-month periods through mid-2020. To calculate the cost of debt, these spreads need to be added to the risk free rate, represented by U.S. Treasuries. **[Appendix 19]** shows the evolution of U.S. Treasury yields over time while **[Appendix 20]** provides the line chart for the major Bloomberg High-Yield U.S. Corporate

Debt Indices. During the COVID-19 crisis, OAS spreads surged dramatically, but Frontier's 7–8% secured YTM aligned with B-rated spreads which were between 464 – 759 bps, suggesting this is a valid proxy. Unsecured debt, by contrast, may require pricing assumptions between B and Caa ratings which historically have been between 1,449 – 1,003 bps, reflecting greater impairment. This gives further evidence that the 7 – 8% cost of debt range on its secured debt is fairly priced, while shedding some light on the potential pricing of its unsecured portion.

Finally, an academically grounded alternative is to estimate a synthetic credit rating based on projected interest coverage ratios under the post-restructuring business plan. Professor Aswath Damodaran (Damodaran 2025) proposes mapping the company's EBIT/Interest or EBITDA/Interest to a notional rating, then applying the typical spread associated with that rating over the risk-free rate. Frontier recorded pro forma LTM interest coverage ratio of 0.9x as shown in **[Appendix 21]**, the corresponding synthetic rating might be CCC, implying a cost of debt in the 8.20 – 9.00% range. This method is particularly useful when the firm is emerging from bankruptcy with a clean balance sheet and limited market comparables.

Each of these methods provides a valid cost of debt estimate under different assumptions. For the purposes of this thesis, we adopt the OAS and synthetic coverage methods as primary tools, given their stability and theoretical robustness. Method 1 is referenced only as a cautionary example of how distressed debt pricing can distort valuation logic. From these methods, we can confidently assume a cost of debt between 7 – 8% for the secured portion and 9 – 14% on the unsecured portion. By taking the market value weights from **[Appendix 17]** and pooling together Frontier subsidiary debt with its secured debt (as those are all unimpaired classes under the RSA proposal), we can further assume that the weight of secured debt to total debt will be 65% whereas the weight of unsecured debt will be 35%. Therefore, by weighting the cost of debt for each class by these weights, we get a final cost of debt range between 7.7 – 10.1%

In conclusion, the cost of capital under distress must be adjusted from textbook assumptions to reflect structural realities: deep discounts on debt, volatile equity, and uncertain funding access. By using peer betas and synthetic debt spreads, the WACC framework remains applicable while avoiding distortions introduced by default risk and market dislocation. For the purposes of valuing the company's going concern, we have come to a WACC between 7 – 8.8%.

4. CHAPTER 7: PATH OF LIQUIDATION

Introduction to Liquidation

In evaluating Frontier Communications' restructuring, it is essential to analyse the range of potential exit strategies available under Chapter 11. A conversion to Chapter 7, leading to a full liquidation of the company, is a possibility. Understanding this path is critical because liquidation generally represents the most severe and value-destructive outcome under the U.S. Bankruptcy Code (Cornell Law School, n.d). Although Frontier is currently pursuing Chapter 11 with the goal of reorganizing, the court, creditors, or the company itself could seek conversion to Chapter 7 if reorganization appears unfeasible, losses continue to mount, or asset values deteriorate such that liquidation would maximize recoveries for certain creditor classes.

Assessing a potential liquidation scenario serves multiple purposes. First, it establishes a "floor value" for the company, providing a benchmark against which the economic benefits of Chapter 11 reorganization, potential acquisitions, or other restructuring options can be compared. Second, it clarifies the incentives of different stakeholders, whose preferences may diverge significantly depending on expected recoveries under a liquidation. Secured creditors, for example, may prefer liquidation if collateral values are strong and immediate repayment is attractive. In contrast, unsecured creditors, employees, suppliers, and equity holders face substantial losses under Chapter 7 (Cornell Law School, n.d), reinforcing their interest in preserving Frontier as a going concern.

For Frontier, evaluating the liquidation path is particularly relevant given the company's mix of assets, declining legacy copper infrastructure, and significant leverage. Determining whether a Chapter 7 conversion is feasible, and the consequences it would entail, requires understanding how liquidation operates, how assets are sold under distress, and how value is allocated through the liquidation waterfall.

Liquidation, Concept and Mechanics

Under the U.S. Bankruptcy Code, corporate liquidation typically occurs through Chapter 7 proceedings, which provide a framework for orderly liquidation and distribution of a firm's assets to creditors. Proceedings may be voluntary, when the company cannot meet obligations or faces legal threats, or involuntary, initiated by creditors demonstrating nonpayment (frivolous petitions may incur liability).

Upon filing, an automatic stay prevents pre-petition creditors from pursuing collection or foreclosure, protecting the debtor's assets. Secured creditors may appeal to reclaim collateral, while criminal proceedings remain unaffected (States 1981). A Trustee, appointed by the court, oversees asset collection, sale, and distribution to creditors, often retaining professionals such as lawyers or accountants. Compensation is tied to recoveries, incentivizing value maximization.

Proceeds follow the absolute priority rule: higher-priority claims are satisfied in full before lower-priority claims, and within each class, distributions are pro-rata if funds are insufficient.

Liquidation often involves fire-sale discounts and substantial legal, administrative, and advisory costs, which reduce recoveries. Chapter 7 terminates operations, frequently destroying value, particularly for firms with intangible assets or strong customer relationships. However, it may benefit certain creditors, especially secured lenders, if collateral values are high and reorganization prospects uncertain (States 1981). Empirical studies show Chapter 7 typically destroys more value than reorganization, especially for firms with network effects or significant intangible assets, as assets are sold quickly below true economic value (Shleifer and Vishny 1992), whereas reorganization preserves going-concern value and maximizes overall stakeholder recoveries (Hotchkiss et al. 2008).

Relevance to Frontier Communications

In Frontier's situation, analyzing liquidation is particularly important due to the composition of its assets. Telecommunications industry trends show that legacy copper networks are being retired worldwide because they are unable to support modern bandwidth requirements, whereas fiber-optic infrastructure is increasingly preferred for its higher capacity and long-term utility. This industry shift reflects the relatively low implied economic value of legacy copper infrastructure and the higher implied value of modern fiber networks (Fiber to the x) (Bourreau, Cambini & Doğan 2014), highlighting that most of the company's potential recoverable value is tied to its modern fiber network and customer base.

Valuation in Liquidation

Taking into consideration Frontier Communications' financial position, it is crucial to estimate the recoverable value of the company's assets under liquidation. Unlike a going-concern valuation, liquidation values account for fire-sale discounts and diminished marketability. This section systematically classifies the company's assets and compares book values with estimated recoverable amounts to evaluate potential creditor recoveries.

To estimate the potential liquidation value of Frontier Communications, differentiated recovery rates were applied to the various asset categories [**Appendix 22**]. Cash was assumed to be fully recoverable (100%) (Graham and Dodd 1940), whereas accounts receivable were discounted in the range of 75–90% (Whitman and Diz 2009a) to reflect the lower probability of collection of the full value. In our liquidation valuation, assets classified as held for sale were assigned a 100% recovery rate, as these assets correspond to the Northwest Operations whose sale was completed on May 1, 2020, and the cash proceeds had been received. Consequently, no material liquidation discount or uncertainty was applied to their realization (Frontier Communications Corporation 2020c).

The recoveries for the company's property, plant, and equipment are expected to reflect typical discounts observed in distressed asset sales within the telecommunications sector. While stable

assets such as Land and Buildings are likely to recover close to their book value due to their inherent and transferable value (Greenwald 2021), and the continuous rise of real estate values. Conversely, most operational and specialized assets, such as general support equipment, poles, cables, and conduits, are expected to achieve relatively low recoveries under a conservative scenario. However, strategic assets like fiber networks or copper infrastructure may realize higher values if sold directly to industry players, rather than through public auctions, which typically result in fire-sale discounts. Electronic equipment and construction in progress are expected to achieve moderate recoveries [Appendix 22], reflecting their partial resale or repurposing value.

Intangible assets were assigned with recovery rates between (5–15%), on the other hand, in line with the bankruptcy and valuation literature, which suggests that goodwill and similar assets are frequently impaired or written down in insolvency proceedings were given a 0% recovery rate in all scenarios (Whitman and Diz 2009a). Administrative expenses and legal/trustee fees were assumed as a percentage of total assets, with ranges of 3%–6% and 2%–4%, respectively, corresponding to the low, base, and high scenarios (Bris, Welch, and Zhu 2004). However, these costs can vary significantly depending on market conditions, the geographic dispersion of assets, differing regulatory requirements across states, and the complexity of employee severance obligations. Higher-than-expected costs would materially reduce net recoverable assets, disproportionately affecting unsecured creditors.

Liabilities were recognized at 100% of their outstanding value, reflecting the standard approach in liquidation analysis. This assumption is theoretically sound, as it ensures that all creditor claims are fully accounted for, even though, in practice, recoveries may be insufficient to satisfy all claims before any residual value could accrue to equity holders. Overall, total current liabilities have a value of \$19 229 million, while total liabilities are valued at \$21 981 billion.

The results indicate that, across low, medium, and high recovery scenarios, the realizable asset pool ranges from \$8.6 billion to \$11.4 billion. In all cases, the asset base falls substantially short of the company's total liabilities of approximately \$21.9 billion, thereby generating a negative indicated net available (deficiency) of \$13.4 billion to \$10.6 billion across scenarios. This outcome underscores that Frontier's restructuring is creditor-driven, with equity holders unable to recover value under any liquidation scenario.

It is important to consider that if macroeconomic conditions shift, such as a sudden surge in demand for fiber connectivity, certain assets could realize higher recoverable values. Similarly, copper resale or the sale of spectrum licenses could provide additional recoveries not captured in the base-case estimates.

Liquidation Costs

In any insolvency or liquidation scenario, the gross realizable value of assets does not flow entirely to creditors. A significant portion is absorbed by administrative and transaction costs associated with the liquidation process itself. These costs typically include (Lawless and Ferris 1997) - Legal and advisory fees: Costs of bankruptcy lawyers, restructuring advisors, and financial consultants, often among the most material expenses; Administrative expenses: Court fees, trustee costs, and staff retained to assist with the process; Asset sale costs: Broker commissions, auction expenses, and marketing costs to sell assets, which are especially relevant in a fire-sale context; Other professional services: Auditors, actuaries, and tax specialists required to wind down operations and Employee wage benefits: Accrued wages, salaries, and other statutory benefits, which have priority over unsecured creditors and must be fully accounted for before distributions to other stakeholders.

Academic studies (Bris, Welch, and Zhu 2004) estimate that direct bankruptcy costs typically range from 5% to 10% of total asset value.

Accordingly, in this analysis, liquidation costs (administrative expenses) are assumed at 3%, 4%, and 6% of gross liquidation value across the optimistic, base, and pessimistic scenarios, respectively and (Legal fees) to be 2%, 3.5% and 4% reflecting the moderate complexity of the company assets, having operations across rural and urban areas in many U.S states with different regulatory regimes and customer bases requiring multiple transactions due to its fragmented footprint.

The deduction of these costs reduces the Asset Value to the Net Liquidation Value (NLV) which represents the amount available to satisfy creditor claims. After accounting for liquidation costs, the NLV is estimated at \$8.5 billion in the low scenario and \$11.4 billion in the high scenario **[Appendix 22]**.

These figures highlight the material impact of liquidation costs, which can erode a significant portion of the assets that would otherwise be available to creditors.

The analysis indicates that, under a Chapter 7 liquidation scenario, the company will face a negative net value of (\$12.091 million) with total liabilities exceeding the realizable value of its assets meaning that shareholders see a total loss. This clearly demonstrates that a straightforward liquidation will destroy shareholder value entirely and provide limited recovery for unsecured creditors. Consequently, pursuing Chapter 7 is a suboptimal strategy, highlighting the importance of alternative restructuring approaches that can better preserve value and enhance recoveries for stakeholders.

Creditors Perspective

In bankruptcy or liquidation scenarios, the distribution of a company's remaining assets follows a strict hierarchy governed by the absolute priority rule, which ensures that claims are settled in order of seniority. Secured creditors are paid first, with claims backed by specific collateral, entitling them to recover up to the value of that collateral. Unsecured creditors follow, receiving

payment from any residual assets once secured claims are satisfied. Equity holders are last in line, typically recovering little or nothing in distressed liquidations (University Press 2018).

The conventional debt hierarchy, First Lien, Second Lien, Senior Unsecured, Subordinated, and Junior Subordinated, applies strictly within the context of a single legal entity. However, in a corporate group comprising multiple subsidiaries, structural subordination becomes a critical consideration (11 U.S.C. §§ 507, 510)). Creditors of a subsidiary have senior claims on the subsidiary's assets and cash flows, whereas the parent company's creditors can only access the subsidiary's equity after all subsidiary-level obligations have been satisfied. As a result, Subsidiaries Unsecured Debt may be paid in full before the parent's secured creditors, such as Frontier Secured Debt, despite the latter's "secured" status. The parent cannot legally draw upon the subsidiary's assets until the subsidiary's own creditors have been fully repaid (11 U.S.C. §§ 507, 510). This nuance demonstrates that the absolute priority rule operates differently across complex corporate structures compared with single-entity scenarios.

Interpretation of Recovery Results

Building on the creditor's perspective and the principles of the absolute priority rule, the recovery analysis for Frontier Communications illustrates how these rules operate under severe financial distress.

Recovery assumptions for Frontier's debt classes (Frontier Communications Corporation 2020d) were informed by typical bond prospectus and rating agency methodologies, incorporating probability of default (PD) and loss-given-default (LGD) concepts to align modelled recoveries with market expectations.

The creditor waterfall analysis illustrates how Frontier's liquidation value under different scenarios would be allocated among stakeholders [**Appendix 23**] in a hypothetical Chapter 7

liquidation, following the strict legal hierarchy of claims under U.S. Bankruptcy Code priority rules (11 U.S.C. § 507).

In the downside scenario, the pool of recoverable assets is limited to \$8,549 million [**Appendix 24**]. Administrative Costs (\$897 million), Priority Claims (\$1,600 million), and Subsidiaries Secured Debt (\$106 million) are fully satisfied. Subsidiaries Unsecured Debt (\$750 million) is also fully covered from residual subsidiary assets. Frontier Secured Debt (\$5,706 million) receives partial recovery, while Frontier Unsecured Debt (\$10,949 million) receives no cash. Equity holders remain out of the money, consistent with their residual claim position. Under the base scenario, with a recoverable cash pool of \$9,890 million, all senior and secured claims are fully satisfied, including Subsidiaries Secured Debt (\$106 million), Subsidiaries Unsecured Debt (\$750 million), and Frontier Secured Debt (\$5,706 million). Administrative Costs (\$802 million) are fully covered, and Priority Claims (\$1,600 million) are fully satisfied. The remaining \$926 million allows for partial recovery of Frontier's unsecured debt (\$10,949 million), representing an 8% recovery, while equity holders receive nothing, reflecting their position at the bottom of the capital structure [**Appendix 23**]. In the high scenario, with a cash pool of \$11,376 million, all senior and secured claims are fully covered, including Subsidiaries Secured Debt (\$106 million), Subsidiaries Unsecured Debt (\$750 million), Frontier Secured Debt (\$5,706 million), Administrative Costs (\$599 million), and Priority Claims (\$1,600 million) [**Appendix 25**]. The remaining \$2,615 million allows partial recovery for Frontier's unsecured debt (\$10,949 million) at 24%, while Subsidiaries Secured Debt and Subsidiaries Unsecured Debt still receive no recovery. Equity holders again receive no residual value, highlighting that even under optimistic assumptions, the available asset pool is insufficient to satisfy all unsecured claims.

These figures align with empirical evidence showing that unsecured creditors in Chapter 7 cases typically recover very little, with one study finding that 95% of unsecured creditors received

nothing, and the mean recovery was only 1%, largely driven by a single outlier case. In contrast, Chapter 11 reorganizations provide much higher recoveries (mean 52%, median 40% for unsecured creditors, and mean 69%, median 79% overall), highlighting the relative disadvantage of unsecured creditors in liquidations Bris, Welch, and Zhu (2005).

Incorporating a sensitivity analysis illustrating how variations in total secured debt can impact the recoveries available to unsecured creditors demonstrates that, with a total cash pool of \$9,890 million and unsecured debt outstanding of \$10,949 million, the recovery for unsecured creditors ranges from 5.9% to 11.1%, depending on the amount of secured claims. Specifically, if secured debt increases by 5%, the cash remaining for unsecured creditors decreases to \$641million, resulting in a 5.9% recovery. Conversely, a 5% reduction in secured debt leaves \$1,211 million available for unsecured creditors, increasing their recovery to 11.1% **[Appendix 26]**. This demonstrates that even modest changes in senior secured obligations can materially affect the recoveries of unsecured creditors, highlighting the sensitivity of lower-priority claims to the size of secured debt in a liquidation scenario. Overall, the waterfall analysis illustrates the conventional hierarchy of recoveries in corporate liquidations. Secured creditors are fully protected, administrative and priority claims are satisfied in full, and unsecured creditors, particularly those at the parent company level, receive only partial recoveries. Equity holders, as residual claimants, absorb the entirety of any financial shortfall. This framework underscores the pronounced risk asymmetry inherent in Frontier Communications capital structure and highlights the critical role of structural subordination within multi-entity corporate groups, whereby the recoveries of parent-level creditors are contingent upon the satisfaction of subsidiary-level obligations.

Shareholders and Management Perspective

Shareholders, as residual claimants, are legally entitled to whatever remains of the asset pool after all creditor obligations are satisfied (Brealey, Myers, and Allen 2017). In theory, equity

represents ownership of the upside of the business, but in liquidation, equity is the last in line. In the case of Frontier Communications, the estimated realizable asset pool under liquidation scenarios ranges between \$8.5 billion and \$11.4 billion, while liabilities amount to \$21.9 billion. This imbalance ensures that shareholders receive no recovery under liquidation, regardless of whether assets are realized under pessimistic or optimistic assumptions.

This outcome underscores a fundamental principle; liquidation systematically eliminates value for equity holders whenever liabilities exceed realizable assets. From a shareholder perspective, liquidation is therefore the worst-case outcome, as it leaves no room for residual claims (Lubben 2018).

Strategic Reasoning for Management

Management, unlike creditors, has broader incentives than merely recovering financial claims. Their focus often lies in preserving the going-concern value of the firm. For Frontier Communications, this perspective was particularly important given the nature of its assets, a telecommunications network with a large customer base and operational infrastructure that is significantly more valuable if kept intact.

Management resistance to liquidation reflects several strategic considerations. Frontier assets, including fiber networks, copper infrastructure, customer contracts, licenses, and technical expertise will suffer steep discounts in a fire-sale liquidation. Property, plant, and equipment are expected to recover at widely varying rates depending on the asset type, while intangibles can fetch 5 to 15% [Appendix 22]. In contrast, these assets retain much higher value when the business continues to operate. Liquidation also compresses the timeframe for asset sales, often resulting in depressed valuations.

Management additionally considers the social and organizational consequences of liquidation. Frontier employs thousands of workers and has long-standing relationships with customers and local communities. Liquidation will destroy this embedded value and trigger mass layoffs. It is also important to recognize that different stakeholders including categories such as secured creditors, unsecured creditors, tax authorities, and employee claims may have competing interests regarding a move to Chapter 7. While secured creditors might prefer liquidation to recover collateral quickly, other stakeholders including employees, suppliers, and community partners will likely experience significant losses, providing management with a strong incentive to pursue Chapter 11 restructuring instead.

Bankruptcy presents management not merely as a necessity, but as an opportunity to restructure. By shedding unsustainable debt obligations through Chapter 11, Frontier can free resources to reinvest in fiber deployment, a key long-term growth driver (Frontier Communications Corporation 2020d).

Alternatives to Liquidation

Management generally favors options that preserve the operating entity, even at the expense of current shareholders. For Frontier, three main strategies could be considered. Chapter 11 reorganization allows the company to continue operations while restructuring debt, preserves its customer base, and supports a pivot toward fiber investment, significantly reducing its debt burden (Frontier Communications Corporation 2020d). Out-of-court restructuring could avoid Chapter 11 costs, but with a dispersed creditor base and over \$21 billion in obligations, unanimous consent is impractical. Debt-for-equity swaps convert creditor claims into equity, eliminating existing shareholder value but keeping the firm alive and providing creditors with long-term upside. In Frontier's case, creditors become new equity holders, aligning their incentives with the company's strategy.

Sensitivity Analysis of Liquidation Outcomes

Implementing a sensitivity analysis, we can see that creditor recoveries in a full liquidation are primarily driven by the recoverable value of property, plant, and equipment (PP&E) and by the overall liquidation costs. In the base case, gross liquidation proceeds with \$10.691 million, net of 7.5% liquidation costs, yield net assets of \$9.890 million, implying that residual equity remains deeply negative **[Appendix 27]**

Variations in the recoverability of property, plant, and equipment (PP&E) materially influence liquidation outcomes. A ten-percentage-point increase in PP&E recovery raises net assets by more than \$1 billion **[Appendix 27]**, underscoring the central role of tangible operating assets in determining creditor recoveries. By contrast, fluctuations in other current asset exert a comparatively limited effect on overall outcomes. Creditor recoveries are also highly sensitive to liquidation cost assumptions. Even modest increases in administrative and transaction costs reduce net recoverable assets and depress recoveries, while effective cost management, through staged asset sales or targeted marketing to strategic buyers, can materially enhance creditor outcomes. From an equity perspective, even the most optimistic assumptions regarding asset recoverability fail to generate a positive residual value **[Appendix 25]**. This confirms that equity holders face substantial losses under liquidation and therefore have a strong incentive to favor restructuring strategies that preserve going-concern value. Overall, the analysis highlights that realistic expectations regarding the sale of large, specialized telecommunications assets and the disciplined management of liquidation costs are the primary determinants of creditor recoveries. Across all plausible scenarios, shareholder recoveries remain negligible.

A focused sensitivity analysis on accounts receivable further illustrates these dynamics. Increasing assumed receivable recoveries from 75% to 95% of book value raises gross assets from \$9,380 million to \$11,921 million, improving aggregate creditor recoveries from 38.8% to 51.5%. At the same time, the implied equity deficit narrows from \$13,445 million to \$10,656

million [Appendix 22]. While meaningful for creditors, these improvements remain insufficient to restore equity value.

Conclusion

The analysis demonstrates that Frontier Communications' asset composition, leverage, and liquidation costs critically shapes stakeholder outcomes in financial distress. Given the company's high debt burden, reliance on legacy copper assets, and limited recoverable value of PP&E, Chapter 7 liquidation would yield severely constrained recoveries for unsecured creditors and eliminate shareholder value. Even under optimistic assumptions, realizable asset values remain insufficient to cover total liabilities, confirming liquidation as a floor-value benchmark rather than a value-maximizing outcome.

Sensitivity analysis shows that creditor recoveries are primarily driven by PP&E recoverability and liquidation costs, with other asset classes exerting only marginal influence. These findings support management's preference for a going-concern solution under Chapter 11, which preserves operational assets, customer relationships, and long-term value that liquidation would destroy. While liquidation remains a theoretical fallback if reorganization fails, its outcomes would be materially inferior for most stakeholders compared with restructuring.

5. REFERENCES

- A. Rosenthal, Michael, Oscar Garza, Alan Moskowitz, and Mathew G. Bouslog. 2019. "Getting Ready for the next Cycle: Prepackaged and Prenegotiated Chapter 11 Reorganization Strategies." Gibson Dunn. <https://www.gibsondunn.com/wp-content/uploads/2019/05/WebcastSlides-Getting-Ready-for-the-Next-Cycle-Prepackaged-and-Prenegotiated-Chapter-11-Reorganization-Strategies-25-APR-2019.pdf>.
- Alaska Communications Systems Group, Inc. 2020. "Form 10-K, 31 December 2019." SEC Database. https://www.sec.gov/Archives/edgar/data/1089511/000143774920005330/alsk20191231_10k.htm.
- Altman, Edward I., Edith Hotchkiss, and Wei Wang. 2019. *Corporate Financial Distress, Restructuring, and Bankruptcy : Predict and Avoid Bankruptcy, Analyze and Invest in Distressed Debt*. Fourth Edition. Newark: John Wiley & Sons, Incorporated.
- American Bankruptcy Institute Journal. 2005. "Out-of-Court Workouts, Prepacks and Pre-Arranged Cases: A Primer." Edited by John D. Ayer, Michael L. Bernstein, and Jonathan Friedland. *American Bankruptcy Institute Journal* XXIV (3). [https://www.arnoldporter.com/-/media/files/perspectives/publications/2005/04/outofcourt-workouts-prepacks-and-prearranged-cas_/files/publication/fileattachment/articleabi_chap_11\(405\).pdf?rev=ba2f95c46f2c42979ffc37f78cf178fc&sc_lang=en&hash=37361F21DCDFA420DDF1541A70607192](https://www.arnoldporter.com/-/media/files/perspectives/publications/2005/04/outofcourt-workouts-prepacks-and-prearranged-cas_/files/publication/fileattachment/articleabi_chap_11(405).pdf?rev=ba2f95c46f2c42979ffc37f78cf178fc&sc_lang=en&hash=37361F21DCDFA420DDF1541A70607192).

- AT&T. 2019. “AT&T INC. 2019 Annual Report.”
<https://investors.att.com/~media/Files/A/ATT-IR/financial-reports/annual-reports/2019/complete-2019-annual-report.pdf>.
- Berger, Michael J. 2023. “Planning Exit Strategies before Filing a Chapter 11.” Law Offices of Michael Jay Berger. December 15, 2023.
<https://www.bankruptcypower.com/blog/planning-exit-strategies-before-filing-a-chapter-11/>.
- Bloomberg L.P. n.d. “Stock Price for Frontier Communications Corporations 31/12/2014 to 15/05/2020.” *Bloomberg Terminal*. Accessed November 2025.
- Bourreau, Marc, Carlo Cambini, and Pinar Doğan. 2014. “Access Regulation and the Transition from Copper to Fiber Networks in Telecoms.” *Journal of Regulatory Economics* 45 (3): 233–58. <https://doi.org/10.1007/s11149-014-9245-z>.
- Brealey, Richard A., Stewart C. Myers, and Franklin Allen. 2017. *Principles of Corporate Finance*. McGraw-Hill Education.
- Bris, Arturo, Ivo Welch, and Ning Zhu. 2004. *The Costs of Bankruptcy: Chapter 7 Cash Auctions vs. Chapter 11 Bargaining*. Yale International Center for Finance (ICF).
 ———. 2005. <https://repec.som.yale.edu/icfpub/publications/2375.pdf>.
 ———. 2006. “The Costs of Bankruptcy: Chapter 7 Liquidation versus Chapter 11 Reorganization.” *Journal of Finance*.
- Century Link. 2020. “Annual Report 2019.” Lumen Technologies.
https://s21.q4cdn.com/756714007/files/doc_financials/2020/ar/CenturyLink-2019-Annual-Report-and-2020-Proxy-Statement.pdf.
- Charter Communications. 2019. Sec.gov. 2019.
<https://www.sec.gov/Archives/edgar/data/1091667/000109166720000024/chtr12312019-10k.htm>.

Cisco. 2020. "Cisco Annual Internet Report - Cisco Annual Internet Report (2018–2023) White Paper." Cisco. 2020. <https://www.cisco.com/c/en/us/solutions/collateral/executive-perspectives/annual-internet-report/white-paper-c11-741490.html>.

"Competition Issues in Television and Broadcasting 2013." n.d. Accessed December 12, 2025. https://www.oecd.org/content/dam/oecd/en/publications/reports/2013/10/competition-issues-in-television-and-broadcasting_3793531c/407e6bc3-en.pdf.

"Consolidated Communications (CNSL) - Revenue." 2025. Companiesmarketcap.com. 2025. <https://companiesmarketcap.com/consolidated-communications/revenue/>.

Consolidated Communications Holdings, Inc. 2016. "Consolidated Communications to Acquire FairPoint Communications, Inc." GlobeNewswire. December 5, 2016. <https://www.globenewswire.com/news-release/2016/12/05/895000/0/en/Consolidated-Communications-to-Acquire-FairPoint-Communications-Inc.html>.

Consolidated Communications Holdings, Inc. 2020. "Form 10-K, 31 December 2019." SEC Database. <http://pdf.secdatabase.com/95/0001558370-20-001763.pdf>.

Cornell Law School. n.d. "11 U.S. Code § 507 - Priorities." LII / Legal Information Institute. <https://www.law.cornell.edu/uscode/text/11/507>.

———. n.d. "Chapter 11 Bankruptcy." LII / Legal Information Institute. https://www.law.cornell.edu/wex/chapter_11_bankruptcy.

CTIA. 2019. "2019 U.S. Wireless Industry Annual Survey." *Www.ctia.org*. <https://api.ctia.org/wp-content/uploads/2019/06/2019-Annual-Survey-Highlights-FINAL.pdf>.

Damodaran, Aswath. 2025. "Damodaran Online: Home Page for Aswath Damodaran." Nyu.edu. January 9, 2025. <https://pages.stern.nyu.edu/~adamodar/>.

- Edelboim Lieberman PLLC. 2025. “The ‘Five Ws’ of Chapter 11 Reorganization Plans - Edelboim Lieberman.” Edelboim Lieberman. July 25, 2025. <https://elrolaw.com/blog/the-five-ws-of-chapter-11-reorganization-plans/>.
- “Encouraging 5G Investment Encouraging 5G Investment Lessons Learnt from around the World.” 2019. <https://assets.kpmg.com/content/dam/kpmgsites/uk/pdf/2019/12/encouraging-5g-investment.pdf>.
- Engebretson, Joan. 2019. “Report Finds 20.5 Million U.S. Fiber Broadband Homes, Nearly 40% of U.S. Homes Passed - Telecompetitor.” Telecompetitor.com. December 17, 2019. <https://www.telecompetitor.com/report-finds-20-5-million-u-s-fiber-broadband-homes-nearly-40-of-u-s-homes-passed>.
- FAIST. 2018. “The Global Telecommunications Services Market: 2012 - 2019 Data.” Faistgroup.com. 2018. <https://www.faistgroup.com/news/the-global-telecommunications-services-market-2012-2019-data/>.
- Federal Communications Commission. 2018. “Measuring Fixed Broadband - Eighth Report | Federal Communications Commission.” Wwww.fcc.gov. December 14, 2018. <https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-fixed-broadband-eighth-report>.
- Federal Communications Commission. 2017. “Connect America Fund Phase II Auction (Auction 903).” Federal Communications Commission. May 17, 2017. <https://www.fcc.gov/auction/903>.
- . 2018. “Eight Measuring Broadband America Fixed Broadband Report.” *Fcc.gov*. <https://data.fcc.gov/download/measuring-broadband-america/2018/2018-Fixed-Measuring-Broadband-America-Report.pdf>.
- . 2019a. Fcc.gov. 2019. <https://docs.fcc.gov/public/attachments/FCC-19-44A1.pdf>.

- . 2019b. “2019 BROADBAND DEPLOYMENT REPORT.” *Www.fcc.gov*.
<https://docs.fcc.gov/public/attachments/FCC-19-44A1.pdf>.
- . 2019c. “Fixed Broadband Deployment Data from FCC Form 477.” Federal Communications Commission. October 16, 2019.
<https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477>.
- . 2020. “Keep Americans Connected.” Federal Communications Commission. March 17, 2020. <https://www.fcc.gov/keep-americans-connected>.
- . 2023. “Staff Block Estimates.” *Fcc.gov*. 2023. <https://www.fcc.gov/staff-block-estimates>.
- Focus Telecom Technology and Services Group. 2017. “U.S. Communications Service Provider Quarterly, 19 April 2017.” Focus Investment Banking.
<https://focusbankers.com/wp-content/uploads/2017/04/Communications-Service-Provider-Spring-2017.pdf>.
- Frontier Communications Corporation. 2009a. “Form 10-K, 31 December 2009.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/128f0dd5-7be2-4678-a981-19f1ee7828a2.pdf>.
- . 2009b. “Frontier Communications to Acquire Verizon Assets Creating Nation’s Largest Pure Rural Communications Services Provider.” Frontier Communications Corporation. May 13, 2009. <https://investor.frontier.com/news/news-details/2009/Frontier-Communications-to-Acquire-Verizon-Assets-Creating-Nations-Largest-Pure-Rural-Communications-Services-Provider/default.aspx>.
- . 2009c. “Management Presentation, 13 May 2009.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/d2c1de56-a5d1-4789-8b51-eeb616b38616.pdf>.

- . 2011. “Form 10-K, 31 December 2010.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/a71e164f-cb95-4f49-82c5-eadf90006730.pdf>.
- . 2013. “Form 8-K, 16 December 2013.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/0b792110-f6d6-4965-89b0-6c5651bcc9e3.pdf>.
- . 2015a. “Form 10-K, 31 December 2014.” Frontier Communications Corporation. https://s201.q4cdn.com/129601114/files/doc_financials/2015/4Q15-10K.pdf.
- . 2015b. “Investor Update First Quarter 2015.” Frontier Communications Corporation. https://s201.q4cdn.com/129601114/files/doc_financials/2015/Q1-2015-Earnings-Presentation.pdf.
- . 2016a. “Investor Update Second Quarter 2016.” Frontier Communications Corporation. https://s201.q4cdn.com/129601114/files/doc_financials/2016/Q2/Q2-2016-Earnings-Presentation.pdf.
- . 2016b. “Form 8-K, 07 October 2016.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/873b2b5d-6cbe-4499-88da-7f0472a455af.pdf>.
- . 2017a. “Form 10-K 2016.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/3af73924-5bf4-4463-b53c-e61ca3ca49ff.pdf>.
- . 2017b. “Form 8-K, 02 May 2017.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/4e47c1d9-a5cb-4cd0-8cc2-5843f5bad9ac.pdf>.
- . 2017c. “Frontier Communications to Implement Reverse Stock Split on July 10, 2017.” Frontier Communications Corporation. July 7, 2017.

<https://investor.frontier.com/news/news-details/2017/Frontier-Communications-to-Implement-Reverse-Stock-Split-on-July-10-2017-07-07-2017/default.aspx>.

- . 2019a. “2018 Summary Annual Report and Proxy Statement.” American Bar Association, Section of Business Law. https://s201.q4cdn.com/129601114/files/doc_financials/ARS_Proxy/2018/2018-Annual-Report-Proxy.pdf.
- . 2019b. “Form 8-K, 25 May 2019.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/30ee6db0-6697-477b-a6f2-9a0c652621c7.pdf>.
- . 2019c. “Form 10-Q, 30 June 2019.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/4710c1c2-a301-415e-b83e-495459561ab1.pdf>.
- . 2019d. “Form 8-K, 16 December 2019.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/42adf2cb-8000-44e8-a6fd-5dddab10a290.pdf>.
- . 2020a. “Form 8-K, 16 March 2020.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/a92b3a5f-4d2a-4735-8c44-0d4f6c93ce6f.pdf>.
- . 2020b. “Form 8-K, 27 March 2020.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/c1f0b5f8-b9e2-4688-8cfc-fde5a9cf07c9.pdf>.
- . 2020c. “Form 10-K 2019.” Frontier Communications Corporation. https://s201.q4cdn.com/129601114/files/doc_financials/2019/q4/4Q19-10K.pdf.
- . 2020d. “Form 10-Q, 31 March 2020.” Frontier Communications Corporation. https://s201.q4cdn.com/129601114/files/doc_financials/2020/q1/1Q20-10Q.pdf.

- . 2020e. “Frontier Communications Announces Restructuring Support Agreement to Support Continued Investment in Long-Term Growth.” Frontier.com. April 14, 2020. <https://investor.frontier.com/news/news-details/2020/Frontier-Communications-Announces-Restructuring-Support-Agreement-to-Support-Continued-Investment-in-Long-Term-Growth-04-14-2020/default.aspx>.
- . 2020f. “Form 8-K, 15 April 2020.” Frontier Communications Corporation. <https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/973bf1b6-4a10-4c60-bc7d-eb1839f6f613.pdf>.
- . 2020g. “Disclosure Statement Relating to the Joint Plan of Reorganization of Frontier Communications Corporation and Its Debtor Affiliates pursuant to Chapter 11 of the Bankruptcy Code (Related Document(S)281) Filed by Stephen Hessler on Behalf of Frontier Communications Corporation.” Southern District of New York.
- Funding Universe. 1993. “History of Citizens Utilities Company.” FundingUniverse. 1993. <https://www.fundinguniverse.com/company-histories/citizens-utilities-company-history/>.
- Gillett, Sharon Eisner, and Emy Tseng. 2001. “Asymmetric Regulation on Steroids: U.S. Competition Policy and Fiber to the Home.” ArXiv.org. 2001. <https://arxiv.org/abs/cs/0109082>.
- Graham, Benjamin, and David L Dodd. 1940. *Security Analysis : Principles and Technique*. New York: Mcgraw-Hill Book Company Inc.
- Greenwald, Bruce C. 2021. *Value Investing : From Graham to Buffett and Beyond*. Editorial: Hoboken, New Jersey: Wiley.
- GSM Association. 2019. “The Mobile Economy 2019.” *Gsma.com*. <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/wp-content/uploads/2024/02/2712-250219-ME-Global.pdf>.

- Hedge Fund Alpha. 2019. "If Frontier Can Dodge Its Debt Risk, Its Equity Could Have 25x Upside by 2021." Hedge Fund Alpha. February 13, 2019. <https://hedgefundalpha.com/stock-analysis/if-frontier-can-dodge-its-debt-risk-its-equity-could-have-25x-upside-by-2021/>.
- Hotchkiss, Edith S., Kose John, Robert M. Mooradian, and Karin S. Thorburn. 2008. "Handbook of Empirical Corporate Finance." *Handbook of Empirical Corporate Finance*.
- "Impact at a Local Level of Full-Fibre and 5G Investments Prepared for Broadband Stakeholder Group." 2019. https://www.connectivityuk.org/wp-content/uploads/2019/09/Impact-of-full-fibre-and-5G-Publication-12.9.19_complete.pdf.
- International Monetary Fund. 2019. "United States 2019 Article IV Consultation." *Www.imf.org*. <https://www.imf.org/-/media/files/publications/cr/2019/1usaea2019001.pdf>.
- Kates, Jennifer, Josh Michaud, and Jennifer Tolbert. 2020. "Stay-At-Home Orders to Fight COVID-19 in the United States: The Risks of a Scattershot Approach | KFF." KFF. April 5, 2020. <https://www.kff.org/covid-19/stay-at-home-orders-to-fight-covid19>.
- Koller, Tim, Marc H Goedhart, David Wessels, and Mckinsey And Company. 2020. *Valuation : Measuring and Managing the Value of Companies*. 7th ed. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Lawless, Robert M., and Stephen P. Ferris. 1997. "Professional Fees and Other Direct Costs in Chapter 7 Business Liquidations." *Washington University Law Quarterly*.
- Lubben, Stephen J. 2018. *The Law of Failure*. Cambridge University Press.
- Lubben, Stephen J. 2016. "The Overstated Absolute Priority Rule." *Fordham Journal of Corporate & Financial Law*.

- Matooma. 2012. "M2M and IoT Markets - What Does Machine to Machine and Internet of Things Stand For? - Matooma." Matooma.com. 2012. <https://www.matooma.com/en/more-information/m2m-and-iot-markets>.
- McKinsey & Co. 2020. "A New Decade for Private Markets." *Www.mckinsey.com*. <https://www.mckinsey.com/~/media/mckinsey/industries/private%20equity%20and%20principal%20investors/our%20insights/mckinseys%20private%20markets%20annual%20review/2020/mckinsey-global-private-markets-review-2020-v4.pdf>.
- McKinsey & Company. 2019. "Global Banking Practice the Ecosystem Playbook: Winning in a World of Ecosystems." <https://www.mckinsey.com/~/media/mckinsey/industries/financial%20services/our%20insights/winning%20in%20a%20world%20of%20ecosystems/winning-in-a-world-of-ecosystems-vf.pdf>.
- Moody's . 2025. "Telecommunications Service Providers Rating Methodology." *Moody's.com*. https://www.moody's.com/research/Rating-Methodology-Telecommunications-Service-Providers-Rating-Methodology--PBC_1461074#788a99842290310a17b1339348951c8b.
- Nasdaq, Inc. 2019. "Frontier Communications (FTR) Q3 Loss Narrower than Expected." *Nasdaq.com*. November 6, 2019. <https://www.nasdaq.com/articles/frontier-communications-ftr-q3-loss-narrower-than-expected-2019-11-06>.
- Norton Rose Fulbright. 2025. "International Restructuring Newswire." *Norton Rose Fulbright*, April 1, 2025. <https://www.nortonrosefulbright.com/-/media/files/nrf/nrfweb/knowledge-pdfs/international-restructuring-newswire-q1-2025.pdf?revision=afed4be5-8c58-40c6-89ef-bba12889fee5&revision=5250527266707387904>.

- Randles, Jonathan, and Colin Kellaher. 2020. "Frontier Communications Files for Chapter 11 Bankruptcy." *The Wall Street Journal*. April 15, 2020. <https://www.wsj.com/articles/frontier-communications-files-for-chapter-11-bankruptcy-11586955706>.
- Reference for Business. 2004. "Citizens Communications Company - Company Profile, Information, Business Description, History, Background Information on Citizens Communications Company." *Referenceforbusiness.com*. 2004. <https://www.referenceforbusiness.com/history2/32/Citizens-Communications-Company.html>.
- "Report Finds 18.4 Million U.S. Fiber Broadband Homes, Highest-Ever Deployment in 2018 - Telecompetitor." 2018. *Telecompetitor.com*. December 12, 2018. <https://www.telecompetitor.com/report-finds-18-4-million-u-s-fiber-broadband-homes-highest-ever-deployment-in-2018/>.
- S. Chehi, Mark, Corali Lopez-Castro, Sarah E. Pierce, and Mindy Y. Kubs. 2017. "An Out-of-Court Restructuring or a Chapter 11 Case: When and How to Choose." In *Reorganizing Failing Businesses: A Comprehensive Review and Analysis of Financial Restructuring and Business Reorganization*, edited by Megan M. Adeyemo and Rafael X Zahralddin-Aravena. American Bar Association, Section of Business Law.
- Shleifer, Andrei, and Robert W. Vishny. 1992. "Liquidation Values and Debt Capacity: A Market Equilibrium Approach." *Journal of Finance*.
- Skill-Lync. n.d. "Different Forms of Telecommunication: Its Types and Leading Service Providers." *Skill-Lync*. <https://skill-lync.com/blogs/different-forms-of-telecommunication-its-types-and-leading-service-providers>.
- States., United. 1979. *Journal of the House of Representatives of the United States*.
- . 1981. *Bankruptcy Reform Act of 1978*.

- Taylor, Richard. 2006. "Barriers to Entry Analysis of Broadband Multiple Platforms: Comparing the US and South Korea." ResearchGate. unknown. August 15, 2006. https://www.researchgate.net/publication/228371514_Barriers_to_entry_analysis_of_broadband_multiple_platforms_Comparing_the_US_and_South_Korea.
- Trading Economics. n.d. "United States Federal Corporate Tax Rate." Tradingeconomics.com. TRADING ECONOMICS. Accessed December 2025. <https://tradingeconomics.com/united-states/corporate-tax-rate>.
- United States Courts. 2024a. "Chapter 7 - Bankruptcy Basics." United States Courts. 2024. <https://www.uscourts.gov/court-programs/bankruptcy/bankruptcy-basics/chapter-7-bankruptcy-basics>.
- . 2024b. "Chapter 11 - Bankruptcy Basics." United States Courts. 2024. <https://www.uscourts.gov/court-programs/bankruptcy/bankruptcy-basics/chapter-11-bankruptcy-basics>.
- University Press, Oxford. 2018. *Encyclopedia of Economics and Finance*. Oxford University Press.
- Verizon. 2019. "Verizon ANNUAL REPORT 2019." 2019. <https://www.verizon.com/about/sites/default/files/2019-Verizon-Annual-Report.pdf>.
- Verizon Communications Inc. and Subsidiaries. 2017. "Annual Report, 2017." Verizon Communications Inc. <https://www.verizon.com/about/sites/default/files/2017VerizonAnnualReport.pdf>.
- Waltzman, Howard. 2013. "The Telecommunications Act of 1996 in the Twenty-First Century." The Federalist Society . February 5, 2013. <https://fedsoc.org/fedsoc-review/the-telecommunications-act-of-1996-in-the-twenty-first-century>.
- Whitman, Martin J, and Fernando Diz. 2009a. *Distress Investing : Principles and Technique*. Hoboken, N.J.: Wiley.

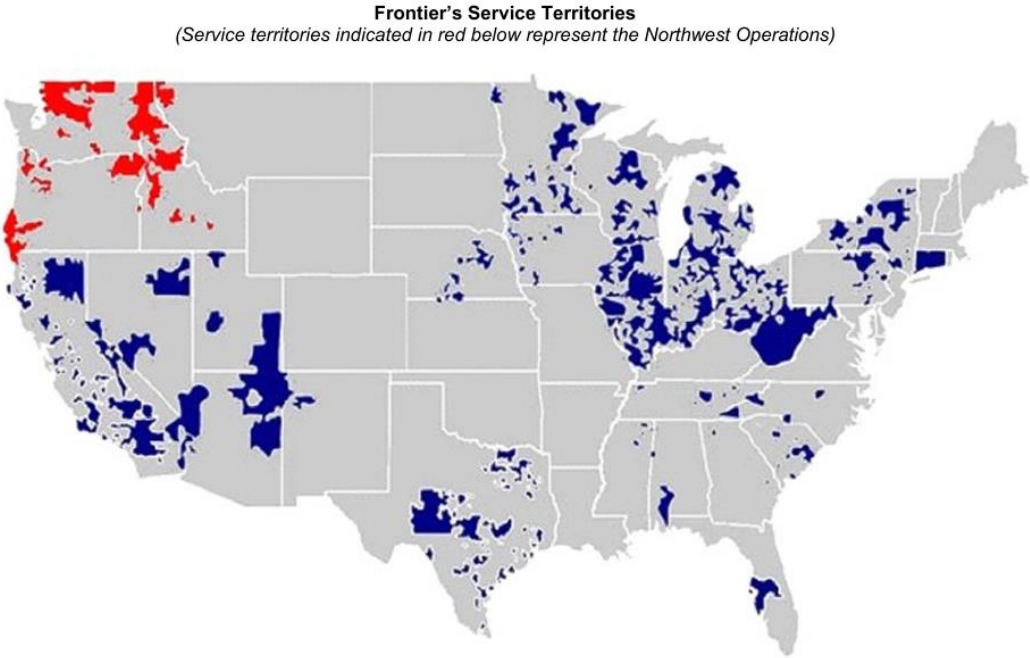
———. 2009b. *Distress Investing*. John Wiley & Sons.

Windstream Holdings, Inc. 2019. “Windstream Holdings, Inc. Files for Voluntary Reorganization under Chapter 11 of the U.S. Bankruptcy Code .” News.windstream.com. February 25, 2019. <https://news.windstream.com/news/news-details/2019/Windstream-Holdings-Inc-Files-for-Voluntary-Reorganization-Under-Chapter-11-of-the-US-Bankruptcy-Code-Following-Judge-Furmans-Decision/default.aspx>.

Yeastar. 2020. “TDM vs. VoIP: What Is, Why & Migration Plan [2024].” Yeastar. January 16, 2020. <https://www.yeastar.com/blog/tdm-vs-voip/>.

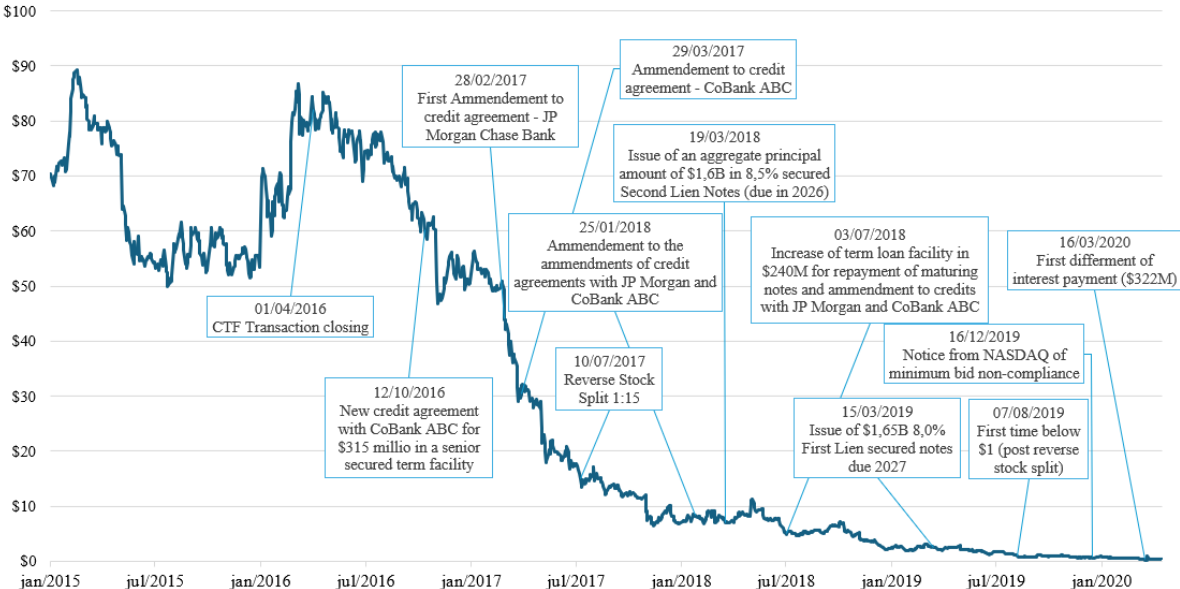
6. APPENDIX

Appendix 1: Frontier Communications regional footprint



Source: Frontier Communications 2019 10-K

Appendix 2: Events leading up to bankruptcy and stock performance



Appendix 3: Treatment of Creditor Claims as agreed upon in the Restructuring Support Agreement (source: Restructuring Support Agreement)

Stakeholder Class	Treatment	Recovery rate/Vote
Revolving Credit Facility	If not fully repaid by DIP financing proceeds, to be paid in cash at the Plan Effective date Interest paid in cash during the proceedings at a non-default rate	100%. No vote
Term Loan		
First Lien Notes		
Second Lien Notes	If not fully repaid by DIP financing proceeds, to be paid in cash at the Plan Effective date or to be reinstated, in the case the company cannot procure other financing on acceptable terms to repay in full Interest paid in cash during the proceedings or accrued to the Plan Effective Date at a non-default rate	100%. No vote
Senior Unsecured Notes	Distribution on a pro-rata share to holders, on the Plan effective date or as soon as reasonable, of 100% of the newly issued equity post-emergence (subject to dilution through the MIP), of takeback debt up to an aggregate amount of \$750 million, and any unrestricted cash in excess of \$150 million on the Plan Effective date, projected 30 days prior	Impaired. Vote on the plan
Subsidiary Secured Notes	Reinstatement on the Plan effective date or as soon as reasonable Interest paid in cash during the proceedings or accrued to the Plan Effective Date at a non-default rate	100%. No vote
Subsidiary Unsecured Notes	Reinstatement on the Plan effective date or as soon as reasonable Interest paid in cash during the proceedings or accrued to the Plan Effective Date at a non-default rate	100%. No vote
Trade Claimes & Other unsecured claims	Either paid in full on the Plan Effective date, reinstated on the effective date or as soon as reasonably acceptable, or other treatment that deems the claim unimpaired	100%. No vote
Parent Litigation Claims	Treated in a way that deems impaired, up to the amount of current insurance coverage plus \$25 million	100%. No vote
Administrative, Priority Tax, Other Priority Claims, or Other Secured Claims	On the Plan Effective Date or as soon as reasonably practicable after, payment in full in cash, reinstatement, delivery of the collateral securing the claim, or any other treatment that deems the class unimpaired	100%. No vote
Intercompany Claims	At the discretion of the debtor, can be either reinstated or cancelled without any distribution	100% or 0%. No vote
Existing Equity interests	No recovery	0%. No vote

Appendix 4: Frontier Communications peer benchmarking and select financial metrics as of 1Q 2020

Company	Ticker	Predicted beta	Market Valuation		LTM Financial Statistics				Sales		EBITDA		EBIT	
			Equity Value	Enterprise Value	Sales	EBITDA	EBIT	Net Income	2020E (\$)	2021E (\$)	2020E (\$)	2021E (\$)	2020E (\$)	2021E (\$)
Frontier Communications Corporation	FTR				\$7,939	\$3,154	\$1,443	\$373						
Tier I: Incumbent Local Exchange Carriers (ILECs)														
Lumen Technologies Inc.	LUMN	1.15	\$10,174	\$44,952	\$21,259	\$9,180	\$4,052	\$1,452	\$20,704	\$19,710	\$8,816	\$8,431	\$3,624	\$4,238
Consolidated Communications	CNSL	1.04	376	2,604	1,324	490	118	13	1,300	1,282	527	502	147	135
Alaska Communications	ALSK	0.89	123	344	233	71	24	13	N/A	N/A	N/A	N/A	N/A	N/A
Windstream	WINMQ	1.81	7	-	4,996	1,564	(67)	(388)	N/A	N/A	N/A	N/A	N/A	N/A
Cincinnati Bell	CBB	1.18	748	2,882	1,537	410	101	(23)	1,534	1,661	410	423	118	138
Tier II: Broader Telecom Carriers														
AT&T Inc.	T	0.65	\$201,709	\$398,720	\$179,145	\$64,910	\$30,858	\$16,161	\$170,611	\$168,292	\$54,852	\$51,620	\$24,022	\$28,313
Verizon Communications Inc.	VZ	0.58	226,390	359,970	131,350	52,539	32,570	20,190	128,161	133,378	46,779	48,374	29,087	32,323
T-Mobile US Inc.	TMUS	0.78	120,264	161,173	45,031	15,834	6,460	4,044	69,502	80,113	24,611	26,623	7,036	6,919
Telephone and Data Systems	TDS	1.26	2,011	5,753	5,179	1,253	180	150	5,261	5,316	1,284	1,358	245	458
Tier III: Cable/ MSOs & Competitive Broadband Operators														
Charter Communications Inc.	CHTR	0.98	\$119,867	\$197,853	\$46,296	\$17,187	\$7,035	\$2,230	\$48,051	\$51,702	\$18,323	\$20,461	\$8,395	\$10,512
ATN International	ATNI	0.68	863	995	446	152	25	(1)	454	600	121	125	9	12
CableOne	CABO	1.01	10,513	12,120	1,211	583	351	218	1,330	1,604	670	842	394	479
Comcast	CMCSA	0.90	163,945	266,708	108,692	34,425	20,970	12,567	102,637	115,663	30,426	34,606	17,233	20,904
Shenandoah Telecommunications Company	SHEN	0.75	2,338	3,317	317	144	23	12	291	245	163	72	68	10
Tier IV: Alternative Access Competitors (Satellite Broadband)														
Globalstar Inc.	GSAT	1.25	\$480	\$840	\$132	\$39	(\$61)	(\$115)	\$128	\$119	\$47	\$36	(\$52)	(\$62)
Iridium Communications Inc.	IRDM	1.17	2,756	4,312	572	328	24	(66)	578	611	356	375	42	43
Echostar Corp.	SATS	1.18	2,651	2,830	1,897	659	74	(117)	1,872	1,996	653	738	127	243
Viasat Inc.	VSAT	1.06	2,181	4,092	2,309	487	84	36	2,312	2,264	463	525	138	164

Notes

Source: Company filings, Bloomberg, Consensus Estimates

Note: Last twelve months data based on March 31, 2020. Estimated annual financial data based on a calendar year.

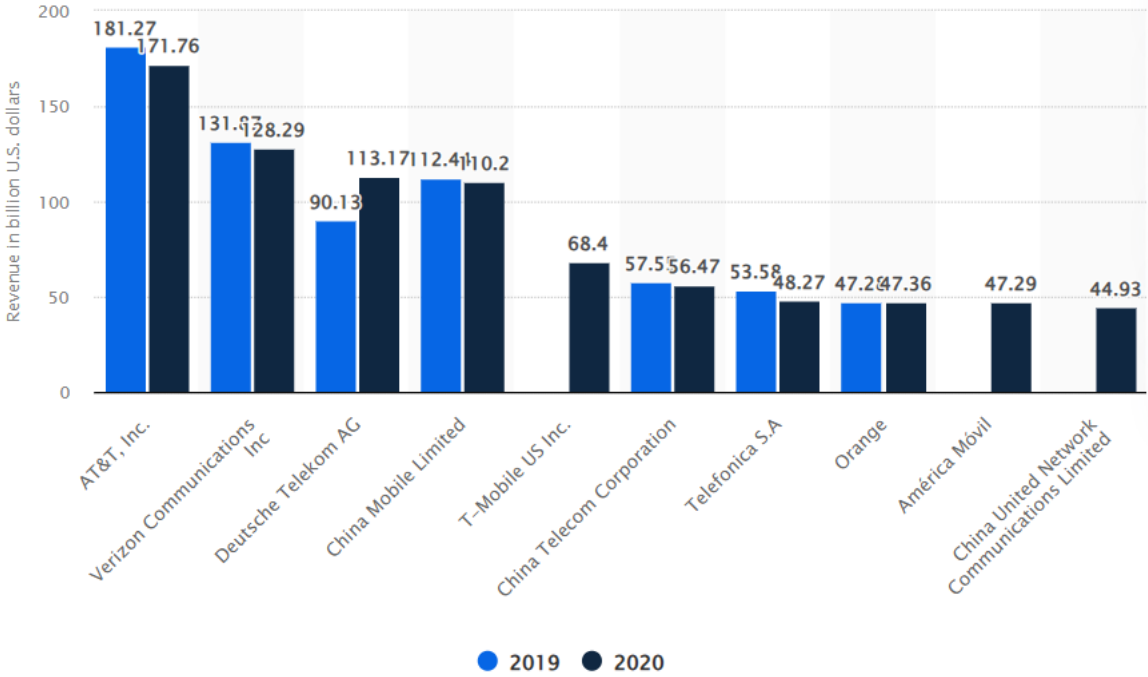
Note: EBITDA, EBIT, and Net Income are adjusted for non-operating and non-recurring items

Note: Expected metrics based on Bloomberg estimates consensus at the end of 1Q 2020

Note: For Alaska, 2020 and 2021 values are based on company guidance since bloomberg estimates were not available

Note: Predicted beta from 2015-05-15 to 2020-05-15 on a monthly calculation basis (0.66 raw beta + 0.33 * 1)

Appendix 5: Largest listed telecommunications companies in 2019 and 2020, by revenue



Source: Statista

Appendix 6: Frontier Communications income statement (as reported)

Annual Financials (All figures in millions of USD except per share data)						
As of December 31,	Notes	2015	2016	2017	2018	2019
Revenue		\$5,576	\$8,896	\$9,128	\$8,611	\$8,107
Less: Network access expenses		640	1,470	1,597	1,441	1,247
Less: Network related expenses		1,287	1,887	1,958	1,898	1,810
Less: Selling, general and administrative expenses		1,346	2,093	2,017	1,815	1,804
Less: Depreciation and amortization		1,320	2,031	2,184	1,954	1,780
Less: Goodwill impairment		-	-	2,748	641	5,725
Less: Loss on disposal of Northwest Operations		-	-	-	-	446
Less: Acquisition and integration costs		236	436	25	-	-
Less: Restructuring costs and other charges		2	91	82	35	168
Total operating expenses		4,831	8,008	10,611	7,784	12,980
EBIT		\$745	\$888	(\$1,483)	\$827	(\$4,873)
Plus: Investment and other income (loss), net		7	27	1	13	(37)
Less: Pension settlement costs		-	-	83	41	57
Plus: Gains (loss) on early extinguishment of debt		-	(7)	(88)	32	(20)
Less: Interest expense		1,113	1,531	1,534	1,536	1,535
EBT		(\$361)	(\$623)	(\$3,187)	(\$705)	(\$6,522)
Less: Income taxes / (benefit)		(165)	(250)	(1,383)	(62)	(611)
Net income / (loss)		(\$196)	(\$373)	(\$1,804)	(\$643)	(\$5,911)
Less: Dividends on preferred stock		120	214	214	107	-
Net loss attributable to Frontier common shareholders		(\$316)	(\$587)	(\$2,018)	(\$750)	(\$5,911)
Other Comprehensive Income (Loss)						
Net loss		(196)	(373)	(1,804)	(643)	(5,911)
Other comprehensive income (loss), net of tax		51	(34)	21	(97)	(108)
Comprehensive loss		(\$145)	(\$407)	(\$1,783)	(\$740)	(\$6,019)
Reference Figures:						
GAAP EBIT	1	745	888	(1,566)	786	(4,930)
GAAP EBITDA		2,065	2,919	618	2,740	(3,150)
attributable to Frontier common shareholders		(\$0.3)	(\$7.6)	(\$26.0)	(\$8.4)	(\$56.8)
Total wa shares outstanding - basic and diluted		n.a.	77,607	77,736	89,683	104,065

Notes:

(1) Equal to reported EBIT minus pension settlement costs

Appendix 7: Frontier Communications balance sheet (as reported)

Annual Financials (All figures in millions of USD)						
<i>As of December 31,</i>	Notes	2015	2016	2017	2018	2019
Cash and cash equivalents	1	9,380	522	362	354	760
Accounts receivable, net	2	571	938	819	723	629
Contract acquisition costs		-	-	-	107	105
Prepaid expenses		100	88	78	86	89
Assets held for sale		-	-	-	-	1,401
Income taxes and other current assets		80	108	64	60	53
Current Assets		\$10,131	\$1,656	\$1,323	\$1,330	\$3,037
Property, plant and equipment, net		8,493	14,902	14,377	14,187	12,963
Goodwill, net		7,166	9,674	7,024	6,383	-
Other intangibles, net		1,143	2,662	2,063	1,494	1,020
Other assets		151	119	97	265	468
Total assets		\$27,084	\$29,013	\$24,884	\$23,659	\$17,488
Long-term debt due within one year		384	363	656	814	994
Accounts payable		467	698	564	495	437
Advanced billings		160	301	270	256	219
Accrued content costs		-	164	102	-	-
Accrued other taxes		87	134	156	182	206
Accrued interest		403	437	401	381	407
Pension and other postretirement benefits		33	23	29	39	43
Liabilities held for sale		-	-	-	-	123
Other current liabilities		359	324	330	394	375
Current liabilities		\$1,893	\$2,444	\$2,508	\$2,561	\$2,804
Deferred income taxes		2,666	2,516	1,139	1,109	462
Pension and other postretirement benefits		1,163	1,602	1,676	1,750	1,896
Other liabilities		240	372	317	281	412
Long-term debt		15,508	17,560	16,970	16,358	16,308
Total Liabilities		\$21,470	\$24,494	\$22,610	\$22,059	\$21,882
Common stock , \$0.25 par value	2	298	298	20	27	27
Additional paid-in capital		6,034	5,283	5,034	4,802	4,815
Accumulated deficit		(87)	(460)	(2,263)	(2,752)	(8,573)
Accumulated other comprehensive loss, net of tax		(353)	(387)	(366)	(463)	(650)
Treasury common stock		(278)	(215)	(151)	(14)	(13)
total equity (deficit)		\$5,614	\$4,519	\$2,274	\$1,600	(\$4,394)
Total liabilities and equity (deficit)		\$27,084	\$29,013	\$24,884	\$23,659	\$17,488
Supplemental Balance Sheet information						
Total interest-bearing debt (incl. accrued interest)		16,295	18,360	18,027	17,553	17,709

Notes:

(1) Includes Restricted Cash for 2015

(2) Net of allowances of \$120 in 2019, \$105 in 2018, \$69 in 2017, \$131 in 2016, and \$57 in 2015

Appendix 8: Frontier reported total revenue breakdown per year

Annual Financials (2015 - 2019)						
<i>As of December 31,</i>	Notes	2015	2016	2017	2018	2019
Data and Internet services		2,337	3,693	3,862	3,878	3,756
Voice services		2,022	2,886	2,864	2,721	2,500
Video services		285	1,244	1,304	1,085	1,005
Other	2	432	436	487	544	477
Revenue from contracts with customers	1	\$5,076	\$8,259	\$8,517	\$8,228	\$7,738
Subsidy Revenue	2	500	637	611	383	369
Total Revenue		\$5,576	\$8,896	\$9,128	\$8,611	\$8,107
Consumer		2,520	4,470	4,564	4,380	4,153
Commercial		2,556	3,789	3,953	3,848	3,585
Revenue from contracts with customers	1	\$5,076	\$8,259	\$8,517	\$8,228	\$7,738
Subsidy Revenue	2	500	637	611	383	369
Total Revenue		\$5,576	\$8,896	\$9,128	\$8,611	\$8,107

Notes:

Source: 10-Ks, Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

1. Includes \$70mn and \$73mn of lease revenue for the years of ended December 31, 2019 and 2018, respectively

2. Frontier recorded Switch access revenues of \$165 million in 2017, \$170 million in 2016 and \$177 million in 2015, reclassified as Other.

Assumed a pro rata distribution between consumer and commercial

Appendix 9: Frontier Communications reported customers per year

Annual Financials						
<i>As of December 31,</i>	Notes	2015	2016	2017	2018	2019
Total Customers	1	3,413	5,393	4,850	4,471	4,118
Consumer Customers		-	-	-	-	-
Customers	1	3,124	4,891	4,397	4,060	3,747
Net customer additions (losses)		n.a.	1,767	(494)	(337)	(313)
Average monthly consumer revenue per customer		\$63.9	\$77.5	\$81.0	\$86.3	\$88.7
Customer monthly churn		1.82%	1.98%	2.17%	1.97%	2.07%
Commercial customers		-	-	-	-	-
Customers	1	289	502	453	411	371
Average monthly business revenue per customer	3	\$690.9	\$673.7	n.a.	n.a.	n.a.
Broadband subscriber metrics		-	-	-	-	-
Broadband subscribers	2	2,462	4,271	3,938	3,735	3,513
Net subscriber additions		n.a.	1,809	(333)	(203)	(222)
Video (excl. Dish) subscriber metrics		-	-	-	-	-
Video subscribers	2,4	554	1,419	961	838	660
Net subscriber additions		n.a.	865	(184)	(123)	(178)
Dish subscriber metrics		-	-	-	-	-
Dish subscribers	4	n.a.	n.a.	235	205	173
Net subscriber additions		n.a.	n.a.	(39)	(30)	(32)
Employees		19,160	28,332	22,736	21,173	18,317

Notes

Source: 10-Ks, Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

(1) 2,283,000 residential customers, 250,000 business customers and 2,533,000 total customers were acquired at the time of the April 2016 CTF Acquisition.

(2) 2,052,000 broadband subscribers and 1,165,000 video subscribers were acquired at the time of the April 2016 CTF Acquisition.

(3) Frontier stopped reporting the average monthly revenue per business customer in 2016

(4) Video subscriber count includes Dish subscribers for 2016 as the company did not report a breakdown

Appendix 10: Frontier Communications income statement (reformulated)

Normalized Income Statement (All figures in millions of USD except per share data)						
<i>As of December 31,</i>	2016	2017	2018	2019	TTM ¹	
Data and Internet services	3,693	3,862	3,878	3,756	3,721	
Voice services	2,886	2,864	2,721	2,500	2,422	
Video services	1,244	1,304	1,085	1,005	959	
Other	436	487	544	477	470	
Revenue from contract with customers	\$8,259	\$8,517	\$8,228	\$7,738	\$7,572	
Subsidy Revenue	637	611	383	369	\$367	
Revenue	\$8,896	\$9,128	\$8,611	\$8,107	\$7,939	
Less: Network access expenses	1,470	1,597	1,441	1,247	1,195	
Less: Network related expenses	1,887	1,958	1,898	1,810	1,798	
Less: Selling, general and administrative expenses	2,093	2,017	1,815	1,804	1,792	
Less: Depreciation and amortization	2,031	2,184	1,954	1,780	1,711	
Pro-forma EBIT	\$1,415	\$1,372	\$1,503	\$1,466	\$1,443	
<i>Less: Statutory Taxes / (benefit)</i>	297	288	316	308	303	
<i>Less: Tax Adjustments</i>	(226)	(1,349)	(55)	(597)	(632)	
<i>Less: Taxes on operating profit</i>	72	(1,061)	261	(289)	(329)	
NOPLAT	\$1,343	\$2,433	\$1,242	\$1,755	\$1,772	
Less: Goodwill impairment	-	2,748	641	5,725	5,725	
Less: Acquisition and integration costs	436	25	-	-	-	
Less: Loss on disposal of Northwest Operations	-	-	-	446	470	
Less: Restructuring costs and other charges	91	82	35	168	188	
Plus: Investment and other income (loss), net	27	1	13	(37)	(23)	
Less: Pension settlement costs	-	83	41	57	160	
Plus: Gains (loss) on early extinguishment of debt	(7)	(88)	32	(20)	-	
Non-operating EBIT	(\$507)	(\$3,025)	(\$672)	(\$6,453)	(\$6,566)	
<i>Less: Statutory Taxes</i>	-	-	-	-	-	
<i>Less: Taxes on non-operating profit</i>	-	-	-	-	-	
<i>Plus: Other Comprehensive Income</i>	(34)	21	(97)	(108)	(30)	
Non-operating profit after taxes	(\$541)	(\$3,004)	(\$769)	(\$6,561)	(\$6,596)	
Less: Interest expense	1,531	1,534	1,536	1,535	1,539	
Less: Tax expense / (shield) on financial expenses	(322)	(322)	(323)	(322)	(323)	
After-tax financial expenses	(\$1,209)	(\$1,212)	(\$1,213)	(\$1,213)	(\$1,216)	
Total Comprehensive Income	(\$407)	(\$1,783)	(\$740)	(\$6,019)	(\$6,040)	
Reference items						
Statutory tax rate	21%	21%	21%	21%	21%	
Depreciation & Amortization	2,031	2,184	1,954	1,780	1,711	
GAAP metrics						
GAAP EBIT	888	(1,566)	786	(4,930)	(4,997)	
GAAP EBITDA	2,919	618	2,740	(3,150)	(3,286)	
Pro-forma metrics						
PF EBIT	1,415	1,372	1,503	1,466	1,443	
PF EBITDA	3,446	3,556	3,457	3,246	3,154	

Notes

Source: Frontier Communications, includes Northwestern Operations

(1) Trailing twelve months ending March 31, 2020

Appendix 11: Frontier Communications balance sheet (reformulated)

Normalized Balance Sheet (All figures in millions of USD except per share data)						
<i>As of December 31,</i>	Notes	2016	2017	2018	2019	1Q 2020
Accounts receivable, net		938	819	723	629	596
Contract acquisition costs		-	-	107	105	105
Prepaid expenses		88	78	86	89	98
Operating Current assets		1,026	897	916	823	799
Accounts payable		698	564	495	437	357
Advanced billings		301	270	256	219	221
Accrued content costs		164	102	-	-	-
Operating Current liabilities		1,163	936	751	656	578
Operating Net Working Capital		(137)	(39)	165	167	221
Property, plant and equipment, net		14,902	14,377	14,187	12,963	12,890
Other intangibles, net	1	2,662	2,063	1,494	1,020	921
Other assets	2	119	97	265	468	475
Invested Capital		\$17,546	\$16,498	\$16,111	\$14,618	\$14,507
Assets held for sale		-	-	-	1,401	1,406
Pension and other postretirement benefits		(23)	(29)	(39)	(43)	(43)
Pension and other postretirement benefits		(1,602)	(1,676)	(1,750)	(1,896)	(1,864)
<i>Liabilities held for sale</i>		-	-	-	(123)	(115)
<i>Other current liabilities</i>		(324)	(330)	(394)	(375)	(359)
Other liabilities		(372)	(317)	(281)	(412)	(411)
Income taxes and other current assets	3	108	64	60	53	56
Deferred income taxes		(2,516)	(1,139)	(1,109)	(462)	(477)
Accrued other taxes		(134)	(156)	(182)	(206)	(209)
Goodwill, net		9,674	7,024	6,383	-	-
Total funds invested		\$22,357	\$19,939	\$18,799	\$12,555	\$12,491
Reconciliation of total funds invested:						
Cash and equivalents		(522)	(362)	(354)	(760)	(941)
Long-term debt due within one year		363	656	814	994	17,306
Long-term debt		17,560	16,970	16,358	16,308	-
Accrued interest		437	401	381	407	619
Net Debt and Debt Equivalents		\$17,838	\$17,665	\$17,199	\$16,949	\$16,984
Common stock, \$0.25 par value		298	20	27	27	27
Additional paid-in capital		5,283	5,034	4,802	4,815	4,816
Accumulated deficit		(460)	(2,263)	(2,752)	(8,573)	(8,759)
Accumulated other comprehensive loss, net of tax		(387)	(366)	(463)	(650)	(564)
Treasury common stock		(215)	(151)	(14)	(13)	(13)
Equity and equity equivalents		\$4,519	\$2,274	\$1,600	(\$4,394)	(\$4,493)
Total Funds Invested		\$22,357	\$19,939	\$18,799	\$12,555	\$12,491

Notes:

1. Includes customer base, royalties, and trade name, all intangibles which are responsible for recurring cash flows
2. Includes ROU assets as well as restricted cash (funds held as collateral by certain insurance carriers)
3. Includes assets and liabilities held for sale

**Appendix 12: Frontier Communications normalized Free Cash Flow Bridge
(reformulated)**

Normalized FCF Bridge (All figures in millions of USD except per share data)					
<i>As of December 31,</i>		2017	2018	2019	TTM¹
Pro-forma EBIT		1,372	1,503	1,466	1,443
Less: Statutory Taxes / (benefit)		288	316	308	303
Less: Tax Adjustments		(1,349)	(55)	(597)	(632)
Less: Taxes on operating profit		(1,061)	261	(289)	(329)
NOPAT		2,433	1,242	1,755	1,772
Plus: Deferred income taxes		(1,385)	(67)	(619)	(665)
Plus: Depreciation & Amortization		2,184	1,954	1,780	1,711
Gross Operating Cash Flows		3,232	3,129	2,916	2,818
Less: Changes in Working Capital		(39)	204	2	24
Less: Capital Expenditures		1,078	1,181	1,138	1,191
Free Cash Flow		\$2,193	\$1,744	\$1,776	\$1,603

Notes

Source: Frontier Communications, includes Northwestern Operations

(1) Trailing twelve months ending March 31, 2020

Appendix 13: Frontier Communications Selected financial metrics, profitability, leverage, and liquidity ratios

<i>(all values in millions of USD)</i>	Notes	2017	2018	2019	TTM ¹
Sales		9,128	8,611	8,107	7,939
PF EBITDA		3,556	3,457	3,246	3,154
PF EBIT		1,372	1,503	1,466	1,443
PF NOPLAT	2	2,433	1,242	1,755	1,772
PF FCF		2,193	1,744	1,776	1,603
Interest expenses		1,534	1,536	1,535	1,539
Profitability & Return Metrics					
PF EBITDA ratio		38.96%	40.15%	40.04%	39.73%
PF EBIT Ratio		15.03%	17.45%	18.08%	18.18%
PF NOPLAT Ratio		26.65%	14.43%	21.64%	22.32%
PF FCF margin		24.02%	20.26%	21.90%	20.19%
PF ROIC		14.75%	7.71%	12.00%	12.21%
Liquidity & Leverage Ratios					
Debt-to-PF EBITDA		5.1x	5.1x	5.5x	5.7x
Net Debt-to-PF EBITDA		5.0x	5.0x	5.2x	5.4x
Interest Coverage Ratio		0.9x	1.0x	1.0x	0.9x
Cash Ratio	3, 4	0.1x	0.1x	0.3x	0.0x
Current Ratio	3, 4,5	0.5x	0.5x	1.1x	0.2x

Notes

Source: Frontier Communications, pro forma adjustments are described in details in appendices xx and xx

Note: both pro forma and reported financial metrics include WDC operations

(1) TTM Ending March 31, 2020

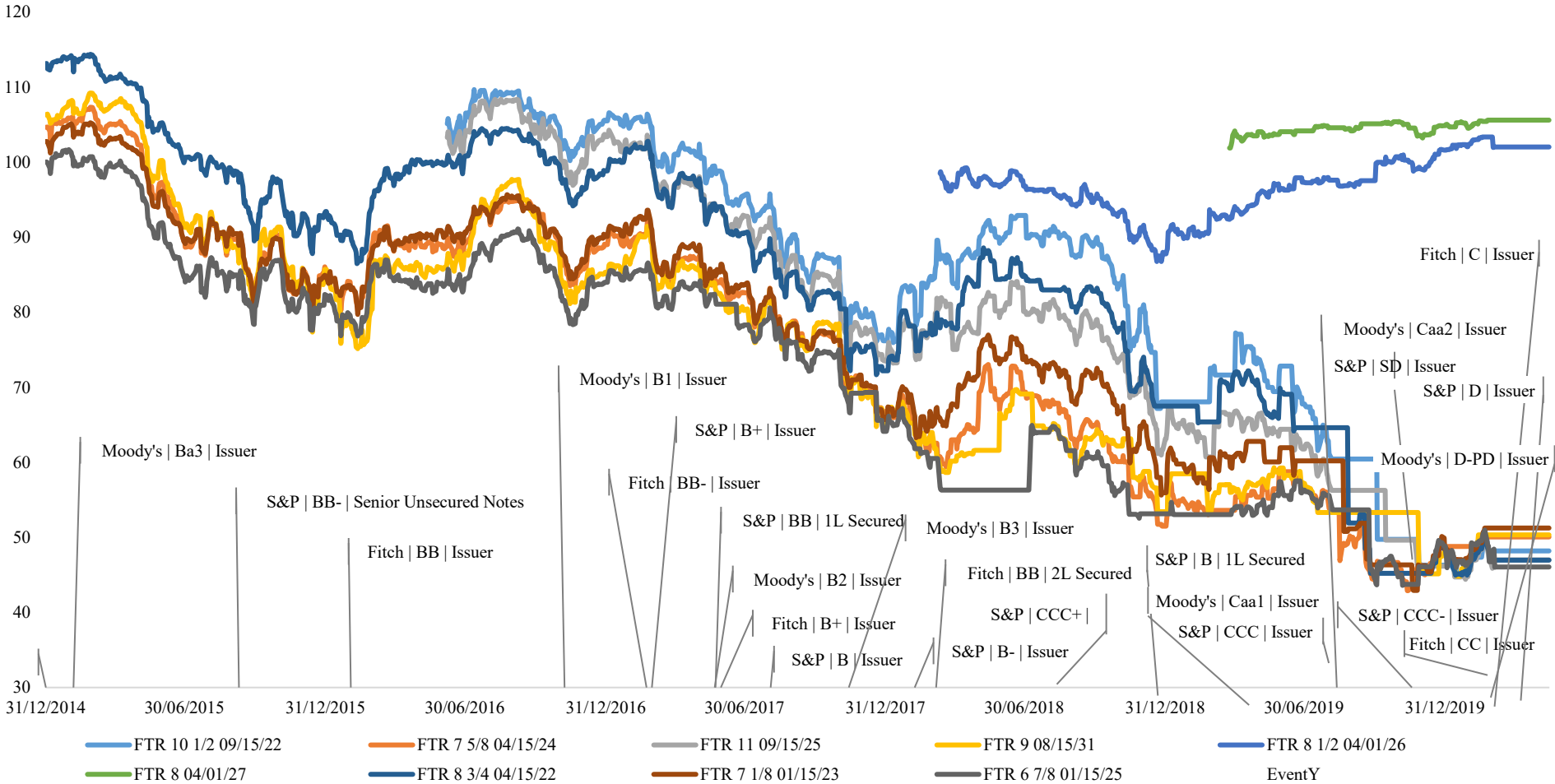
(2) NOPLAT is higher than EBIT due to tax adjustments, which were all assumed as core operations

(3) Cash and Current Ratios based on "as reported" financials

(4) All of Frontier's debt outstanding was moved to long-term debt due within one year following the ch. 11 filing

(5) Includes \$1.4b in Assets Held For Sale following sale of Northwestern operations

Appendix 14: Frontier Communications bond prices (expressed as cents on the dollar) for the period between Dec 31, 2014 and May 15, 2020 and rating actions by the three major credit rating agencies for the issuer and select securities.



Notes: Selection of bonds which were traded at least once in the trailing three months ending May 15, 2020. Remaining bonds were excluded due to lack of liquidity

Appendix 15: Frontier Communications Weighted Average Cost of Capital (WACC) model output and Sensitivity Analysis

WACC Calculation	
Target Capital Structure	
Debt-to-Total Capitalization	75.0%
Equity-to-Total Capitalization	25.0%
Cost of Debt	
Cost-of-Debt	9.0%
Tax Rate	21.0%
After-tax Cost of Debt	7.1%
Cost of Equity	
Risk-free Rate (1)	0.6%
Market Risk Premium (2)	8.1%
Levered Beta	1.17
Cost of Equity	10.1%
WACC	7.9%

Comparable Companies Unlevered Beta						
Company	Predicted Levered Beta (3)	Market Value of Debt (3)	Market Value of Equity (3)	Debt/Equity	Marginal Tax Rate	Unlevered Beta
Lumen Technologies Inc.	1.15	\$34,778	\$10,174	341.8%	21%	0.31
Telephone and Data Systems	1.26	3,742	2,011	186.1%	21%	0.51
Alaska Communications	0.89	222	123	180.6%	21%	0.37
Consolidated Communications	1.04	2,228	376	592.2%	21%	0.18
Cincinnati Bell	1.18	2,135	748	285.4%	21%	0.36
Mean	1.10			317.2%		0.35
Median	1.15			285.4%		0.36

ValueCo Relevered Beta				
Relevered Beta	Mean Unlevered Beta	Target Debt/Equity	Target Marginal Tax Rate	Relevered Beta
	0.35	300.0%	21.0%	1.17

WACC Sensitivity Analysis						
Debt-to-Total Capitalization	Pre-tax Cost of Debt					
	8.0%	8.5%	9.0%	9.5%	10.0%	
70.0%	7.0%	7.3%	7.6%	7.8%	8.1%	
72.5%	7.1%	7.4%	7.7%	8.0%	8.3%	
75.0%	7.3%	7.6%	7.9%	8.2%	8.4%	
77.5%	7.4%	7.7%	8.0%	8.3%	8.6%	
80.0%	7.5%	7.8%	8.2%	8.5%	8.8%	

Notes

Source: Modified template from the book Investment Banking: Valuation, Leveraged Buyouts, and Mergers & Acquisitions by Josh Rosenbaum and Joshua Pearl.

(1) 10-year U.S. Government Bond yields at 15/05/2020

(2) Obtained from daily prices on the S&P500 Index and U.S. 10-Year daily bond prices since 03/05/1982 until 15/05/2020

Appendix 16: Frontier Communications market-implied yield-to-maturity (as a percentage) as of May 15, 2020 and price (expressed as cents on the dollar) of select tradeable debt securities

Name¹	Creditor class	Ticker	OPB	Price²	ytm³
Frontier Secured					
First lien notes	Frontier 1L Secured	FTR 8 04/01/27	1,650	\$1.06	7%
Second lien notes	Frontier 2L Secured	FTR 8 1/2 04/01/26	1,600	\$1.02	8%
<i>Total</i>			3,250	\$1.04	8%
<i>% of total book value of debt reported by Frontier in the RSA⁴</i>			56.94%		
Frontier Unsecured					
Senior Notes Apr 2022	Frontier Unsecured	FTR 8 3/4 04/15/22	500	\$0.47	52%
Senior Notes Sep 2022	Frontier Unsecured	FTR 10 1/2 09/15/22	2,188	\$0.48	41%
Senior Notes Jan 2023	Frontier Unsecured	FTR 7 1/8 01/15/23	850	\$0.51	31%
Senior Notes Apr 2024	Frontier Unsecured	FTR 7 5/8 04/15/24	750	\$0.50	30%
Senior Notes Jan 2025	Frontier Unsecured	FTR 6 7/8 01/15/25	775	\$0.46	25%
Senior Notes Sep 2025	Frontier Unsecured	FTR 11 09/15/25	3,600	\$0.47	29%
Senior Notes Oct 2031	Frontier Unsecured	FTR 9 08/15/31	945	\$0.50	20%
<i>Total</i>			9,608	\$0.48	32%
<i>% of total book value of debt reported by Frontier in the RSA⁴</i>			87.75%		
Total			12,858	\$0.62	26%
<i>% of total book value of debt reported by Frontier in the RSA⁴</i>			73%		

Notes

Source: Bloomberg, Frontier Communications SEC Filings

(1) Debt securities issued by frontier which were traded in the trailing 3 months

(2) price as of 2025-04-15, totals and subtotals calculated as a weighted average on outstanding principal balance

(3) ytm as of 2025-04-15, totals and subtotals calculated as a weighted average on outstanding principal balance

(4) % of total book value reported by Frontier Communications on the Restructuring Support Agreement

Appendix 17: Frontier Communications Debt Securities and yield-to-maturity implied by company's reported market value of debt as of 1Q 2020 10-Q filing

<i>As of May 15th, 2020</i>	Book value	ytm	Market Value
Frontier 1L Secured	4,108	6.98%	4,013
Frontier 2L Secured	1,600	8.06%	1,722
Frontier Unsecured	10,949	47.53%	3,571
Subsidiary Unsecured	106	7.51%	110
Subsidiary Secured	750	7.51%	700
Total Debt	17,513	32%	10,117

Notes

Source: Bloomberg, Frontier Communications SEC Filings

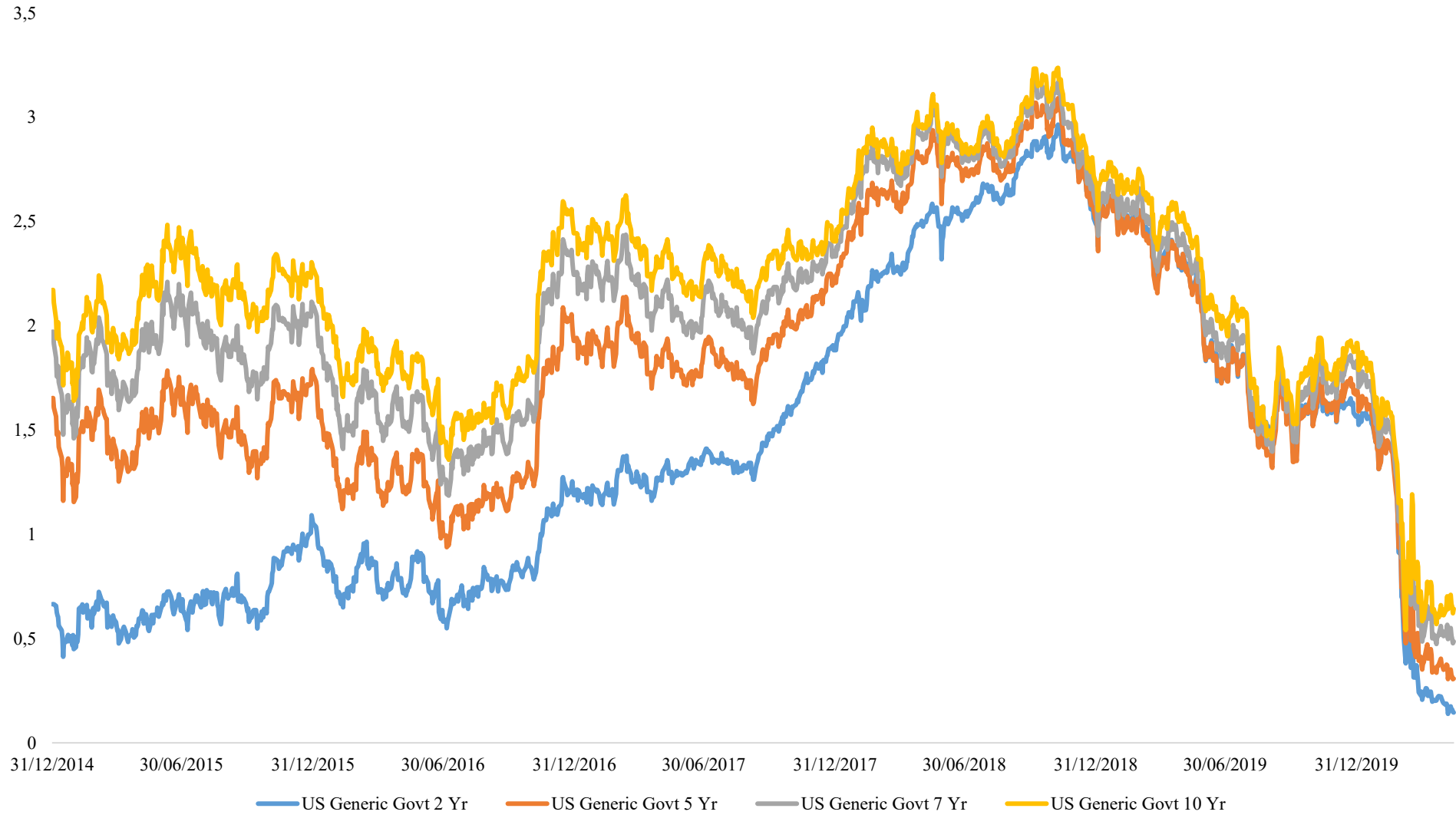
Appendix 18: Option-adjusted Spreads on major Bloomberg High-Yield US Corporate Bond

Index	May 15th, 2020	3-month avg.	6-month avg.	12-month avg.
BBG US IG Index	206 bps	209 bps	154 bps	135 bps
BBG US HY Index	761 bps	716 bps	534 bps	460 bps
BBG HY Telecom Index	466 bps	528 bps	460 bps	445 bps
BBG HY Ba Index	545 bps	507 bps	350 bps	289 bps
BBG HY Ba/B	626 bps	597 bps	429 bps	366 bps
BBG HY B Index	759 bps	727 bps	536 bps	464 bps
BBG HY Caa Index	1,449 bps	1,392 bps	1,143 bps	1,003 bps
BBG HY Ca/D Index	4,870 bps	3,704 bps	2,931 bps	2,533 bps

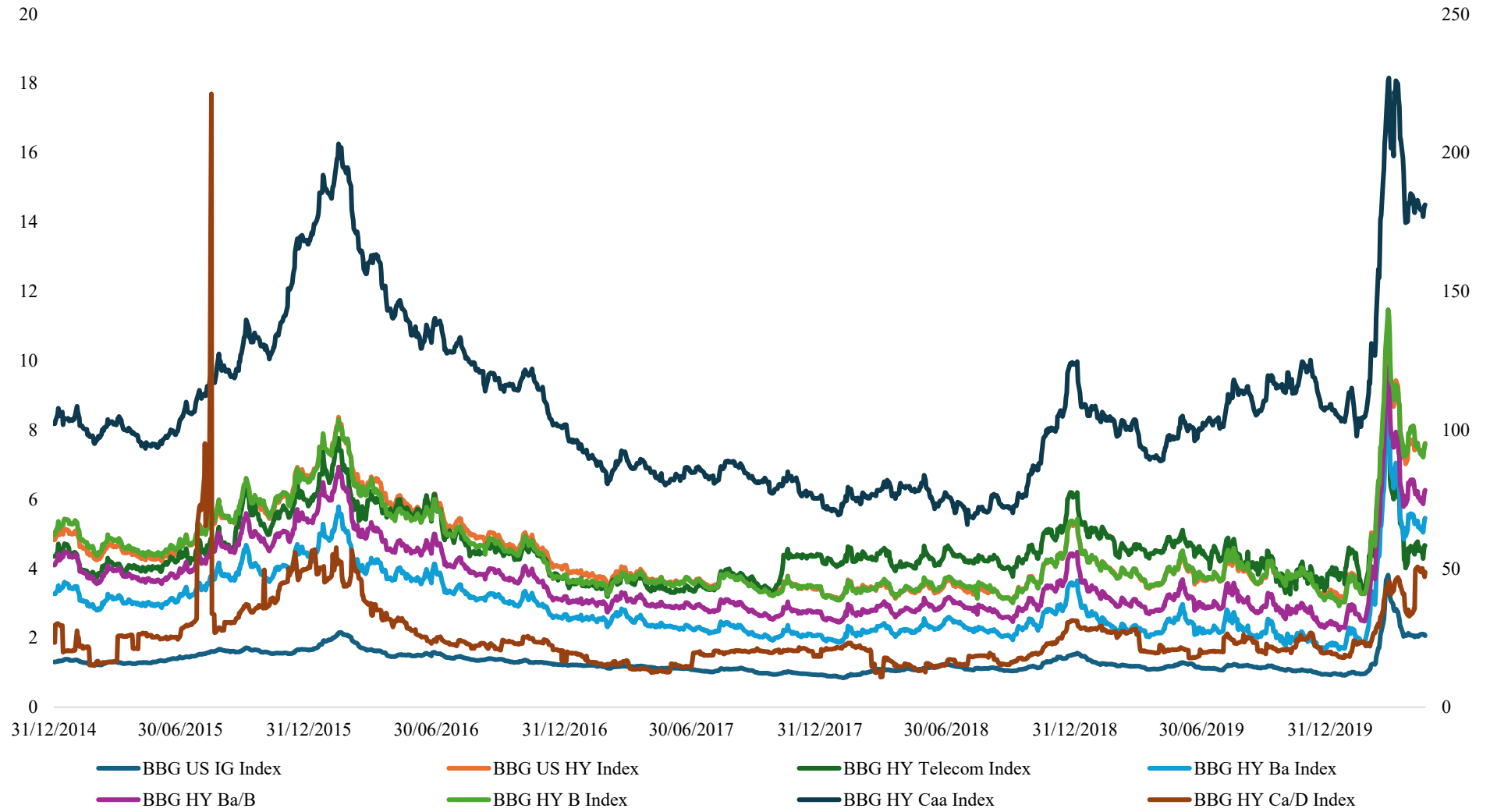
Notes

Source: Bloomberg, Frontier Communications SEC Filings

Appendix 19: Market Yield on U.S. Treasury Securities at 2,5,7,10-Year Constant Maturity for the period between Dec 31, 2014 and May 15, 2020, expressed in percentages



Appendix 20: Option-adjusted credit spreads on select Bloomberg High-yield U.S. Corporate Bond indices, expressed as percentage (BBG HY Ca/D Index on right-axis, remaining indices on left-axis)



Appendix 21: Credit Ratings implied by Interest Coverage Ratio for 2020 and 19

Interest Coverage is		Rating is	Spread 2020	Spread 2019
Greater than	Smaller or equal to			
8.5	100000	Aaa/AAA	0.63%	0.75%
6.5	8.499999	Aa2/AA	0.78%	1.00%
5.5	6.499999	A1/A+	0.98%	1.25%
4.25	5.499999	A2/A	1.08%	1.38%
3	4.249999	A3/A-	1.22%	1.56%
2.5	2.999999	Baa2/BBB	1.56%	2.00%
2.25	2.499999	Ba1/BB+	2.00%	2.50%
2	2.249999	Ba2/BB	2.40%	3.60%
1.75	1.999999	B1/B+	3.51%	4.50%
1.5	1.749999	B2/B	4.21%	5.40%
1.25	1.499999	B3/B-	5.15%	6.60%
0.8	1.249999	Caa/CCC	8.20%	9.00%
0.65	0.799999	Ca2/CC	8.64%	11.08%
0.2	0.649999	C2/C	11.34%	14.54%
-100000	0.199999	D2/D	15.12%	19.38%

Notes

Source: Aswath Damoradan: Ratings, Interest coverage ratios, and Default Spreads

Appendix 22: Liquidation Valuation

All figures in USD in millions unless stated, as of 31 of december	Est / Book Value	Estimated Recovery - %			Estimated Liquidation Value		
		Low	Med	High	Low	Med	High
Cash and cash equivalents	941	100%	100%	100%	941	941	941
Accounts receivable	596	75%	85%	90%	447	507	536
Contract acquisition costs	105	10%	12%	15%	11	13	16
Prepaid expenses	98	15%	20%	30%	15	20	29
Assets held for sale	1 406	100%	100%	100%	1 406	1 406	1 406
Income taxes and other current assets	56	15%	20%	30%	8	11	17
Total current assets	\$3 202				\$2 828	\$2 897	\$2 945
Land	217	90%	95%	100%	195	206	217
Buildings	1 200	90%	95%	100%	1 080	1 140	1 200
General Support	900	28%	35%	50%	252	315	450
Electronic Equipment	4 500	65%	75%	80%	2 925	3 375	3 600
Poles	750	30%	50%	70%	225	375	525
Cable, Fiber, Wire	4 118	30%	35%	45%	1 235	1 441	1 853
Conduit	900	35%	45%	60%	315	405	540
Construction in Progress	378	60%	80%	90%	227	302	340
Property, plant and equipment, net	12 963						
Goodwill, net	-	0%	0%	0%	-	-	-
Other intangibles, net	921	5%	10%	15%	46	92	138
Other assets	475	25%	30%	35%	119	143	166
Total assets	\$17 488				\$9 447	\$10 691	\$11 975
Estimated Liquidation Costs							
Administrative expenses		6%	4%	3%	567	428	359
Trustee/Legal Fees		4%	3,5%	2%	331	374	240
Net Liquidation Value					\$8 549	\$9 890	\$11 376
Long-term debt due within one year	17 306				17 306	17 306	17 306
Accounts payable	357				357	357	357
Advanced billings	221				221	221	221
Accrued other Tax	209				209	209	209
Accrued interest	619				619	619	619
Pension and other postretirement benefits	43				43	43	43
Liabilities held for sale	115				115	115	115
Other current liabilities	359				359	359	359
Total current liabilities	19 229				19 229	19 229	19 229
Deferred income taxes	477				477	477	477
Pension and other postretirement benefits	1 864				1 864	1 864	1 864
Other liabilities	411				411	411	411
Long-term debt	-				-	-	-
Total Liabilities	\$21 981				\$21 981	\$21 981	\$21 981
Indicated Net Available					Low	Med	High
Assets					8 549	9 890	11 376
Liabilities					21 981	21 981	21 981
Indicated Net Available (Deficiency)					(13 432)	(12 091)	(10 605)

Appendix 23: Base case scenario recovery calculations

Base case

Total Cash Pool	9 890
------------------------	--------------

Debt Class	Outstanding	Recoverable	Recovery Rates	Cumulative Cash	Notes
Administrative Costs	802	802	100%	802	<u>Paid first</u>
Priority claims	1 600	1 600	100%	2 402	<u>Paid second</u>
Subsidiaries Secured Debt	106	106	100%	2 508	<u>Senior secured</u>
Subsidiaries unsecured Debt	750	750	100%	3 258	<u>Fully covered</u>
Frontier secured Debt	5 706	5 706	100%	8 964	<u>Fully covered</u>
Frontier unsecured Debt	10 949	926	8%	9 890	<u>Partial recovery</u>
Equity Holders	N/A	-	0%	9 890	<u>No residual value</u>

Appendix 24: Downside scenario recovery calculations

Downside Scenario

Total Cash Pool	8 549
------------------------	--------------

Debt Class	Outstanding	Recoverable	Recovery Rates	Cumulative Cash	Notes
Administrative Costs	897	897	100%	897	<u>Paid first</u>
Priority claims	1 600	1 600	100%	2 497	<u>Paid second</u>
Subsidiaries Secured Debt	106	106	100%	2 603	<u>Fully covered</u>
Subsidiaries unsecured Debt	750	750	100%	2 843	<u>Fully covered</u>
Frontier secured Debt	5 706	5 706	100%	8 549	<u>Partial recovery</u>
Frontier unsecured Debt	10 949	-	0%	8 549	<u>Out of cash</u>
Equity Holders	N/A	-	0%	8 549	<u>Out of the money</u>

Appendix 25: High scenario recovery calculations

High Scenario

Total Cash Pool	11 376
-----------------	--------

Debt Class	Outstanding	Recoverable	Recovery Rates	Cumulative Cash	Notes
Administrative Costs	599	599	100%	599	<u>Paid first</u>
Priority claims	1 600	1 600	100%	2 199	<u>Paid second</u>
Subsidiaries Secured Debt	106	106	100%	2 305	<u>Fully covered</u>
Subsidiaries unsecured Debt	750	750	100%	3 055	<u>Fully covered</u>
Frontier secured Debt	5 706	5 706	100%	8 761	<u>Fully covered</u>
Frontier unsecured Debt	10 949	2 615	24%	11 376	<u>Partial recovery</u>
Equity Holders	N/A	-	0%	11 376	<u>No residual value</u>

Appendix 26: Sensitivity Analysis Liquidation Outcomes and Creditor Recoveries

Unsecured Debt Outstanding	10 949
Total secured debt	5 706
Cash Available for Unsecured Debt	926

Scenario Analysis of Liquidation Outcomes and Creditor Recoveries

Change in Secured Debt	Total Secured Debt	Cash for Unsecured	Unsecured Recovery %
5%	5 991	641	5,9
1%	5 763	869	7,9
Base	5 708	924	8,4
-1%	5 649	983	9,0
-5%	5 421	1 211	11,1

Appendix 27: Sensitivity Analysis Under different scenarios

Scenario Analysis of Liquidation Outcomes and Creditor Recoveries

Scenario	Gross Assets	Cost %	Cost	Net Assets	Liabilities	Indicated Equity	Creditor Recovery %
Low	9 447	9,0%	850	8 597	21 981	(13 384)	49,1%
Base	10 691	7,5%	802	9 889	21 981	(12 091)	56,5%
High	11 975	5,0%	599	11 376	21 981	(10 605)	65,0%

Sensitivity Analysis varying liquidation cost rate

Liquidation Cost %	Gross Assets (base)	Cost	Net assets	Indicated Equity	Creditor recovery %
9,0%	9 447	850	8 597	(13 384)	49,1%
7,5%	10 691	802	9 889	(12 092)	56,5%
5,0%	11 975	599	11 376	(10 605)	65,0%

Sensitivity Analysis varying one asset class

PP&E Recovery %	PP&E Book Value	New Gross Assets	Cost	Net assets	Indicated Equity	Creditor recovery %
40,0%	5 185	8 177	736	7 441	(14 540)	42,5%
50,0%	6 482	9 614	721	8 892	(13 089)	50,8%
60,0%	7 778	11 028	551	10 476	(11 505)	59,8%