

IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

RAMCELL, INC.,)
)
) Petitioner,)
)
) v.) C.A. No. 2019-0601-PAF
)
) ALLTEL CORPORATION d/b/a VERIZON)
) WIRELESS,)
)
) Respondent.)

MEMORANDUM OPINION

Date Submitted: July 1, 2022
Date Decided: October 31, 2022

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FIORAVANTI, Vice Chancellor

This is an appraisal action to determine the fair value of petitioner's shares of Jackson Cellular Telephone Co., Inc. ("Jackson") as of April 4, 2019. On that date, Alltel Corporation ("Alltel" and d/b/a Verizon Wireless), which owned more than 90% of Jackson's outstanding common stock, effected a short-form merger under 8 *Del. C.* § 253. In the merger, petitioner's stock in Jackson was canceled, and each share of common stock was converted into the right to receive the merger consideration of \$2,963.

Petitioner Ramcell, Inc. ("Ramcell") exercised its appraisal rights under 8 *Del. C.* § 262, seeking a statutory appraisal for its approximately 155 shares of Jackson common stock that were cashed out in the merger. Ramcell and Alltel have presented vastly different valuations of Jackson. Respondent's expert opines that Jackson's per-share value was \$5,690.92 at the time of the merger. Petitioner's expert has offered two appraisal ranges, opining that, at the high end, Jackson's per-share value was \$36,016 on the merger date.

Both sides agree that Jackson should be valued exclusively using a discounted cash flow ("DCF") approach, but the disparity in the experts' valuations are attributed to their sharp disagreements over the inputs to the DCF model and how they should be calculated. In the end, this court determines that Jackson's per share fair value was \$11,464.57 as of the valuation date. This number reflects the court's determination of Jackson's fair value taking into consideration all relevant factors.

I. BACKGROUND

The following recitation reflects the facts as the court finds them after trial.¹

A. Parties, the Merger, and Procedural History

Respondent Alltel is a Delaware corporation and indirect wholly owned subsidiary of Verizon Communications, Inc. (“Verizon”).² On April 9, 2019, Alltel owned more than 90% of the outstanding common stock of Jackson, a Delaware corporation.

On April 4, 2019, Alltel’s Board of Directors adopted resolutions approving a merger of Jackson into Alltel.³ On April 9, 2019, Jackson merged with and into Alltel, with Alltel surviving the merger.⁴ Alltel completed the merger pursuant to Section 253 of the Delaware General Corporation Law (“DGCL”). Immediately prior to the merger, Jackson canceled and extinguished its outstanding shares of common stock, converting each share of common stock into the right to receive the merger consideration of \$2,963 in cash, without interest and subject to any

¹ Documents filed on the docket for this case are cited as “Dkt.” followed by their docket number. The trial testimony (Dkt. 124–25) is cited as “Tr.”; deposition testimony is cited as “[name] Dep.”; trial exhibits are cited as “JX”; and stipulated facts in the pre-trial order (Dkt. 118) are cited as “PTO,” with each followed by the relevant page, paragraph, or exhibit number.

² PTO 2.

³ *Id.*

⁴ *Id.*

applicable taxes.⁵ Ramcell did not consent to the merger, and on May 6, 2019, Ramcell made a written demand to Alltel for an appraisal of its 155.4309 shares of Jackson common stock pursuant to 8 *Del. C.* § 262.⁶ On August 5, 2019, Ramcell filed a verified petition for appraisal.

The court conducted a two-day trial on March 2 and 3, 2022. The parties submitted approximately 260 joint exhibits and five deposition transcripts. There were four trial witnesses, including valuation experts for each side.⁷ The Petitioner presented J. Armand Musey, CFA, JD/MBA (“Musey”), the President of Summit Ridge Group, LLC, as its valuation expert.⁸ Respondent’s valuation expert was Joseph W. Thompson, CFA, ASA (“Thompson”), a principal at the Griffing Group.⁹

⁵ PTO 3.

⁶ *Id.*

⁷ The other two trial witnesses were Philip Junker, Verizon’s executive director of business development, and Courtney Macuszonok Verizon Communications’ manager of FP&A and commercial finance for Verizon’s consumer group.

⁸ JX 228, at 67. The Summit Ridge Group, LLC provides business valuation and financial consulting services in the telecommunications, media, and satellite industries. Musey is a specialist in the telecommunications industry with extensive experience in the area. Musey holds a B.A. from the University of Chicago. He additionally holds an M.B.A. and a J.D. from Northwestern, as well as an M.A. from Columbia University. JX 228, at 8–9.

⁹ JX 227, at 36. The Griffing Group, LLC is a consulting firm that provides business valuation, transaction advisory, and litigation support services. Thompson has twenty years of professional experience in finance and specializes in, among other things, valuing businesses. Thompson received his B.S. from DePaul University with majors in Finance and Economics. He went on to earn his master’s in business administration and a master’s in science and information systems from Boston University. JX 227, at 4.

B. Jackson History

In the 1980s, the Federal Communications Commission (“FCC”) used lotteries to award the rights to construct cellular telephone networks in particular Metropolitan Statistical Areas (“MSA”).¹⁰ The Jackson, Mississippi MSA (“Jackson MSA”) was one such market.¹¹

A group of investors, including Ramcell, formed Jackson as a partnership to increase their collective chances of winning the cellular network construction rights for Jackson, Mississippi.¹² The partnership operated such that if one of the partners won the lottery, the winning partner would contribute its cellular network construction rights to the partnership in exchange for a 50.01% interest in the partnership.¹³ The remaining 49.99% partnership interest would be allocated among the other partners with no minority partner allowed to have more than a 0.99% interest in the partnership.¹⁴

¹⁰ Ramsey Dep. 18:12–19:8; 16:10–23; *In re Cellular Tel. P’ship Litig.*, 2022 WL 698112, at *3 (Del. Ch. Mar. 9, 2022).

¹¹ Ramsey Dep. 31:16–32:8.

¹² *Id.* at 23:13–22; 31:8–32:8.

¹³ *Id.* at 23:13–22.

¹⁴ *Id.*

In 1986, the FCC awarded the cellular network construction rights for Jackson MSA to a Jackson partner, and Ramcell received a minority interest of 0.99%.¹⁵ In 1988, Jackson converted from a partnership to a corporation.¹⁶ By 2009, Alltel was Jackson's majority owner. That same year, Verizon acquired Alltel and combined Jackson's operations with its own.¹⁷ As of early 2018, there were five minority Jackson stockholders, each with less than a 1% interest in Jackson.¹⁸ On April 11, 2018, Alltel offered to purchase the shares of the minority stockholders for \$2,870 a share subject to the condition that all the minority stockholders agree to sell—a condition that was not met.¹⁹ Alltel arrived at the offer price by taking its internal valuation of Jackson, discounting it by 10% to “create value to Verizon,” and then discounting it by a further 10% to begin negotiations.²⁰ Alltel made a second offer to acquire the minority shares, raising the price to \$2,963 per share without a condition that all the minority stockholders sell. Two of the five minority stockholders accepted the offer and sold their shares to Alltel at that price.²¹ On

¹⁵ *Id.* at 31:16–32:8; Resp. Pre-Tr. Br. 5.

¹⁶ JX 1.

¹⁷ JX 73, at 3.

¹⁸ JX 7, at 2.

¹⁹ JX 115.

²⁰ Tr.I, at 123:16–21 (Junker).

²¹ JX 154, at 0000013.

April 4, 2019, Alltel exercised its right under Section 253 to effect a short-form merger with Alltel, converting each of Jackson's remaining shares into the right to receive \$2,963.²² On that same day, Jackson merged with and into Alltel with Alltel surviving the merger.²³

C. Jackson's Business

Jackson was in the business of providing wireless communication products and services in the Jackson MSA, which comprises Hinds, Rankin, and Madison Counties in Mississippi.²⁴ Jackson operated three retail stores, and another four retail stores were operated by an authorized retailer.²⁵ Jackson also had a network office and twenty-six employees as of December 31, 2018.²⁶ Verizon operated and branded Jackson's operations.²⁷ Jackson derived revenue from four primary streams: (1) service revenues; (2) visitor roaming; (3) equipment revenue; and (4) other revenue.

²² *Id.* at 0000021.

²³ Tr.I 109:8–18 (Junker).

²⁴ JX 154, at 0000013.

²⁵ *Id.*

²⁶ *Id.*

²⁷ Tr.I 285:6–19 (Macuszonok).

Service revenues are revenues generated from customers' use of the cellular network.²⁸ In other words, service revenues are the portion of a customer's phone bill attributable to service access to Jackson's network.²⁹ Jackson received both direct and allocated service revenues.³⁰ Jackson derived direct service revenues that were attributable to Verizon Wireless customers with a phone number geographically tied to the Jackson MSA.³¹ Phone numbers are geographically tied through their area code and next three digits of the phone number, known in the industry as NPA/NXX.³² Allocated service revenues are Jackson's share of service revenue that derive from customers with non-geographic NPA/NXXs.³³ Jackson's share is calculated by dividing Jackson's customers by Verizon Wireless's total customers. An example of non-geographic NPA/NXXs are OnStar accounts which are located in cars.³⁴

Visitor roaming revenue is revenue that Jackson earns from Verizon users whose NPA/NXX is attributable to a geographic area other than the Jackson MSA

²⁸ *Id.* at 230:16–23 (Macuszonok).

²⁹ *Id.*

³⁰ *Id.* at 230:16–231:7 (Macuszonok).

³¹ *Id.* at 231:2–232:3 (Macuszonok).

³² *Id.*

³³ *Id.*

³⁴ *Id.*

when they are using their device in the Jackson MSA.³⁵ For example, any voice or data usage by a customer whose NPA/NXX is mapped to New York City while in Jackson would generate roaming revenue attributable to Jackson.

Equipment revenue is revenue generated from the sale of devices such as cellphones, machine-to-machine devices, watches, tablets, and accessories. Jackson would book equipment revenue based on the shipping address for any online orders or based on the location of the retail store in which the sale occurred.³⁶ Jackson also received allocated equipment revenue in certain circumstances where an equipment-based promotion, such as a buy-one-get-one-free promotion, would not provide economic benefits to a legal entity. Such promotions are often loss leaders to drive subscriber growth. In situations where the equipment promotion is given by one legal entity, but the subscriber receives an NPA/NXX that allocates their subscriber revenue to another legal entity, the promotion is allocated across legal entities to make sure that the promotion is equitable to all of Verizon’s legal entities.³⁷

“Other revenue” comprises revenue generated that is not necessarily connected to the Verizon network.³⁸ For example, handset insurance and IT support

³⁵ *Id.* at 237:10–13 (Macuszonok).

³⁶ Tr.I 24:15–21 (Musey).

³⁷ *Id.* at 242:7–23 (Macuszonok).

³⁸ *Id.* at 244:6–9 (Macuszonok).

service revenue are categorized as other revenue.³⁹ Jackson also generates non-operating income, or losses depending on the year, from investments.⁴⁰

Jackson's operating expenses fall into six categories: (1) cost of service; (2) cost of roaming; (3) cost of equipment; (4) depreciation and amortization; (5) commissions; and (6) selling, general, and administration.⁴¹

Cost of service expenses are those incurred to run the network. The expenses are Jackson-specific costs of service and allocated costs of service.⁴² Jackson-specific cost of service includes the cost of fiber to connect two cell sites that are both located within Jackson.⁴³ An example of allocated costs of service is the cost of fiber that connects a cell site in Jackson to a site owned by another legal entity.⁴⁴

Cost of roaming is the cost created when a Jackson NPA/NXX designated customer uses their device in an area serviced by another legal entity.⁴⁵ For example,

³⁹ *Id.* at 244:6–14 (Macuszonok).

⁴⁰ *Id.* at 244:18–20 (Macuszonok).

⁴¹ JX 190.

⁴² Tr.I 236:16–24 (Macuszonok).

⁴³ *Id.*

⁴⁴ *Id.* at 237:2–6 (Macuszonok).

⁴⁵ *Id.* at 238:4–9 (Macuszonok).

a Jackson customer who uses their phone in Los Angeles would create roaming expenses for the use of their device attributable to Jackson.⁴⁶

Cost of equipment expenses are the costs of sold inventory.⁴⁷ For example, when Jackson sells an iPhone that it purchased from Apple, Jackson incurs cost of equipment expense.⁴⁸ For the expense to be allocated to Jackson, the sale must occur in a Jackson retail store or go to a shipping address located in the Jackson MSA.⁴⁹

Depreciation and amortization expenses comprise the expense related to the assets that Jackson holds.⁵⁰ For example, a cell site typically has a useful life of seven years. The expense required to purchase or construct a cell site is capitalized up front and then depreciated over those seven years.

Commissions are expenses related to the sale of devices from retail store employees or indirect agents.⁵¹

Selling, general, and administrative expenses is a catch-all expense category that, in large part, consists of allocated costs from Verizon.⁵² For example, the

⁴⁶ *Id.*

⁴⁷ *Id.* at 243:18–21 (Macuszonok).

⁴⁸ *Id.* at 244:1–2 (Macuszonok).

⁴⁹ *Id.*

⁵⁰ *Id.* at 245:1–6 (Macuszonok).

⁵¹ *Id.* at 245:8–10 (Macuszonok).

⁵² *Id.* at 245:11–21 (Macuszonok).

salaries of Verizon’s in-house accountants are included in this catch-all category on an allocated basis.⁵³

D. Jackson’s Financing

When Jackson was organized as a partnership, Jackson financed its capital expenditures through capital calls.⁵⁴ After Jackson became a corporation, Jackson’s majority owner financed capital expenditures through intracompany debt recorded as a Due to Affiliate (“DTA”) balance.⁵⁵ The DTA balance effectively operated as a cash account that recorded inflows and outflows.⁵⁶ A positive net income would reduce the DTA balance, while things like capital expenditures would increase the balance.⁵⁷ Until the DTA balance was extinguished, it was “not mathematically possible to pay dividends” to Jackson’s equity holders.⁵⁸

Data on the DTA is not available for periods predating 2005, and existing records do not explain the origin of the DTA balance.⁵⁹ The DTA balance centered on a mean of \$44.6 million from 2005 to 2010 with variations of up to \$4 million

⁵³ *Id.*

⁵⁴ Ramsey Dep. 34:17–21; 37:5–7.

⁵⁵ Junker Dep. 89:6–87:12.

⁵⁶ Tr.I 247:1–5 (Macuszonok).

⁵⁷ *Id.*

⁵⁸ Tr.I 117:15–19 (Junker).

⁵⁹ JX 159A.

around that mean throughout the period.⁶⁰ In 2011, the DTA balance jumped from \$48.6 million to \$81.6 million, an increase of \$33 million.⁶¹ A portion of this increase, \$18.4 million, can be attributed to a sale of assets from Verizon to Jackson as a part of Jackson’s 4G network development and consolidation of overlapping assets in the Jackson area.⁶² The parties and their experts did not explain the remaining \$14.6 million dollar jump at trial, in their expert reports, or in any of the briefing. Starting in 2013, earnings before interest, taxes, depreciation, and amortization (“EBITDA”) began to decrease the DTA balance. By 2018, positive EBITDA results had decreased the DTA amount to \$12.8 million.⁶³

Verizon apparently charged Jackson an interest rate for its DTA funds, but the rate was not established by the parties at trial.⁶⁴ Respondent’s expert, Thompson, asserts that the DTA balance accrued interest at the applicable federal funds rate.⁶⁵ Petitioner’s expert, Musey, states that his analysis suggests that Verizon was charging Jackson an interest rate of 5.3%.

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² Tr.I 249:12–250:22 (Macuszonok).

⁶³ JX 159A.

⁶⁴ Tr.I 134:11–15 (Junker).

⁶⁵ JX 227, at 36.

E. EDGE Receivables

Important to this appraisal proceeding is Jackson's practice of selling phones, financing them, and securitizing the receivables. In the past, Verizon would give customers their phones for free.⁶⁶ Around the valuation date, Verizon had begun to sell customers their phones and finance them so that they would pay off the cost of the phone over the course of two years.⁶⁷ Thompson states that these receivables are securitized through a third-party financier and are therefore a cash-neutral event outside of their associated financing expense.⁶⁸

F. United States, Jackson MSA, and Wireless Industry Market Outlook

Despite the same available information, Thompson and Musey came to different conclusions regarding the overall United States' economic outlook, the Jackson MSA's market outlook, and the wireless industry's market outlook. Thompson, relying on the Congressional Budget Office's economic forecasts published in January 2019, painted a picture of the overall United States economy generally headed for a slight slowdown in the wake of Trump-era economic and tax policies which created short-term, outsized economic growth.⁶⁹ Thompson's

⁶⁶ Tr.II 341:16–18 (Thompson).

⁶⁷ *Id.*

⁶⁸ JX 227, at 33.

⁶⁹ *Id.* at 19.

proffered forecast predicted that real GDP was to grow by 2.3% in 2019 and an average of 1.7% per year from 2020 through 2023.⁷⁰ Musey relied on the outsized GDP growth in 2018, Trump administration tax policies, low cost of debt, favorable regulatory environment, and positive statements about the United States economy from Verizon executives to paint a favorable picture of the macro environment poised for continued growth.⁷¹

Thompson presented a somewhat gloomy view of Jackson MSA's economic outlook considering, population and income trends. Looking at U.S. Census Annual Population Estimates, Thompson found that the Jackson MSA experienced flat to modest population growth from 2013 to 2018.⁷² Thompson further found that Hinds County, Jackson MSA's largest county, saw a decrease in population of 3.4% between 2010 and 2018.⁷³

Musey rebuts Thompson's view as overly pessimistic. Musey found that the population growth of the Jackson MSA was -0.19%, +0.03%, and 0.14% for the one-year, three-year, and five-year trailing periods ended December 31, 2018.⁷⁴ This

⁷⁰ *Id.*

⁷¹ JX 228, at 22–23.

⁷² JX 227, at 20.

⁷³ *Id.* at 21.

⁷⁴ JX 228, at 24.

population growth is slower than the national average population growth for these periods of 0.80%, 0.71%, and 0.74%.⁷⁵ Musey, however, points to older U.S. Census data to show that the population of Jackson MSA increased by 9.4% between 2000 and 2010.⁷⁶ Musey claims that the older data is more reliable and is a better indicator of demographic trends, despite being almost a decade out of date.⁷⁷ Income data for the Jackson MSA presented by Thompson shows that Madison and Rankin County have a higher median household income than the United States average, while Hinds County substantially trails the United States average.⁷⁸

Thompson and Musey also disagree about the wireless industry's economic outlook. Thompson states that the wireless market is highly competitive and that companies have limited options to differentiate their products, which has led to decreasing revenues in the industry overall.⁷⁹ Additionally, Thompson states that industry forecasts expect the average revenue per user ("ARPU") to continue to decline, which will stifle revenue growth opportunities.⁸⁰ Musey agrees that industry

⁷⁵ *Id.*

⁷⁶ JX 229, at 47.

⁷⁷ *Id.*

⁷⁸ JX 227, at 22.

⁷⁹ *Id.* at 24.

⁸⁰ Tr.I 19:20–24 (Musey). The ARPU is calculated by dividing total revenue by the average number of subscribers during a period.

revenues and ARPU decreased between 2013 and 2018.⁸¹ Declining ARPU is in part driven by an increase in non-traditional subscribers (*i.e.*, non-cellphone subscribers), which increase the subscriber count without a commensurate increase in revenue.⁸² Musey, however, expects future revenue growth in the industry of 3.1% because of the revenue opportunities attendant to the 5G rollout.⁸³

5G is the fifth generation of the wireless mobile network. Since the 1980s, “[t]elecommunication providers and technology companies around the world have been working together to research and develop new technology solutions to meet growing demands for mobile data from consumers and industrial users.”⁸⁴ The 5G network is the latest iteration of this effort. The 5G rollout has the potential to create new revenue opportunities for wireless firms because of the various new applications and services it enables.⁸⁵

5G has very low latencies, which allows users to create of Internet of Things (“IoT”) applications.⁸⁶ Latency is the time it takes a piece of data to go from its

⁸¹ JX 228, at 27.

⁸² Tr.II, at 444:4–7 (Thompson).

⁸³ *Id.* at 28.

⁸⁴ JILL C. GALLAGHER & MICHAEL E. DEVINE, CONG. RSCH. SRV., R45485, FIFTH-GENERATION (5G) TELECOMMUNICATIONS TECHNOLOGIES: ISSUES FOR CONGRESS 1 (Jan. 30, 3019).

⁸⁵ Tr.I, at 20:30–21:20 (Musey).

⁸⁶ *Id.*

origin to its destination.⁸⁷ The IoT is a “network of physical objects—‘things’—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet.”⁸⁸ As more IoT systems come online because of the 5G rollout, the more revenue opportunities there are for firms like Verizon which provide 5G wireless services.

5G also allows for an enormous amount of bandwidth.⁸⁹ Bandwidth is a network’s capacity to handle data. The greater a network’s bandwidth, the more data can be accessed over that network at any given time.⁹⁰ With 5G and the colossal amount of bandwidth it provides, the wireless industry is poised to move into the fixed internet business.⁹¹ This means that companies like Verizon could compete with companies that provide internet through cable modems. This opens an avenue of growth for the wireless industry because the wireless industry is now able to effectively provide internet to consumers.⁹²

⁸⁷ *Id.*

⁸⁸ *What is IoT*, ORACLE, <https://www.oracle.com/internet-of-things/what-is-iot> (last visited Oct. 20, 2022).

⁸⁹ Tr.I, at 20:30–21:20 (Musey).

⁹⁰ GALLAGHER & DEVINE, *supra* note 84, at 5.

⁹¹ *Id.*

⁹² *Id.*

At trial, however, Musey stated that during the 4G cycle, industry revenues did not peak as anticipated.⁹³ Thus, it is possible that the 5G network will not provide all the revenue benefits it promises.

G. Competitive Environment – C-Spire

The nature of Jackson’s competitive environment is another area in which Thompson’s and Musey’s opinions diverge. Thompson states that Jackson’s future growth is hampered by the presence of a regional competitor, C-Spire.⁹⁴ Musey uses the Herfindahl-Hirschman Index (“HHI”) to discount any effect C-Spire may have had on the competitive environment and to claim that the Jackson MSA is not significantly different from the national market.⁹⁵ The HHI is used to measure market concentration in competition analyses and is calculated by summing the squared market shares of all firms in any given market.⁹⁶ In 2013, the HHI for the Jackson MSA market was 3,016, slightly lower than the national average HHI for the wireless industry of 3,027 during the same time period.⁹⁷ Musey states that this is an indication of an average level of competition compared to the U.S. as a whole.⁹⁸

⁹³ Tr.I 86:17–24 (Musey).

⁹⁴ JX 227 at 25.

⁹⁵ JX 228, at 25–26.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

At trial, Musey further stated that Jackson's HHI index indicates that C-Spire was not significantly reducing the market share of Jackson's other four major competitors because if it was, the HHI index for the region would be lower than the national average.⁹⁹ Thompson contested the use of the HHI index to prove that C-Spire was not a significant competitor.¹⁰⁰ Thompson supported his position that C-Spire was in fact a major competitor in the region with anecdotal evidence, including that C-Spire has over a million subscribers, that 94% of C-Spires's stores are located in Mississippi, that C-Spire employed 1,500 people, and that readers of the *Mississippi Business Journal* voted C-Spire's mobile communications unit the best in Mississippi noting C-Spire's impact in moving Mississippi forward.¹⁰¹

⁹⁹ Tr.I 16:9–15 (Musey).

¹⁰⁰ The HHI is calculated by taking the sum of the squares of the market participants. $HHI=S1^2+S2^2 \dots Sn^2$. If in one market there are two participants (*e.g.*, Verizon and AT&T) and they control the market 60/40, the HHI would be 5200. If in another market there were two competitors (*e.g.*, Verizon and C-Spire), and they control the market 60/40, the HHI would be 5200. Thus, the HHI in aggregate only informs the relative concentration, not which firms are creating the concentration. As a result, in the Jackson market, it is possible that C-Spire is a significant competitor and that one of the other competitors in the market is not active or is not taking up a significant amount of market share.

¹⁰¹ JX 230, at 8–11; Tr:II, 370:17–371:20 (Thompson).

H. Keeping Track of Subscribers: NPA-NXX & Principal Place of Use

1. NPA-NXX

As previewed above and as discussed thoroughly in the court’s recent *In re Cellular Telephone Partnership Litigation* (“*In re Cellular*”) decision,¹⁰² keeping track of the number of subscribers attributable to a regional wireless provider is difficult due to the NPA-NXX system and a lack of viable alternatives. As Vice Chancellor Laster outlined in *In re Cellular*, “From the early days of the cellular industry until the mid-2000s, wireless carriers pursued a relatively stable business model that depended on ‘postpaid’ wireless voice plans. Postpaid subscribers entered into long-term contracts (typically one or two years) and paid fees based on their monthly usage.”¹⁰³ The court further describes the way in which subscribers were tracked:

Wireless carriers tracked subscribers and their usage using a system known as “NPA-NXX,” a shorthand term for the area code and next three digits of the subscriber’s phone number. For example, in the phone number (999)-555-1234, the NPA-NXX is 999-555. The last four digits produce a block of 10,000 phone numbers, ranging from 0000 to 9999, associated with that particular NPA-NXX.¹⁰⁴

¹⁰² 2022 WL 698112, at *3–5 (Del. Ch. Mar. 9, 2022).

¹⁰³ *Id.* at *4.

¹⁰⁴ *Id.*

The FCC assigned NPA-NXX to geographic regions throughout Verizon's United States territories.¹⁰⁵ Jackson has a specific set of NPA-NXX numbers that are assigned to it, and any customers whose NPA-NXX were assigned to the Jackson area were identified as Jackson subscribers for the purposes of allocating revenue.¹⁰⁶

Verizon employees typically gave customers NPA-NXXs based on where the person lived or used their phone the most.¹⁰⁷ Verizon employees, however, had a fair bit of discretion in assigning NPA-NXXs, so there is a possibility for error in that customers could be assigned to the incorrect NPA-NXX.¹⁰⁸

The NPA-NXX system does not properly allocate service revenues if a customer moves and does not change their phone number, because wireless companies have “no mechanism for assigning the existing NPA-NXX number to the new market.”¹⁰⁹ The revenues associated with a customer who moved

¹⁰⁵ Tr.I 216:20–24 (Macuszonok).

¹⁰⁶ *Id.* at 216:12–217:8 (Macuszonok).

¹⁰⁷ Tr.I 23:1–26:8 (Musey).

¹⁰⁸ *Id.*

¹⁰⁹ *In re Cellular*, 2022 WL 698112, at *4.

but did not change their number “continued to be attributed to the original market.”¹¹⁰ As described in *In re Cellular*:

Until the mid-aughts, [this] major defect was not a significant problem During that era, if a subscriber used her cellular phone outside of her local market, then the carrier charged the subscriber for “roaming.” Due to the high cost of roaming, a customer who relocated outside of her home area had a strong financial incentive to obtain a new NPA-NXX number. Moreover, until the advent of number portability in 2004, any subscriber who changed carriers was treated as a new subscriber and received a new NPA-NXX number. A customer’s NPA-NXX number therefore correlated strongly with the customer’s primary place of use, and customers holding NPA-NXX numbers associated with the Partnership were highly likely to be primarily using the Partnership’s portion of [the] network.¹¹¹

With the advent of number portability and nationwide rate plans in the mid-aughts, the NPA-NXX became a less reliable means of keeping track of the number of subscribers attributable to a regional partnership within a larger wireless service business. Number portability is a feature that permits a customer disconnecting service from one wireless provider to take that number with them to their next wireless provider.¹¹² Nationwide rate plans offered customers who formerly paid roaming charges when traveling between markets the ability to make calls or use data without incurring roaming charges.¹¹³ As a result of the developments in the

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² Tr.I 172:1–4 (Junker).

¹¹³ Tr.I 173:23–3 (Junker).

wireless industry, customers no longer had an incentive to change phone numbers when moving out of one NPA-NXX region and into another.¹¹⁴ As cell users inevitably moved from one NPA-NXX region to another, the NPA-NXX system became increasingly unreliable and is no longer likely to be a close proxy for the number of subscribers in a given NPA-NXX region.¹¹⁵ A wireless service provider can clean up this data by allocating customers who create a large amount of internally calculated roaming charges to the NPA-NXX region in which they are creating the roaming charges.¹¹⁶ Verizon, however, does not appear to have undertaken this effort.¹¹⁷

2. Principal Place of Use

A suggested alternative means of calculating the number of Jackson subscribers is by using the customers' principal place of use ("PPU"). PPU is generally defined as where the customer uses the connected devices most often.¹¹⁸ A customer's billing address is used as a proxy that customer's PPU.¹¹⁹

¹¹⁴ Tr.I 26:17–27:2 (Musey).

¹¹⁵ *Id.* at 25:2–28:2 (Musey).

¹¹⁶ *Id.* at 30:13–24 (Musey).

¹¹⁷ *Id.*

¹¹⁸ Tr.I 182:8–12 (Junker).

¹¹⁹ Tr.I 28:23–29:1 (Musey).

PPU is not a completely accurate way to measure the number of subscribers in a given region. Some customers may have their billing address in one region and use their phone exclusively in another region.¹²⁰ Further, large swings in PPU can occur if an enterprise customer changes its billing address. For example, in Jackson, it appears that a single enterprise customer, Itron, updated its billing address in 2017 causing 200,000 connected devices to be reallocated from Jackson to another legal entity.¹²¹

Neither Musey nor Thompson used PPU as a basis for their revenue projections.

3. NPA-NXX v. PPU

The below chart compares the number of Jackson subscriber lines measured by NPA-NXX with Jackson’s subscriber lines measured by principal place of use:¹²²

Date	NPA-NXX	PPU
4/1/2012	21,117	20,565
4/1/2013	35,096	61,764
4/1/2014	57,008	301,607
4/1/2015	72,047	314,754

¹²⁰ Tr.I 29:2–4 (Musey).

¹²¹ Tr.I 219:21–220:1 (Macuszonok).

¹²² JX 223 at 22.

4/1/2016	82,409	323,003
4/1/2017	82,733	318,879
4/1/2018	84,699	100,048
4/1/2019	90,787	101,529

The data show that the number of subscribers according to PPU moved dramatically in 2014 and after 2017. Alltel attributes this to Itron’s change in billing address.¹²³ Petitioner does not dispute this.

I. Historical Financials & Management Projections

Verizon’s partnership accounting group (“PAG”) created annual financial statements for Jackson in the ordinary course, but did not create projections for Jackson in the ordinary course.¹²⁴ The PAG creates these annual financials to reflect the revenues, expenses, and capital investment that arise from the partnership’s particular market.¹²⁵ Jackson’s financial statements were unaudited because Jackson’s corporate bylaws did not contain a requirement that its financial statements be audited.¹²⁶ In preparing to effect the merger, Verizon created a ten-

¹²³ Tr.I 219:21–220:1 (Macuszonok).

¹²⁴ Tr.I 131:8–14 (Junker).

¹²⁵ *Id.*

¹²⁶ Macuszonok Dep. 177:3-18.

year forecast of Jackson’s financial performance to establish the merger price.¹²⁷

Verizon created the forecasts knowing that a merger was imminent and that appraisal litigation was possible, if not likely.¹²⁸

II. ANALYSIS

The purpose of an appraisal proceeding is to give stockholders dissenting from a merger the opportunity to receive a judicially determined fair value for their shares of the company.¹²⁹ In an appraisal proceeding, 8 *Del. C.* § 262(h), directs the court to:

[A]ppraise the shares determining their fair value, exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with a fair rate of interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors.¹³⁰

The fair value that the court is to determine in the appraisal context is largely a judge-made creation “freighted with policy considerations” and should not be conflated with the general economic concept of fair value.¹³¹ In explaining the

¹²⁷ JX-152A, Alltel_00012529-30.

¹²⁸ *Id.* at Alltel_0012523.

¹²⁹ *Cede & Co. v. Technicolor, Inc.*, 542 A.2d 1182, 1186 (Del. 1988) (hereinafter “*Cede F*”).

¹³⁰ 8 *Del. C.* § 262(h).

¹³¹ *Finkelstein v. Liberty Digit., Inc.*, 2005 WL 1074364, at *11 (Del. Ch. Apr. 25, 2005).

contours of fair value more than seventy years ago, the Delaware Supreme Court observed:

The basic concept of value under the appraisal statute is that the stockholder is entitled to be paid for that which has been taken from him, his proportionate interest in a going concern. By value of the stockholder's proportionate interest in the corporate enterprise is meant the true or intrinsic value of his stock which has been taken by the merger. In determining what figure represents this true or intrinsic value, . . . the courts must take into consideration all factors and elements which reasonably might enter into the fixing of value. Thus, market value, asset value, dividends, earning prospects, the nature of the enterprise and any other facts which were known or which could be ascertained as of the date of the merger and which throw any light on future prospects of the merged corporation are not only pertinent to an inquiry as to the value of the dissenting stockholder's interest, but must be considered¹³²

The burden of proof in an appraisal proceeding as to the issue of fair value differs from a typical civil proceeding. “In a statutory appraisal proceeding, both sides have the burden of proving their respective valuation positions by a preponderance of the evidence.”¹³³ In evaluating the parties' positions, “[n]o presumption, favorable or unfavorable, attaches to either side's valuation,”¹³⁴ and “[e]ach party also bears the burden of proving the constituent elements of its valuation position . . . including the propriety of a particular method, modification,

¹³² *Tri-Cont'l Corp. v. Battye*, 74 A.2d 71 (Del. 1950).

¹³³ *M.G. Bancorporation v. Le Beau*, 737 A.2d 513, 520 (Del. 1999).

¹³⁴ *Pinson v. Campbell-Taggart, Inc.*, 1989 WL 17438, at *6 (Del. Ch. Feb. 28, 1989).

discount, or premium.”¹³⁵ If neither party can meet the preponderance standard on the “ultimate question of fair value, the court is required to make its own determination.”¹³⁶

In making its determination, the court must value the company as a “going concern based upon the ‘operative reality’ of the company as of the time of the merger.”¹³⁷ The company must be valued as a stand-alone going concern because the assumption that underlies an appraisal valuation is that the stockholders who elect appraisal would maintain their investment position in the corporation had the merger not occurred.¹³⁸ The valuation date is the date on which the merger closes.¹³⁹

Delaware courts and valuation experts recognize that valuation is an art rather than a science.¹⁴⁰ Thus, it is unlikely that the court will be able to uncover the true fair value of the company at the time of the merger; its form can only be

¹³⁵ Jesse A. Finkelstein & John D. Hendershot, *Appraisal Rights in Mergers and Consolidations*, Corp. Prac. Portfolio Series, No. 38-5th, at VI.K (2022) [hereinafter Finkelstein & Hendershot] (describing the burden of proof in a Delaware appraisal proceeding).

¹³⁶ *Id.*

¹³⁷ *M.G. Bancorporation*, 737 A.2d at 525.

¹³⁸ *Paskill Corp. v. Alcoma Corp.*, 747 A.2d 549, 553 (Del. 2000).

¹³⁹ *Cede I*, 542 A.2d at 1186.

¹⁴⁰ *See, e.g., In re Shell Oil Co.*, 607 A.2d 1213, 1221 (Del. 1992) (“Valuation is an art rather than a science.”); *In re Smurfit–Stone Container Corp. S’holder Litig.*, 2011 WL 2028076, at *24 (Del. Ch. May 20, 2011) (“[U]ltimately, valuation is an art and not a science.”)

approximated through analyzing the shadows cast by the parties' evidence. Further, Delaware courts have stated that there is no one fair value and that an impression of exactitude in appraisal proceedings is unwarranted:

[I]t is one of the conceits of our law that we purport to declare something as elusive as the fair value of an entity on a given date [V]aluation decisions are impossible to make with anything approaching complete confidence. Valuing an entity is a difficult intellectual exercise, especially when business and financial experts are able to organize data in support of wildly divergent valuations for the same entity. For a judge who is not an expert in corporate finance, one can do little more than try to detect gross distortions in the experts' opinions. This effort should, therefore, not be understood, as a matter of intellectual honesty, as resulting in the fair value of a corporation on a given date. The value of a corporation is not a point on a line, but a range of reasonable values, and the judge's task is to assign one particular value within this range as the most reasonable value in light of all the relevant evidence and based on considerations of fairness.¹⁴¹

In determining the range of reasonable values and selecting the appropriate valuation within that range, the court "has the discretion to select one of the parties' valuation models as its general framework or to fashion its own."¹⁴² The court may adopt a party's model in its entirety.¹⁴³ The court may also accept a model and then adjust it by adapting or blending the parties' factual assumptions.¹⁴⁴ If no party

¹⁴¹ *Cede & Co. v. Technicolor, Inc.*, 2003 WL 23700218, at *2 (Del. Ch. Dec. 31, 2003), (revised July 9, 2004), *aff'd in part, rev'd in part on other grounds*, 884 A.2d 26 (Del. 2005) (hereinafter "*Cede III*").

¹⁴² *M.G. Bancorporation*, 737 A.2d at 525.

¹⁴³ *Id.*

¹⁴⁴ *Id.*

establishes a value that is persuasive, “the court must make a determination based upon its own analysis.”¹⁴⁵ Further, a valuation approach that “may have met ‘the approval of this court on prior occasions . . . may be rejected in a later case if not presented persuasively or if ‘the relevant professional community has . . . come, by a healthy weight of reasoned opinion, to believe that a different practice should become the norm’”¹⁴⁶

The parties’ experts agree that the best approach to value Jackson is a discounted cash flow analysis (“DCF”). Thompson and Musey eschewed the capitalized earnings method, several market approaches, and the asset approach.¹⁴⁷ Each of them, for reasons including a lack of comparable companies, determined that methods other than the DCF method were inappropriate for valuing Jackson.¹⁴⁸ Despite selecting the same overarching methodology, the parties’ experts unsurprisingly came to vastly divergent opinions as to Jackson’s value. Thompson concluded the fair value for Jackson was \$5,690.92 per share.¹⁴⁹ Musey conducted a two-scenario analysis. Scenario One assumed that Jackson’s market penetration

¹⁴⁵ *Cooper v. Pabst Brewing Co.*, 1993 WL 208763, at *8 (Del. Ch. June 8, 1993).

¹⁴⁶ *In re Appraisal of Stillwater Mining Co.*, 2019 WL 3943851, at *20 (Del. Ch. Aug. 21, 2019) (quoting *Glob. GT LP v. Golden Telecom, Inc.*, 993 A.2d 497, 517 (Del. Ch. 2010)).

¹⁴⁷ JX 227, at 39–42; JX 228, at 74–77.

¹⁴⁸ JX 227, at 39–42; JX 228, at 74–77.

¹⁴⁹ Tr.II 358:23 (Thompson).

rates would trend towards Verizon Wireless's national rates and concluded that Jackson's per share fair value was between \$21,047 and \$30,813.¹⁵⁰ Scenario Two assumed that Jackson's market penetration rates were already at Verizon Wireless's national rates and that they would grow in line with Verizon Wireless's national forecasts. Scenario Two concluded that Jackson's per share fair value was between \$28,856 and \$36,016.¹⁵¹

A. The DCF Methodology

A DCF model analyzes the value of a company as “equal to the present value of its projected future cash flows.”¹⁵² Delaware courts have accepted the DCF methodology, stating that “[w]hile the particular assumptions underlying its application may always be challenged in any particular case, the validity of [the DCF] technique qua valuation methodology is no longer open to question.”¹⁵³ The DCF methodology is a generally accepted technique that “gives life to the finance principle that firms should be valued based on the expected value of their future cash flows, discounted to present value in a manner that accounts for risk.”¹⁵⁴ The DCF model entails three basic components:

¹⁵⁰ Tr.I 49:23–50:1 (Musey).

¹⁵¹ *Id.*

¹⁵² *Neal v. Ala. By-Prods. Corp.*, 1990 WL 109243 at *7 (Del. Ch. Aug. 1, 1990).

¹⁵³ *Pinson v. Campbell-Taggart, Inc.*, 1989 WL 17438, at *6 (Del. Ch. Feb. 28, 1989).

¹⁵⁴ *Andaloro v. PFPC Worldwide, Inc.*, 2005 WL 2045640, at *9 (Del. Ch. Aug. 19, 2005).

[A]n estimation of net cash flows that the firm will generate and when, over some period; a terminal or residual value equal to the future value, as of the end of the projection period, of the firm’s cash flows beyond the projection period; and finally[,] a cost of capital with which to discount to a present value both the projected net cash flows and the estimated terminal or residual value.¹⁵⁵

B. The Estimate of Future Cash Flows

The foundation of a DCF analysis is an accurate estimate of future operating cash flows over the projection period. This foundation is the most important input necessary for performing a proper DCF because “[w]ithout a reliable estimate of cash flows, a DCF analysis is simply a guess.”¹⁵⁶ Stated more colorfully, “[g]arbage in, garbage out.”¹⁵⁷

Delaware courts prefer DCF models based on projections prepared by management in the ordinary course of business because an “unbiased management forecast ordinarily [is] more reliable than estimates later produced by experts who cannot be expected to be as familiar with the company as the company’s own management.”¹⁵⁸ Projections prepared by management “are not entitled to the same deference usually afforded to contemporaneously prepared management

¹⁵⁵ *Cede & Co. v. Technicolor, Inc.*, 1990 WL 161084, at *7 (Del. Ch. Oct. 19, 1990) (hereinafter “*Cede I*”).

¹⁵⁶ *Del. Open MRI Radiology Assocs., P.A. v. Kessler*, 898 A.2d 290, 312–13 (Del. Ch. 2006).

¹⁵⁷ *In re PetSmart, Inc.*, 2017 WL 2303599, at *22 (Del. Ch. May 26, 2017).

¹⁵⁸ *Cede II.*, 1990 WL 161084, at *15.

projections” where “management had never prepared projections beyond the current fiscal year,” “the possibility of litigation, such as an appraisal proceeding, was likely,” and the projections “were made outside of the ordinary course of business.”¹⁵⁹ On the other hand, there is no “bright-line test under which management projections that were created during the merger process are deemed inherently unreliable.”¹⁶⁰ In fact, Delaware courts have relied on projections prepared by management outside the ordinary course of business and where the possibility of litigation loomed in the background.¹⁶¹ The court, however, is inherently doubtful of post-merger, litigation-driven forecasts because “[t]he possibility of hindsight and other cognitive distortions seems untenably high.”¹⁶²

¹⁵⁹ *Gearreald v. Just Care, Inc.*, 2012 WL 1569818, at *5 (Del. Ch. Apr. 30, 2012).

¹⁶⁰ *Merion Cap., L.P. v. 3M Cogent, Inc.*, 2013 WL 3793896, at *11 (Del. Ch. July 8, 2013).

¹⁶¹ See, e.g., *Gilbert v. MPM Enters., Inc.*, 709 A.2d 663, 669–70 (Del. Ch. 1997) (accepting management’s financial forecasts created in anticipation of the merger with minor changes because “management was in the best position to forecast [the company’s] future before the merger” and rejecting petitioner’s implication that the upcoming merger led management to understate the company’s future financial performance in the absence of evidence of a deliberate attempt to falsify the company’s projected financial metrics), *aff’d*, 731 A.2d 790 (Del. 1999); *Gray v. Cytokine Pharmasciences, Inc.*, 2002 WL 853549, at *4–5, *8 (Del. Ch. Apr. 25, 2002) (disregarding “litigation-driven projections” prepared by petitioner’s expert and accepting projections prepared by management while an offer was pending and the company was exploring merger opportunities).

¹⁶² *Agranoff v. Miller*, 791 A.2d 880, 892 (Del. Ch. 2001).

Moreover, the court “holds a healthy skepticism for post-merger adjustments to management projections or the creation of new projections entirely.”¹⁶³

Here, the financial projections on which Thompson relies were created by management in anticipation of a merger using historical records kept in the ordinary course. Management knew that appraisal litigation was possible if not probable. Musey’s projections were created post merger, for the purposes of this litigation.

1. Musey’s Approach

Musey rejected Jackson’s historical financials as being too poor to accurately forecast future financial results. Instead, he created forecasts for Jackson that assumed Jackson’s market performance is on par with Verizon Wireless’ overall national performance.

Musey opined that Jackson’s historical financials could not be relied on for several reasons. Among others, certain key metrics such as market penetration deviated from Verizon Wireless’s national rate without satisfactory explanation, the historical financials relied on NPA-NXX to calculate service revenue, and there were unexplained jumps in financial metrics such as revenues and the DTA balance.¹⁶⁴ Musey rejected Jackson’s historical financials as a predictor of future growth rates,

¹⁶³ *Cede & Co. v. JRC Acquisition Corp.*, 2004 WL 286963, at *2 (Del. Ch. Feb. 10, 2004) (hereinafter “*Cede IV*”).

¹⁶⁴ JX 228, at 91–96.

in favor of his own financial projections. Musey created two sets of projections, each of which assumes that Jackson's performance should be on par with Verizon Wireless as a whole.¹⁶⁵

The first scenario assumes that Jackson's reported number of subscribers based on NPA-NXX is correct, but that those numbers would converge with Verizon Wireless's nationwide metrics over the forecasted period until 2028.¹⁶⁶ Scenario One assumes that Jackson's market penetration rates during the forecast period will trend from Jackson's market penetration rate in 2018 to 95% of the forecasted penetration rate for Verizon in 2027 and 2028.¹⁶⁷ Musey then adjusted these forecasted 2027 and 2028 rates down by 1.7% to account for competition from C-Spire.¹⁶⁸ Scenario One assumes that Jackson's share of the subscribers in the Jackson MSA would increase from 14% to approximately 47% over the ten-year DCF projection period. Musey made several other assumptions for his Scenario One. Musey assumed that roaming revenue and expense would net to zero and that Jackson's operating margin would converge to Verizon Wireless's operating margin

¹⁶⁵ *Id.* at 81–87.

¹⁶⁶ Tr. 44:2-16 (Musey).

¹⁶⁷ *Id.*

¹⁶⁸ *Id.* Musey calculated the 1.7% number by taking C-Spire's market share of 5% and dividing it by three to allocate its impact among C-Spire's three national wireless competitors.

by 2028. Additionally, Musey normalized forecasted capital expenditures based on forecasted capital expenditures for Verizon Wireless. Further, Musey normalized depreciation and amortization based on Verizon's historical depreciation and amortization as a percentage of capital expenditures. Under Scenario One, Ramcell's per share value is \$21,047 or \$21,403, depending on whether the model assumes outstanding DTA balance of \$18,376 or \$12,817.

Musey's Second Scenario assumes that Jackson already achieved the market penetration that Verizon had reached nationally and that Jackson would grow in line with Verizon national's projections.¹⁶⁹ Musey assumed in Scenario Two that Jackson's market penetration would trend from 95% of Verizon's national penetration rate in 2018 to 95% of Verizon's national penetration rate in 2027 and 2028. Scenario Two assumes that Jackson's share of subscribers in the Jackson MSA jumps from 14% to 47% in year one of the DCF projection period.¹⁷⁰ Besides the market penetration assumptions, Musey made all the same assumptions from Scenario One in Scenario Two. Under Scenario Two, Jackson's per share value is either \$26,231 or \$26,586, depending on whether the model assumes an outstanding DTA balance of \$18,376 or \$12,817.

¹⁶⁹ Tr. 44:17-21 (Musey).

¹⁷⁰ JX 230, at 25.

For both Scenarios One and Two Musey adds the present value of what he calls Excessive Capital Expenditures and the value of the DTA ending balance on December 31, 2002.¹⁷¹ Musey finds Jackson's historical data regarding capital expenditures to be unreliable and erratic when compared to Verizon Wireless's historical capital expenditures. He opines that there was an excess in Jackson's capital expenditures, which justifies a \$6,732 adjustment in Jackson's per share going concern value. Musey also opines that the present value of the DTA ending balance on December 31, 2002, should be added to the per share going concern value of the company. This is to make an adjustment for the allegedly incorrect capital expenditures included in the calculation the DTA. The ending balance of the DTA on December 31, 2002, was \$42,240. Musey calculates the per share present value of that amount to be \$2,698. The present value of the ending balance of the DTA on December 31, 2002, together with the present value of the "excessive capital expenditures," increases Jackson's per share value under Scenario One to \$30,833 and to \$36,016 under Scenario Two. Musey did not persuasively show that Jackson's capital expenditures as reported by management were so unreliable and excessive. Nor did he provide a well-reasoned explanation for why these two

¹⁷¹ JX 228, at 89 fig.13-1.

adjustments must be made or why they are simply tacked onto the final per share valuation.

Musey did not convincingly demonstrate that management's forecasts should be rejected and that his forecasts, based on Verizon Wireless at a national level, are more reasonable.

- a. Musey does not provide convincing evidence that there is no reasonable explanation for Jackson's underperformance relative to Verizon Wireless or his assertion that Jackson should be performing on par with Verizon Wireless.**

Musey posits there is “no plausible explanation for the massive magnitude of Jackson's underperformance relative to Verizon as a whole.”¹⁷² Musey states that he would “expect [Jackson's] market share, profit margins, and other operating metrics to be closer to Verizon's national average for its wireless business” without support.¹⁷³ Musey goes on to state, “[t]he reason for Jackson's underperformance in terms of market share relative to its parent is not apparent,” while discounting the presence of competitors like C-Spire.¹⁷⁴ Moreover, Musey looks at reported churn rates for Verizon and for Jackson, finds a difference between the two, states that there is no explanation for the difference, and assumes that Jackson's numbers

¹⁷² JX 228, at 13.

¹⁷³ *Id.*

¹⁷⁴ *Id.* at 47–48.

should mirror Verizon's numbers.¹⁷⁵ Musey continues through Jackson's, financials finding differences between Jackson's numbers and Verizon's numbers, and then concludes that there is no reason for the differences each time.

From the premise that there is no reason for any difference between Jackson's metrics and Verizon's metrics, Musey concludes that the best way to forecast Jackson's future performance is to assume that Jackson's financial performance should be on par with or trend towards Verizon's overall performance.¹⁷⁶ Musey provides no support for this assumption other than the "significant unwarranted differences between forecasted results for [Jackson] compared to the predicted results for Verizon, in particular differences related to penetration rates and EBITDA margins."¹⁷⁷ On the other hand, Respondent's expert, Thompson, provides four plausible explanations for why Jackson's results could be different than Verizon at a national level.

¹⁷⁵ *Id.* at 50–51. For the period 2007 through 2017, Jackson's churn rate increased from 1.59% in 2007 to 1.77% in 2017, with a low of 1.43% in 2011 and a high of 2.1% in 2014. Verizon's churn data is incomplete as there is no data available for 2017. In 2007, Verizon's postpaid wireless churn rate was 0.91%, and in 2009, it was 1.07%. The minimum wireless customer churn rate for the period 2007 to 2012 was 1.19% and the maximum was 1.38%. Churn is an industry metric to calculate market share and measures of the number of subscribers who disconnect their service during a given period. *In re Cellular*, 2022 WL 698112, at *13.

¹⁷⁶ JX 228 at 81–85.

¹⁷⁷ *Id.* at 81.

First, the existence of a significant regional competitor headquartered in the Jackson MSA, C-Spire. Thompson showed, albeit anecdotally, that C-Spire maintained a significant presence in Mississippi. He also persuasively showed that Musey’s analysis likely understated C-Spire’s market penetration in the Jackson MSA.

Second, Verizon/Alltel’s lack of prior incumbent local exchange carrier (ILEC) services in the Jackson MSA.¹⁷⁸ Verizon tended to have higher market share in markets in which it had an existing customer base to sell its wireless services and existing name recognition. Musey acknowledged that AT&T’s “ability to bundle wireless and wireline services might enhance its competitive position against Verizon.”¹⁷⁹

Third, Verizon was late to Jackson MSA, as Jackson had only operated under the Verizon brand since 2009. This lack of brand recognition could contribute to Jackson’s underperformance relative to Verizon Wireless nationally.¹⁸⁰

¹⁷⁸ An ILEC is a local telephone company that held a regional monopoly on landline services before the market was opened to competitive local exchange carriers by the Telecommunication Act of 1996. *AT&T Corp. v. Iowa Utilities Bd.*, 525 U.S. 366, 371 (1999).

¹⁷⁹ JX 228, at 48.

¹⁸⁰ JX 230, at 11

Fourth, Verizon's market share in terms of data usage lags in Mississippi when compared to other regions in the United States.¹⁸¹

Thompson's rebuttal is largely based on anecdotal evidence. Nevertheless, it does provide the "plausible explanation" that Musey opines does not exist to explain why Jackson's market share is not the same as Verizon Wireless's national market share. In any event, Musey did not persuasively show that Jackson's market share in the Jackson MSA must be close to or at Verizon Wireless's national average.

b. The data concerns identified by Musey do not justify throwing out management forecasts and replacing them with hypothesized numbers based on Verizon's national performance

Musey maintains that Jackson's financials statements lack any integrity and cannot serve as the foundation for reliable projections to value the Company. Therefore, his projections should be adopted by the court. Musey is right in at least one regard, management's historical financials are undoubtedly wrong by some unknown percentage. The NPA-NXX system for tracking Jackson subscribers, as discussed above, is flawed. There surely are some number of Jackson NPA-NXX numbers no longer operating primarily in Jackson and some number of non-Jackson NPA-NXX numbers operating primarily in Jackson. Thus, management's historical

¹⁸¹ *Id.* at 6.

financials are wrong by some percentage because service revenue is surely being misallocated.

The fact that management's financials are off by some percentage, however, does not justify adopting another set of financial projections that are also off by some percentage. Musey provides no explanation, other than his belief that there is no reason for Jackson's performance to not be on par with Verizon Wireless's, as to why his financial projections are more accurate. The court is disinclined to throw out historical financials and trends in favor of hypothesized trends without a convincing explanation as to why the hypothesized trends are likely to create a more accurate projection of a company's cash flow. At a minimum, the historical trends are based on the number of Jackson MSA NPA-NXX numbers in existence which tethers the financials to reality, albeit inaccurately.

Musey also points to unexplained jumps in revenues in 2010 and 2011, an increase in the DTA balance in 2011, and spreadsheet cells that appear to pull in data from other markets as a reason why this court should throw out management's projections based on the historical financials in favor of his hypothesized projections.¹⁸² It appears that the cells linking to markets outside Jackson may be

¹⁸² JX 228, at 66–67.

the cause of the unexplained revenue jumps in 2010 and 2011.¹⁸³ Further, Alltel explained at trial that a large part of the DTA jump in 2011 was attributable to Jackson's purchase of cellular assets from Verizon.¹⁸⁴ In the end, all Musey calls into question is the reliability of management's historical financials. But he does not persuasively support replacing management's projections that are based on those historical financials with Musey's projections that are based solely upon Verizon Wireless's overall performance.

c. Excessive Capital Expenditures Adjustment Is Not Adequately Explained or Persuasive

Musey's proposed adjustment to Jackson's per share value due to what he calls excessive capital expenditures is not adequately explained or persuasive. Musey's adjustment is based on the notion that historical capital spend is overstated in management's historical financials and that it should have been exactly Verizon's capital spend as a percent of revenues.¹⁸⁵ As described in Thompson's rebuttal

¹⁸³ *Id.* at 68. For example, in the "Forecast" tab JX 139, cell M:21 references the following: "=\tpap11rebua01.verizon.com\Partnerships_Accounting\Industry Relations\PARTACC\2010-2012 year folders\2011Audit\12543 **Fresno**\[12543 **Fresno** 2011 Audit.xlsm]Stats'!\$F\$30/1000" (emphasis added). This cell is supposed to provide the beginning subscriber number for 2010, which the model uses as an input to calculate subscriber revenue. Thus, it appears that the spreadsheet may be pulling data from the wrong market.

¹⁸⁴ Tr.I 134:16–136:9 (Junker).

¹⁸⁵ JX 228, at 64–67.

report, Musey’s calculation of this excessive capital spend adjustment proceeds as follows:

1. Verizon’s Capital Expenditures as a percent of revenue times Jackson’s revenue from 2003 through 2018 equals theoretical capital expenditures for Jackson. This amount totals \$102.8 million.
2. Any historical capital expenditures in excess in Step 1 would be considered excess and effectively damages for unasserted claims that Jackson’s actual capital expenditures were [] legally improper. Any deficit is effectively an offset to damages. The total Jackson capital expenditures from 2003 through 2018 was calculated as \$144.6 million indicating, in Musey’s view, excess capital expenditures of \$41.8 million.
3. The “present value” calculation effectively acts as a form of prejudgment interest by assuming a 6.8% compounded rate of return on any excess or deficit since 2003. This increases the \$41.8 million excess capital expenditures in Step 2 to \$105.4 million. Of this \$105.4 million value, \$64.1 million is derived from the 2003 to 2008 period, which is before Respondent acquired its interest in Jackson.¹⁸⁶

Musey posits that this adjustment is necessary because management’s historical financials are unreliable and overstated. Musey supports this contention by, among other things, pointing out that management’s financials pull in capital expenditures from a spreadsheet that looks to be associated with Fresno California.¹⁸⁷ Although this court finds the spreadsheet irregularities are of concern, but they do not warrant the blunt remedy that Musey advocates.

¹⁸⁶ JX 230, at 55.

¹⁸⁷ Tr.1, at 36:22–37:23 (Musey).

Musey's assumption that Jackson's historical capital spend from 2003 onward should have been exactly Verizon's capital spend as a percent of revenue is flawed. Jackson is its own market with its own idiosyncrasies. Jackson's capital spend as a percent of revenue invariably departed from Verizon's national capital spend as a percent of revenue at some point between 2003 and 2018.

Musey also failed adequately to explain the financial valuation concepts and principles that justify the adjustment. The excess capital expenditure adjustment is only discussed briefly. To justify such a large adjustment in the per share value, a more thorough and reasoned explanation is needed. What Musey presented was not persuasive. Thus, this court declines to adopt an excess capital spend adjustment.

d. DTA Adjustment is Not Justified

Musey posits that an adjustment to Jackson's per share value is justified because of his belief that the capital expenditures included in the calculation of the DTA are incorrect. Musey adjusted for this by "calculating (i) the present value (using Verizon's discount rate of 6.8%) of the difference between Jackson's reported capital expenditures and Jackson's capital expenditures normalized using VZW's historical capital expenditures and (ii) the present value of the undocumented DTA ending balance of December 31, 2002 of 42.240 million."¹⁸⁸

¹⁸⁸ JX 228, at 67.

As described in Thompson’s rebuttal report “The ‘present value’ is actually a future value calculation labeled within the Musey working papers calculated as the \$14.7 million increased at a WACC of 6.8% for 16 years to a total value of \$45.2 million.”¹⁸⁹ The increase of \$30.5 million represents a theoretical return on the balance similar to prejudgment interest.¹⁹⁰

The DTA adjustment is not justified because it is not persuasively explained or reasoned. Musey does not provide an explanation why this methodology is appropriate to adjust for any errors in the DTA balance. Nor does he cite to any academic literature, case law, or treatise to support his methodology. Further, as pointed out in the Thompson rebuttal report, “it is unclear how the Company, or its minority shareholders, could realize this value on a going concern basis as of the Valuation date.”¹⁹¹ Thus, because the DTA adjustment lacks sufficient support and explanation, the court declines to adopt it.

2. Thompson’s Approach

Thompson created his forecast by adjusting management’s projections created in anticipation of the Jackson merger. Thompson started with the model that

¹⁸⁹ JX 230, at 55.

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

Verizon's management created in conjunction with merger planning.¹⁹² The base model used the historical financials created by the PAG as a foundation for creating its projections.¹⁹³ Management's model then used assumptions about the growth of Jackson's business to forecast Jackson's performance into the future.¹⁹⁴

The majority of Thompson's adjustments to management's model were updates to the model based on actual financial results existing as of the valuation date that were not available when management created its model.¹⁹⁵ For example, Thompson adjusted the number of subscribers for 2018 down from 93,500 to 91,515 based on Jackson's actual results for that period. This data was not available when management made its projections but should be incorporated to make the historical financials current as of the valuation date.

Thompson also kept many forecasted metrics the same as management's model. For example, Thompson's revised projections assume roaming revenue to

¹⁹² JX 227, at 28–29. Thompson's base model was one of a few models created in conjunction with the merger process and closely resembled the model used to calculate the merger consideration.

¹⁹³ JX 152A, at 10–11.

¹⁹⁴ JX 137.

¹⁹⁵ JX 227, at 29.

be identical to management's forecasts and calculated all items associated with cost of service based on the same formulas applied in management's forecast.¹⁹⁶

Thompson adjusted commission expense to correct for a discrepancy caused by the adoption of Accounting Standards Codification topic 606 ("ASC 606"). ASC 606 changes the expensing of commissions from being immediately expensed to being capitalized and expensed over a multi-year period. The impact of this change was that for 2018, the financials understated commission expense by approximately \$0.8 million. Thompson adjusted the 2018 commission expense for that understatement and used the base model's assumption for the expected decline in commission expenses during the remaining projection period.¹⁹⁷

Thompson's most significant alteration to Jackson's financials was the EDGE cash flow adjustment accounting for the bulk of the difference between the merger consideration price and Thompson's proposed valuation. Thompson disagreed with management's treatment of EDGE accounts receivable as a cash flow adjustment.¹⁹⁸ In management's model, an increase in EDGE receivables would decrease free cash

¹⁹⁶ *Id.* at 31.

¹⁹⁷ *Id.* at 32.

¹⁹⁸ *Id.* at 33.

flow.¹⁹⁹ Thompson treated any change in EDGE receivables as a cash-neutral event because of Verizon's practice of securitizing their EDGE receivables.²⁰⁰ Thompson then constructed a hypothetical EDGE interest expense by:

- 1) Calculating the annual EDGE-related sales for each year of the projection period by multiplying projected equipment revenue by the percent of EDGE sales.
- 2) Estimating the annual projected EDGE balance as 25% of the prior year's equipment revenue and 75% of the current year's equipment revenue, assuming equipment sales occur evenly throughout the year and a two-year payback period.
- 3) Multiplying the estimated edge balance by an interest rate of 3.30%. Thompson calculated the 3.30% interest rate by choosing an interest rate slightly below the midpoint between the average and weighted average of the interest rate on Verizon's asset-backed debt.

Thompson provided no explanation for why the projected EDGE balance would be equal to 25% of the prior year's equipment revenue and 75% of the current year's equipment revenue. Thompson also did not provide much explanation for his reasoning as to why 3.30% was the correct estimated interest rate. Petitioners did

¹⁹⁹ *Id.* Working capital = current assets(less cash) – current liabilities. When calculating free cash flow (“FCF”) cash should not be included as a current asset for the purposes of calculating working capital because cash is considered a non-operating asset. The change in net working capital from the last period to the current period is subtracted out of free cash flow because if current assets are rising, the business is investing cash in the business in a way that is not captured on the income statement as an operational expense. In management's model, when EDGE receivables increased, current assets increased resulting in an increase in current assets that decreased Jackson's FCF.

²⁰⁰ *Id.*

not challenge this adjustment which results in a higher valuation over the merger price. Although this court would have appreciated a better explanation of the EDGE receivables adjustment in the expert reports, the briefing, or at trial because of the significant impact it has on Jackson's cashflows, this court accepts that the EDGE transactions were a cashflow neutral event and that changes in the EDGE receivables should not affect Jackson's cashflows.

Importantly, Thompson does not attempt to make any revenue adjustments to account for the shortcomings of the NPA/NXX subscriber tracking system.

3. The Court's Weighted Average Approach

Neither party persuasively established that the projections used in their DCF model were reliable. That is attributable to Jackson's use of NPA/NXX to track subscribers, which Petitioner demonstrated is outmoded and inherently unreliable due to the advent of nationwide plans and number portability in the early years of the new millennium. Vice Chancellor Laster detailed those shortcomings in *In re Cellular*, where the valuation date was 2011. The weaknesses in using NPA/NXX to track subscribers was surely no less pronounced at the time of the Jackson merger in 2019.

Both sides have used management's NPA/NXX subscriber data and revenue forecast as the starting point for their own projections. Thompson did not attempt to adjust management's projections to subscriber revenue to account for any

shortcomings reflected in the use of NPA/NXX. Musey, on the other hand, adjusted the projections to reflect Jackson's subscriber base to converge with Verizon's national subscriber rate. Both sets of forecasts are less than ideal and unpersuasive.

Musey's forecasts are unpersuasive because they make the unsupported assumption that Jackson's market penetration rates should be essentially the same as Verizon nationals market penetration rates. Thompson's forecasts are unpersuasive because they fail to account for the distorting effect of the NPA/NXX subscriber system. Because both parties have presented unpersuasive evidence, the court must conduct its own analysis. Despite NPA/NXX's flaws, the court is left with NPA/NXX as the starting point for a key revenue driver in the DCF model.

This court finds that the appropriate solution is to create a blended share price using two iterations of the model discussed below. The first iteration will use Thompson's financial projections and receive a weight of 70%. The second iteration will use Thompson's projection spreadsheet but incorporate Musey's Scenario Two wireless service revenue projection for 2019 and receive a 30% weight. The court accomplished this by first forecasting the equipment revenue, roaming revenue, and other revenue found in Thompson's model for the year 2018 into 2019 using Thompson's growth rate for 2019. Then the court summed this revenue figure with Musey's 2019 wireless service revenue projection for 2019. This final sum then served as the base revenue number upon which revenue is forecasted for the

remainder of the projection period. Revenue is forecasted to grow during the projection period in accordance with Thompson's posited revenue growth percentages. The two iterations will then be averaged to arrive at Jackson's per share value. Those projections will not include Musey's excess the capital expenditure or DTA adjustments proposed by Musey.

This court uses Musey's Scenario Two as opposed to Scenario One because the experts in the case presented the court with two realities and Scenario Two better captures Musey's proposed state of the world. Thompson presented a world in which the PAG's subscriber records were accurate, and management's forecasts based off those records were reliable. Musey presented a world in which the PAG's records were unreliable, and that Jackson's financial metrics should be on par with Verizon Wireless's national metrics because Jackson was an indistinguishable part of Verizon's national business. Scenario One reflects a transition from Thompson's posited state of the world to Musey's posited state of the world over the projection period. Thus, Musey's Scenario Two is the appropriate model to average with Thompson's because it represents Musey's proposed state of the world from the outset of the projection period.

This court finds that weighting and averaging models that use Thompson's revenue projections and Musey's Scenario Two revenue projections, while imperfect, better reflects Jackson's future revenue than either of the experts' models

alone. Thompson's model reflects revenue projections on the concrete, but inaccurate, NPA/NXX subscriber tracking system. Musey's model reflects an attempt to adjust for the inaccuracies inherent in the outdated NPA/NXX system to track subscribers. But it goes too far by assuming Jackson's market penetration rate is the same as Verizon Wireless's nationwide rate with only small alterations. By running Thompson's model, as adjusted by this court, twice—once with Thompson's revenue projections and once with Musey's revenue projections—the court strikes a balance between two possible states of the world.

The respective weights of the models reflect the court's credibility determination of the two projections. Thompson's management-based forecasts were more credible than Musey's because they were based on a metric that at one time accurately reflected the Jackson's market penetration. Musey's forecasts, however, made a welcome attempt to adjust for the inaccuracies created by the NPA/NXX system. Without concrete subscriber data, the court's weighted averaged approach attempts to account for the drawbacks of using the NPA/NXX subscriber accounting system exclusively to derive subscriber revenue.

C. The Discount Rate

The discount rate is the interest rate used to determine the present value of future cash flows.²⁰¹ Thompson used Jackson’s cost of equity as determined by his capital asset pricing model as Jackson’s discount rate.²⁰² Musey, on the other hand, used Verizon’s weighted average cost of capital as Jackson’s discount rate.²⁰³

In a DCF model, the discount rate is typically the weighted average cost of capital (“WACC”) to the firm.²⁰⁴ The WACC is “an average of the costs of all sources of capital for the company, with each source weighted by its respective percentage share in the capital structure of the company.”²⁰⁵ Generally, a company’s sources of capital are equity and debt.²⁰⁶ The WACC is selected as the discount rate because it represents the expected rate of return that market participants require in order to attract funds to a particular company.²⁰⁷ In other words, the WACC

²⁰¹ Finkelstein & Hendershot, at V.E.3.

²⁰² JX 227, at 51.

²⁰³ JX 228, at 84, 87.

²⁰⁴ Finkelstein & Hendershot, at V.E.3.

²⁰⁵ *Hintmann v. Fred Weber, Inc.*, 1998 WL 83052, at *3 (Del. Ch. Feb. 17, 1998).

²⁰⁶ *Id.*

²⁰⁷ SHANNON P. PRATT & ASA EDUCATIONAL FOUNDATION, SHANNON PRATT’S VALUING A BUSINESS 208 (6th ed. 2022).

represents the opportunity cost of forgoing the next best alternative investment.²⁰⁸

WACC can be expressed as follows:

$$WACC = \frac{V_e}{V_e + V_d} \times C_e + \frac{V_d}{V_e + V_d} (1 - t) \times C_d$$

Where:

$V_e = \text{Value of Equity}$

$V_d = \text{Value of Debt}$

$C_e = \text{Cost of Equity}$

$C_d = \text{Cost of Debt}$

$t = \text{tax rate}$

The cost of equity is typically calculated through the capital asset pricing model (“CAPM”).²⁰⁹ The CAPM is “a generally accepted method of determining a company’s cost of equity by reference to the risk-free rate of return, the market risk premium[,] and the differential between investment in a particular industry or company and investment in a diversified portfolio of stocks.”²¹⁰ Essentially, the CAPM estimates the expected return of an investment based on its riskiness relative

²⁰⁸ *Id.*

²⁰⁹ Finkelstein & Hendershot, at V.E.3(a).

²¹⁰ *Hodas v. Spectrum Tech., Inc.*, 1992 WL 364682, at *3 (Del. Ch. Dec. 8, 1992).

to the rest of the market.²¹¹ It achieves this by adding to the risk-free rate the risk premium associated with investing in a diversified portfolio of stocks modified by a particular stock's riskiness relative to the rest of the market (*i.e.*, beta). Other premiums can be added to capture risks not captured by the general equity risk premium (*e.g.*, risks associated with investing in smaller companies). The expected rate of return on equity can be understood to be its cost because it is the return that an investor would require to invest in the company's equity. The CAPM can be expressed as:

$$C_e = R_f + B(RP_m) + RP_s$$

Where:

C_e = *Cost of Equity*

R_f = *Rate of return available on a risk-free security as of the valuation date*

B = *Beta*

RP_m = *Market equity risk premium* = $ER_m - R_f$

RP_s = *Risk premium for small size*

ER_m = *Expected market return*

²¹¹ PRATT, *supra* note 207, at 222–23.

The CAPM model typically derives the risk-free rate from government treasury obligations.²¹² Treasury bills are typically considered nearly free of default risk because they are backed by the full faith and credit of the United States government.²¹³ The market risk premium is the excess of the expected rate of return for a representative stock index over the riskless rate.²¹⁴

Beta is a function of the excess expected return over the riskless rate on an individual security relative to the excess expected return over the riskless rate on a market index.²¹⁵ Beta is determined by regressing the percentage change in stock prices of the individual company against the percentage change in the overall stock index.²¹⁶ The beta for private companies must be estimated based on the betas of comparable, publicly traded companies because a privately held company does not have stock returns against which to regress the market's returns.²¹⁷

When estimating a private company's beta by taking the mean of other companies' betas, it is important to select public companies that are comparable to the private company. Comparable companies are generally defined as companies in

²¹² Finkelstein & Hendershot, at V.E.3(a) n.146.

²¹³ PRATT, *supra* note 207, at 214–15

²¹⁴ *Id.* at 216–17.

²¹⁵ *Id.* at 222–32.

²¹⁶ *Id.*

²¹⁷ *Id.*

the same line of business or more generally, companies that are affected by the same economic forces that affect the firm being valued.²¹⁸ To check if a group of comparable firms is truly comparable, one can “estimate a correlation between revenues or operating income of the comparable firms and the firm being valued.”²¹⁹ If the correlation is high, the firms are comparable.²²⁰

A size premium may be added when determining the cost of equity for a smaller company “to account for the higher rate of return demanded by investors to compensate for the greater risk associated with small company equity.”²²¹

When valuing a division or line of business within a company, it is generally accepted that one “cannot simply apply the company’s overall WACC to determine the value of each individual business, if the risk profiles are different.”²²² This is because the firm is viewed as a portfolio of businesses comprised of its division, with each such business or division having distinctive characteristics.²²³ Thus,

²¹⁸ Aswath Damodaran, *Private Company Valuation*, <https://pdfs.semanticscholar.org/c94a/584368b85eb7197c66f910db970a759b3010.pdf> (last visited Sept. 12, 2022); ROBERT W. HOLTHAUSEN & MARK E. ZMIJEWSKI, *CORPORATE VALUATION: THEORY, EVIDENCE & PRACTICE* 527–30 (2014).

²¹⁹ Damodaran, *supra* note 218.

²²⁰ *Id.*

²²¹ *Gearreald v. Just Care, Inc.*, 2012 WL 1569818, at *10 (Del. Ch. Apr. 30, 2012).

²²² SHANNON P. PRATT & ROGER J. GRABOWSKI, *COST OF CAPITAL: APPLICATIONS AND EXAMPLES* 469 (4th ed. 2010).

²²³ *Id.*

generally, when valuing a distinct part of a business, a distinct WACC for that part of the business should be calculated. Nevertheless, being a member of a division of a larger company can mitigate risks associated with being a smaller division.²²⁴ For example, the credit quality of the larger company affects the cost of debt for the division.²²⁵ Moreover, in a larger company, there “may be firmwide integration of the financing function and a consequent reduction in the apparent risks of business size of a [smaller] division”²²⁶

1. Thompson’s Approach

In determining the appropriate discount rate with which to value Jackson, Thompson only included Jackson’s cost of equity.²²⁷ Thompson supported his decision to not include Jackson’s cost of debt in his discount rate by stating in his rebuttal report:

Functionally, the only debt that Jackson had immediate access to was the DTA from Verizon. The DTA was being paid down over the prior several years and becoming a smaller part of the capital structure for Jackson. The proper approach to discounting the cash flows in the DCF was to use the cost of equity and account for the payoff of the DTA as performed in the Thompson Opening Report.²²⁸

²²⁴ *Id.* at 472.

²²⁵ *Id.*

²²⁶ *Id.*

²²⁷ JX 230, at 39.

²²⁸ *Id.*

Thompson estimated Jackson's cost of equity from the perspective that Jackson is a standalone entity, separate from its corporate parent.²²⁹ This perspective was based on the position that the value of business units should be measured separately from their corporate parents.²³⁰

To estimate Jackson's cost of equity, Thompson used the CAPM. For the risk-free rate, he used the yield on the 20-year U.S. Treasury bonds as of the valuation date—2.73%.²³¹ Thompson estimated beta by examining the unlevered betas for a group of “comparable” firms. Thompson sourced his comparable companies from S&P's *CapitalIQ* financial database.²³² His selection methodology consisted of procuring “a Telecommunication Services report listing all publicly traded Telecommunication Services companies” and then screening the list to include only companies traded on major U.S. Exchanges.²³³ Thompson further screened this list by removing a company with a statistically insignificant beta and

²²⁹ JX 227, at 44.

²³⁰ Petitioner argues that Thompson's opinion should be disregarded because he did not value Jackson as a “going concern,” denying the Company's operative reality as of the date of the merger. Petitioner's Opening Br. 42-43. The court disagrees. Thompson explained that he valued Jackson as a going concern, recognizing its operation under the Verizon umbrella. *See, e.g.*, Tr. 391:2-4; 392:24-393:12; 393:22-24; 394:8-11; 395:14-17 (Thompson).

²³¹ *Id.* at 46.

²³² *Id.* at 48.

²³³ *Id.* at 50.

excluding AT&T because “less than half of its revenue is derived from the wireless business.”²³⁴ He then determined the median beta of these companies over various time periods. Then, Thompson selected the median of the median betas as Jackson’s proxy beta. Finally, Thompson re-levered this median beta using Jackson’s implied financial leverage of 10% debt and 90% equity resulting in a levered beta of 0.80.²³⁵

Thompson did not explain in his report how he determined Jackson’s implied financial leverage or why he used this implied metric over some other metric. From his spreadsheet model, it appears that Thompson calculated the implied financial leverage by taking a modified version of the indicated value of 100% of the equity as determined by his DCF model and then comparing that amount with the DTA balance as of March 31, 2019.²³⁶

Thompson’s selection of his comparable companies did not inspire confidence in his approach. For example, Musey points out that Lumen and Cincinnati Bell are not in the wireless business.²³⁷ That alone might not render them not comparable.

²³⁴ *Id* at 47 n.79. This left the following companies: 1) Verizon Communication Inc., 2) T-Mobile US, Inc., 3) Lumen Technologies, Inc., 4) United States Cellular Corporation, 5) Cogent Communications Holdings, Inc., 6) Shenandoah Telecommunication Company, 7) Cincinnati Bell Inc., 8) Consolidated Communication Holdings, Inc., 9) Alaska Communications Systems Group, Inc.

²³⁵ JX 227, at 48.

²³⁶ JX 227A (DCF tab & CAPM tab).

²³⁷ JX 229, at 17–32.

But Thompson removed AT&T from his list of comparable companies initially because less than half of its revenues were derived from wireless revenues. He does not explain this inconsistency. Further, Thompson does not provide a reasoned analysis for his selection of comparable companies beyond the aforementioned exclusions and fails to conduct any tests to ensure the comparability of his selected comparable companies.

Thompson selected the long-horizon expected equity risk premium of 6.04% as his equity risk premium.²³⁸ This premium represents the average difference between the returns on large stocks and long-term government bonds from 1926 to 2017 adjusted for historical changes in price-to-earnings ratios.

Thompson applied a size premium of 5.22%, which was the size premium for companies in the 10th decile by market capitalization. This premium is the premium that the Duff & Phelps Cost of Capital Navigator suggests for companies that have a market capitalization between \$2.5 million and \$322 million. Under Thompson's methodology, the implied market capitalization of Jackson, using the squeeze-out price of \$2,963 per share, is \$46 million which places it in that range.

Combining the above inputs, Thompson concluded that Jackson's cost of equity was 12.9%. The below describes how Thompson arrived at his cost of equity:

²³⁸ JX 227, at 50.

$$C_e = R_f + B(RP_m) + RP_s$$

$$C_e = 2.73\% + 0.80(6.14\%) + 5.22\%$$

$$C_e = 12.9\% \text{ (rounded)}$$

Because Thompson did not include the cost of debt in his discount rate, Jackson's cost of equity was Thompson's selected discount rate.

2. Musey's Approach

Musey eschewed the CAPM model and simply assumed that Jackson's WACC was the same as Verizon's WACC.²³⁹ Musey based this assumption on his assertion that Jackson was a fully integrated part of Verizon Wireless.²⁴⁰ He claimed that Jackson's integration warrants using Verizon's cost of capital because this is a more accurate reflection of Jackson's operative reality and associated risks.²⁴¹ To support this contention, Musey cites to *In re AT&T Mobility Wireless Operations Holdings Appraisal Litigation*, in which the court used AT&T's levered beta and capital structure to value one of AT&T's subsidiaries because it reflected the

²³⁹ JX 228, at 84, 87.

²⁴⁰ *Id.* at 80.

²⁴¹ JX 229, at 41.

integrated, affiliated nature of the business.²⁴² Musey concludes that Verizon's 6.8% WACC should be the discount rate applicable to Jackson.²⁴³

3. The Court's Blended Approach

The court concludes that an approach which blends Thompson's and Musey's analyses should be used to determine Jackson's discount rate. Jackson's cost of capital must take into consideration the reality that Jackson benefits from its relationship with Verizon.

a. Risk-Free Rate

This court accepts Thompson's use of the rate of return on a twenty-year United States Treasury bond of 2.73% as of the valuation date for the risk-free rate. Additionally, the court accepts the use of the long-horizon expected equity risk premium of 6.04% as the equity risk premium. Both inputs to the model comport with standard methodology and do not raise a significant issue.

b. Capital Structure and Beta

Jackson's capital structure and beta are assumed to be that of Verizon's, which reflect the degree to which Jackson was integrated with Verizon. The use of Verizon's capital structure and beta is supported by the lack of a sufficiently convincing alternative analysis. Thompson took an inconsistent approach in

²⁴² 2013 WL 3865099, at *4 (Del. Ch. June 24, 2013).

²⁴³ JX 229, at 41.

determining Jackson’s beta, including companies that do not operate in the wireless industry, while excluding AT&T because less than half of its revenue is attributable to the wireless business. Using Verizon’s beta reflects the operative reality that Jackson was operated, branded, and financed by Verizon.²⁴⁴ It is also the approach taken in the closely analogous precedents of *In re Cellular* and *In re AT&T Mobility*, where the court valued a telecommunications partnership similarly intertwined with its parent.²⁴⁵ Following this precedent, this court believes that it is similarly appropriate to use Verizon’s beta and capital structure. Thus, this court adopts Verizon levered beta of 0.65 using a five-year weekly lookback period. This court further adopts Verizon’s capital structure of 30% debt and 70% equity as presented in Thompson’s rebuttal report and trial testimony.²⁴⁶

c. Size Premium

Applying a size premium increases the company’s cost of equity, resulting in an increase in the discount rate. “That in turn lowers the present value of cash flows and results in a lower valuation estimate.”²⁴⁷

²⁴⁴ Tr.I 285:6–19; Junker Dep. 89:6–87:12 (Macuszonok).

²⁴⁵ *In re Cellular*, 2022 WL 698112, at *53; *In re AT&T Mobility*, 2013 WL 3865099, at *4.

²⁴⁶ JX 230, at 36, Schedule D-2; Tr.II 345:6–21 (Thompson).

²⁴⁷ *In re Cellular*, 2022 WL 698112, at *53.

“The use of a size premium is a subject of some controversy.”²⁴⁸ Musey insists that a size premium is inappropriate here, because Jackson was a fully integrated part of Verizon’s larger, nationwide business operations and does not face the traditional non-diversifiable risk that apply to small companies.²⁴⁹ He also points to other decisions of this court that did not apply a size premium.²⁵⁰ Musey criticizes the specific size premium applied by Thompson because the 10th Decile Size Premia Studies used in the Thompson Report “include large numbers of distressed companies and those with negative earnings.”²⁵¹ Musey states that these companies are inappropriately included in the calculation of Jackson’s size premium because Jackson is neither distressed nor revenue negative.

Ramcell’s objected to applying any size premium, but did not meaningfully join issue on the appropriate the actual percentage of the premium in the event the court were to conclude one is warranted. Except for a passing criticism of the types

²⁴⁸ *Dunmire v. Farmers & Merchants Bancorp of W. Penn., Inc.*, 2016 WL 6651411, at *12 n.139 (Del. Ch. Nov. 10, 2016); *see* JX 229, at 35. Musey acknowledges that he is “not taking the position that size premiums are never applicable.” JX 229, at 34.

²⁴⁹ JX 229, at 36.

²⁵⁰ JX 229, at 35 (citing *Merion Cap. L.P. v. Lender Processing Servs., Inc.*, 2016 WL 7324170, at *29 (Del. Ch. Dec. 16, 2016) (declining to use a size premium); *AT&T Mobility*, 2013 WL 3865099, at *4 (declining to include a small company risk premium in an appraisal action involving small cellular companies operated as part of the parent’s nationwide network).

²⁵¹ JX 229, at 35.

of companies contained in the tenth decile of the Duff & Phelps data, Musey did not challenge Thompson's figure of 5.99%.

The court agrees that a size premium is appropriate in this case, but it must reflect the reality of Jackson's integration in and heavy reliance upon Verizon. "This Court may adjust a company's size premium where sufficient evidence is presented to show that the company's individual characteristics make it less risky than would otherwise be implied under its corresponding Ibbotson decile based on size alone."²⁵² Those characteristics are present here. Thompson did not attempt to risk adjust his size premium.

An adjustment to the size premium is necessary here to recognize the operative reality that Jackson was a Verizon division, operating under the network brand with unconditional support from the mothership. Thompson did not attempt to calibrate his size premium to the operative reality. Conversely, the Petitioner has not offered any meaningful help. Ramcell simply rolled the dice on the size premium issue, taking an all-or-nothing approach.

In re Cellular is a closely analogous case, involving a national wireless company acquiring the remaining equity interests that it did not already own in several small cellular partnerships. The court noted that in two prior appraisal cases

²⁵² *Gearreald*, 2012 WL 1569818, at *12.

“involving similar market-level entities” the court came to different conclusions on whether to apply a size premium,²⁵³ but on the record before it was persuaded that a size premium, subject to reasonable adjustment, was appropriate.²⁵⁴

The court is persuaded that a size premium should be applied to Jackson’s cost of equity to reflect the notion that one “cannot simply apply the company’s overall WACC to determine the value of each individual business, if the risk profiles are different.”²⁵⁵ Jackson has distinct risks from Verizon as a whole as its operations are geographically confined to a three counties with income levels and population growth below the national average.²⁵⁶ Verizon, as a whole, operates on a national basis serving regions of varying density, income levels, and population growth.²⁵⁷ Thus, different risk factors affect Verizon and Jackson and it is appropriate to adjust Jackson’s cost of equity to capture how Jackson’s size affects its riskiness.

²⁵³ *In re Cellular*, 2022 WL 698112, at *54 (citing *AT&T*, 2013 WL 3865099, at *4 (declining to apply a size premium), and *B&L Cellular v. USCOC of Greater Iowa, LLC*, 2014 WL 5342715, at *2 (Del. Ch. Dec. 8, 2014) (adopting the use of a size premium where the local partnership was operated as part of the larger national cellular company)).

²⁵⁴ *In re Cellular*, 2022 WL 698112, at *54. Petitioner here did not address this aspect of the *In re Cellular* decision in its post-trial briefs. Notably, Musey was an expert for the plaintiffs in that case, who were also represented by some of the same counsel representing the Petitioner in this case.

²⁵⁵ PRATT, *supra* note 207, at 469

²⁵⁶ JX 227, at 19–22.

²⁵⁷ JX 230, at 12.

Nevertheless, the size premium should reflect the reality that the risks associated with Jackson's size are mitigated by Jackson's integration with Verizon.

In *In re Cellular*, the defendant's expert started with a 3.99% premium indicated by the micro-cap decile from the 2010 Ibbotson SBBI Yearbook, and then subtracted 1-percentage point "to reflect AT&T's involvement for a total size premium of 2.99%."²⁵⁸ The court found this adjustment to be based upon a "reasoned judgment" and accepted it.²⁵⁹ Here, the court applies a size premium of 3.22% to Jackson, which reflects a two percentage point reduction from Thompson's calculation.

The calculation of Jackson's cost of equity can be seen below:

$$C_e = R_f + B(RP_m) + RP_s$$
$$C_e = 2.73\% + 0.65(6.14\%) + 3.22\%$$
$$C_e = 9.9\% \text{ (rounded)}$$

d. Cost of Debt and Tax Rate

The court applies a 4.0% cost of debt for Jackson, using Thompson's calculation of Verizon's cost of debt. Thompson arrived at a 4.0% cost of debt for Verizon "based on the midpoint between the yields on Verizon's most recently

²⁵⁸ *In re Cellular*, 2022 WL 698112, at *54.

²⁵⁹ *Id.*

issued long term debt as of the Valuation Date.”²⁶⁰ Although Jackson had access to debt at the applicable federal funds rate through the DTA balance, using Verizon’s cost of debt is consistent with the adopted approach of using Verizon’s capital structure and beta.²⁶¹ This court further adopts a 26.0% corporate tax rate for the purposes of calculating Jackson’s WACC as presented in both Musey’s and Thompson’s rebuttal reports.²⁶²

e. WACC Calculation

With all the elements of Jackson’s WACC accounted for, Jackson’s WACC can be seen represented below:

$$WACC = \frac{V_e}{V_e + V_d} \times C_c + \frac{V_d}{V_e + V_d} (1 - t) \times C_d$$

$$\frac{V_e}{V_e + V_d} = \textit{Equity Portion of Capital Structure} = 70\%$$

$$\frac{V_d}{V_e + V_d} = \textit{Debt Portion of Capital Structure} = 30\%$$

$$C_e = \textit{Cost of Equity} = 9.9\%$$

$$C_d = \textit{Cost of Debt} = 4\%$$

$$t = \textit{tax rate} = 26\%$$

²⁶⁰ JX 230, at 36 & 36 n.53.

²⁶¹ See *In Re Cellular*, 2022 WL 698112, at *53 (adopting the same approach and using AT&T’s cost of debt).

²⁶² JX 229, at 45; JX 230, at 36.

$$WACC = 70\% \times 9.9\% + 30\%(1 - 26\%) \times 4\%$$

$$WACC = 7.847\%$$

As shown above, this court adopts a WACC of 7.847% for Jackson.

D. The Terminal Value

The terminal value is the present value of all the company's future cash flows beginning after the projection period.²⁶³ There are several methods available to calculate the terminal value.²⁶⁴ Here, both Musey and Thompson agree that a perpetual growth method is the most suitable approach for calculating Jackson's terminal value.²⁶⁵ Musey and Thompson, however, rely on different perpetual growth rates and different types of perpetual growth models to determine Jackson's terminal value. Musey opines that the growth rate should be 2.77% while Thompson believes that it should be 2.00%. Further, Musey believes that the standard Gordon Growth Model ("GGM") should be used while Thompson believes that the McKinsey Value Driver ("MVD") should be used. A 2.20% growth rate, calculated using a slightly altered version of Musey's methodology, is appropriate. On the other hand, this court believes that Thompson's MVD model with some alterations is the more appropriate model for valuing Jackson.

²⁶³ Finkelstein & Hendershot, *supra* note 131, at V.E.2.

²⁶⁴ *Id.*

²⁶⁵ JX 227, at 51; JX 228, at 81–82.

A perpetual growth model assumes cash flows to grow at a constant rate in perpetuity.²⁶⁶ Essential to this assumption is the selection of the correct growth rate. It should be recognized at the outset that “ascertaining a growth rate in perpetuity . . . is an inherently speculative exercise.”²⁶⁷ The general bounds of the perpetuity growth rate are the rate of inflation at a minimum and the nominal rate of growth in the economy. As described in the *3M Cogent* decision:

“A viable company should grow at least at the rate of inflation and . . . the rate of inflation is the floor for a terminal value estimate for a solidly profitable company that does not have an identifiable risk of insolvency.” But, a terminal growth rate should not be greater than the nominal growth rate for the United States economy, because “[i]f a company is assumed to grow at a higher rate indefinitely, its cash flow would eventually exceed America’s [gross national product].”²⁶⁸

The growth rate should be justifiably related to the company being valued or its industry. “Without a valid explanation, the use of a generic growth rate is inherently flawed and unreasonable” especially when industry growth rates are available.²⁶⁹

²⁶⁶ *JRC Acquisition*, 2004 WL 286963, at *2.

²⁶⁷ *Id.* at *4.

²⁶⁸ *3M Cogent.*, 2013 WL 3793896, at *21 (first quoting *Global GT LP v. Golden Telecom, Inc.*, 993 A.2d 497, 511 (Del. Ch. 2010); then quoting BRADFORD CORNELL, CORPORATE VALUATION: TOOLS FOR EFFECTIVE APPRAISAL AND DECISION MAKING 146–47 (1993)).

²⁶⁹ *Dobler v. Montgomery Cellular Hldg. Co.*, 2004 WL 2271592, at *10 (Del. Ch. Oct. 4, 2004) (internal quotations omitted), *aff’d in relevant part, rev’d on other grounds*, 880 A.2d 206 (Del. 2005).

1. The Growth Rate

Thompson unconvincingly used generic growth rates to estimate Jackson's perpetuity growth rate. Thompson begins his discussion of the long term growth rate by appealing to generalized rules about what growth rates should be, stating: “[f]or companies that have normal . . . long term growth prospects the [perpetuity growth rate] should mirror the inflation rate plus the long-term real growth rate of the overall economy”²⁷⁰ Thompson then provides a table of various long-term nominal growth rates and proceeds to summarily state that one half of the nominal economic growth forecasts, 2.00%, is an appropriate growth rate, “based on the history of declining ARPU both at the [c]ompany and industry levels along with the low to negative growth in population for Jackson MSA.”²⁷¹ His estimate effectively assumes no inflationary growth but a small amount of real growth.²⁷²

Thompson's approach is unconvincing because of its reliance on generic growth rates and its unreasoned decrease of the nominal United States growth rate by half. Thompson fails to look at industry growth rates. Further, Thompson does not support his decision to cut his chosen generic growth rates in half. Although, Thompson does point to declining ARPUs and the low to negative growth in

²⁷⁰ JX 227, at 52.

²⁷¹ *Id.* at 53.

²⁷² *Id.*

population for the Jackson MSA, he does not explain why these general trends justify a halving the United States nominal growth estimates. Thompson's assumption that Jackson will experience no inflationary growth, but a small amount of real growth is not convincingly supported and the court declines to adopt it.

Musey, on the other hand, persuasively presents the average of industry growth forecasts discounted for Jackson MSA-specific characteristics as the long-term growth rate for Jackson. Musey averaged the consensus analyst forecast for Verizon's long-term growth rate, the SNL Kagan Wireless Industry forecasted growth rate for the wireless industry, and the growth rate from a prior court of Chancery wireless valuation opinion.²⁷³ The average of these rates was 3.37%. Next, Musey decreased the average growth rate by the difference between Jackson's five-year trailing population growth and the United States' five-year trailing population growth. The difference between the population growth rates was 0.60%, resulting in Musey's long-term growth rate was 2.77%.²⁷⁴

²⁷³ JX 228, at 72. The wireless industry growth estimates used by Musey were 1) Consensus Analyst Long-Term Growth for Verizon: 3.02%; 2) Consensus Analyst Revenue Growth for Verizon OVERALL (2018–2022): 1.54%; 3) SNL Kagan Wireless Industry Revenue Growth (2018–2022): 3.12%; 4) Consensus Analyst EBITDA for Verizon (2018–2022): 3.32%; 5) SNL Kagan Wireless Industry EBITDA Growth (2018–2028): 3.33%; 6) Consensus Analyst Free Cash Flow growth for the Verizon (2018–2022): 7.00%; 7) Verizon Free Cash Flow Growth for the Partnership (2019–2028): 2.3%; 8) Delaware Chancery: Concluded Long-Term Growth of Spring/Clearwire: 3.35%.

²⁷⁴ JX 22, at 72.

Musey convincingly presented his long-term growth rate because it was based on industry specific growth rates and factors unique to the Jackson MSA. Although Musey does not explain the exact mathematical or numeric relationship between population and the long-term growth rate implicit in his calculation of the 2.77% number, his reliance on an average of industry specific growth rates discounted by Jackson specific factors is more convincing than Thompson's use of generic growth rates slashed in half.

At trial and in his rebuttal report, Thompson raises serious concerns as to the data used in Musey's average. Thompson states that he went to the same database that Musey did for his averages and pulled completely different numbers.²⁷⁵ Using the "corrected" numbers that he pulled from the database, Thompson found that the long-term growth rate should be 2.02% using Musey's methodology. Musey did not address this at trial.

Thompson also raised concerns about the inclusion of an outlier in Musey's calculation of the average of growth rates. Musey included in his average a growth a 7.00% analyst forecasted growth rate for Verizon's free cash flows between 2018 and 2022. Thompson points out that, "using a long-term growth rate of 7.0% and a WACC of 6.8% would result in a negative capitalization rate, and thus an irrational

²⁷⁵ JX 230, at 45; Tr.II 354:2–355:8 (Thompson).

value for the perpetuity value.”²⁷⁶ Removing the 7.00% outlier from the average results in a long-term growth rate of 2.20% under Musey’s methodology.

This court is not able to determine which numbers from Musey’s database are correct. This court, however, finds that the inclusion of the 7.0% growth rate was not internally consistent with Musey’s proposed valuation and believes that it should be removed from the calculation of the average long-term growth rate. Thus, this court adopts Musey’s growth rate, modified to 2.20%.

2. Gordon Growth Versus Value Driver

Although Musey and Thompson agree that a perpetual growth model is the best method for calculating Jackson’s terminal value, they disagree over which model to use. Musey used a standard GGM, whereas Thompson suggests a MVD method. The court used the MVD model for calculating Jackson’s terminal value.

a. The Gordon Growth Model

The GGM is a simple model that calculates the present value of an infinite stream of cash flows.²⁷⁷ It can be understood as “equivalent to a discounted future cash flow analysis with certain simplifying assumptions, namely, (a) earnings grow at a constant rate into perpetuity and (b) all earnings are either distributed to

²⁷⁶ JX 230, at 42. A company whose growth rate exceeds their WACC in the long-term would present a riskless arbitrage opportunity that would attract all capital.

²⁷⁷ PRATT, *supra* note 207, at 194–95.

shareholders or, if retained by the company, reinvested at the discount rate.”²⁷⁸ The GGM is expressed as:

$$\text{Terminal Value} = \frac{FCF_t \times (1 + g)}{WACC - g}$$

Where:

FCF_t = Free Cash Flow at the end of the projection period

g = the long – term growth rate

WACC = the weighted average cost of capital to the firm

This GGM presents both positives and negatives as a method for calculating the terminal value of a company. Beginning with the positive, the GGM is simple and easy to understand. It is not difficult to take the last period’s cash flows, increase them by the growth rate, and then calculate a perpetuity based on the discount value reduced by the growth rate. Further, it is a theoretically sound and widely accepted means of calculating the terminal value.²⁷⁹

There are downsides to the GGM. For instance, the GGM is very sensitive to small changes in the discount rate or growth rate. A slight change in either metric

²⁷⁸ Z. CHRISTOPHER MERCER, THE INTEGRATED THEORY OF BUSINESS VALUATION 22 (2004).

²⁷⁹ *Crescent/Mach I P’ship, L.P. v. Turner*, 2007 WL 2801387, at *14 (Del. Ch. May 2, 2007).

will lead to large swings in the terminal value of the company.²⁸⁰ Moreover, the GGM does not explicitly deal with the amount of capital investment required to sustain the selected long term growth rate.²⁸¹

b. The Value Driver Model

The VDM (or McKinsey formula) is an alternative to the GGM, which makes explicit the relationship between growth, free cash flow, and invested capital. The Court of Chancery “has accepted the [VDM] in other cases, sometimes referring to it as the convergence theory.”²⁸² The VDM is based on the notion that without investment the firm cannot grow in perpetuity.²⁸³ To effectuate this notion, the VDM

²⁸⁰ The below chart demonstrates how the terminal value of a firm with \$10,000 in FCF can drastically change with small adjustments in the WACC or long-term growth rate for the firm.

WACC	g		
	0%	2%	4%
10%	\$10,000	\$12,500	\$16,667
12%	\$8,333	\$10,000	\$12,500
14%	\$7,143	\$8,333	\$10,000

Clifford S. Ang, *Terminal Values in DCFs*, (Nov. 20, 2019), <http://quickreadbuzz.com/2019/11/20/business-valuation-clifford-ang-terminal-values-in-dcfs>.

²⁸¹ *Id.*

²⁸² *Fir Tree Value Master Fund, LP v. Jarden Corp.*, 236 A.3d 313, 332 (Del. 2020).

²⁸³ *Id.* at 333. An expert in *Fir Tree* stated: “[the VDM] matches the economic precepts . . . of being more rigorous about quantifying the link between growth and investment, that growth is not free, and linked to the return on capital.” *Id.*

links the long-term growth rate and the net investment during the terminal period through the following formula:

$$\text{Continuing Value}_t = \frac{\text{NOPAT}_{t+1} \times (1 - \frac{g}{\text{RONIC}})}{\text{WACC} - g}$$

Where:

NOPAT_{t+1} = *Net operating profit after tax*

g = *long term growth rate*

RONIC = *return on new invested capital*

$\frac{g}{\text{RONIC}}$ = *implied investment rate*

WACC = *weighted average cost of capital*

The above formula attempts to model the growth of a company in perpetuity while accounting for the notion that any growth in perpetuity must be funded by capital expenditure (*i.e.*, a “plowback” amount, also called the “required reinvestment rate”). The plowback is the “amount of investment at the terminal period required to support the projected growth during the terminal period.”²⁸⁴ The VDM takes net operating profit after tax in the terminal period and reduces it by one minus the implied reinvestment rate. The implied reinvestment rate is calculated by

²⁸⁴ *Id.* at 321 n.33.

taking the growth rate and dividing it by the return on new invested capital (“RONIC”). RONIC measures the return on capital invested during the terminal period.²⁸⁵ RONIC should be set so that it is consistent with expected competitive conditions.²⁸⁶ Economic theory suggests that competition will eventually eliminate abnormal returns. This means that in competitive industries RONIC should equal WACC.²⁸⁷ If, however, a business has a sustainable competitive advantage provided by things such as network effect, brands, or patents, it is not appropriate to assume that RONIC equals WACC because a business with a sustainable competitive advantage can demand supranormal rents over the long run.²⁸⁸

An interesting byproduct of the VDM where RONIC equals WACC is that the growth term falls out of the equation and the VDM can be expressed as a simplified equation:

²⁸⁵ TIM KOLLER, MARC GOEDHART & DAVID WESSELS, VALUATION: MEASURING AND MANAGING THE VALUE OF COMPANIES 250, 260 (6th ed. 2015) [hereinafter “McKinsey”].

²⁸⁶ *Id.* at 250.

²⁸⁷ *Id.* (“Economic theory suggests that competition will eventually eliminate abnormal returns, so for companies in competitive industries, set RONIC equal to WACC”).

²⁸⁸ *Id.* (“[F]or companies with sustainable competitive advantages (*e.g.*, brands and patents), you might set RONIC equal to the return the company is forecast [sic] to earn during later years of the explicit forecast period”); *Id.* at 262 (“Many financial analysts routinely assume that the incremental return on capital during the continuing period will equal the cost of capital For some businesses, this assumption is too conservative. For example, both Coca-Cola’s and PepsiCo’s soft-drink businesses earn high returns on invested capital and their returns are unlikely to fall substantially as they continue to grow, due to the strength of their brands, high barriers to entry, and limited competition.”).

$$\text{Continuing Value}_t = \frac{NOPAT_{t+1}}{WACC}$$

Thus, this formulation essentially moots any discussion of the long-term growth rate.²⁸⁹ The McKinsey textbook states that, “The fact that the growth term has disappeared from the equation does not mean that the nominal growth in [NOPAT] is zero. The growth term drops out because new growth adds nothing to value, as the RONIC associated with growth equals the cost of capital.”²⁹⁰

As with the GGM, there are benefits and drawbacks of the VDM. A benefit of the VDM is that it is less sensitive to changes in WACC and g than the GGM.²⁹¹ Further, it quantifies the link between growth and required investment.²⁹² A drawback of the VDM is its potential to undervalue companies that have sustainable competitive advantages when RONIC is assumed to be equal to WACC.²⁹³ Further, firms that have yet to reach a steady state due to their fast growth may be undervalued by the VDM where RONIC is set to equal WACC.²⁹⁴

²⁸⁹ The long-term growth rate is still relevant in calculating the terminal period’s cashflows from the projection period’s last period.

²⁹⁰ McKinsey, *supra* note 285, at 262.

²⁹¹ Ang, *supra* note 280.

²⁹² André Thormann & Henrik Foged Rasmussen, *The Discounted Cash Flow Terminal Value Model as an Investment Strategy* 39 (May 2019) (Master of Science in Finance and Accounting Thesis, Copenhagen Business School).

²⁹³ *Id.*

²⁹⁴ *Id.* at 42.

c. The Court's Selected Terminal Value Calculation

The Court of Chancery has accepted both GGM and the VDM as valid means calculating a firm's terminal value.²⁹⁵ In this case, Thompson's presentation of the MVD is more persuasive. This court is convinced of the need to account for the investment necessary to sustain the long-term growth rate into perpetuity because to grow, a company must invest. There is no free growth, and, in this case, the court finds that the terminal value model should make this concept explicit. Further, Thompson presented an illuminating demonstration of Musey's model's implied return on invested capital ("ROIC") for his two models. Thompson showed that the implied ROIC for Musey's Scenario One and Scenario Two were 192.88% and 227.37% respectively.²⁹⁶ Although numbers like this can likely be created for any model that calculates terminal value using the GGM, this presentation contributed to the court's decision to adopt the VDM in this case.²⁹⁷ Further, the court adopts a

²⁹⁵ *Fir Tree*, 236 A.3d, at 332 ("The Court of Chancery has accepted the McKinsey formula in other cases, sometimes referring to it as a convergence theory."); *Crescent/Mach I P'ship, L.P. v. Turner*, 2007 WL 2801387, at *14 (Del. Ch. May 2, 2007) ("Appraisal actions have used the Gordon Growth method to determine the appropriate terminal value in a DCF calculation.").

²⁹⁶ JX 230, at 50.

²⁹⁷ In fact, a GGM that assumes depreciation and amortization equal to capital expenditure and no change in working capital in the final period would imply an infinite return on capital. $\lim_{n \rightarrow 0} \frac{g}{n}$ Where n = net reinvestment/NOPAT; net reinvestment = change in working

VDM model that sets RONIC equal to WACC. This is appropriate because Jackson is a mature, capital-intensive company in a competitive industry.²⁹⁸ Although there are significant barriers to entry given the limited availability of spectrum licenses, this court does not find that this creates a competitive moat that would justify adjusting RONIC to be greater than WACC.

The first iteration of the model uses Thompson's VDM model and Thompson's projections. Using this model, Jackson's terminal value is \$161,900,000. In present value terms that is \$80,498,000. The second iteration of the model uses Thompson's VDM model but incorporates Musey's wireless revenue

capital + working capital - depreciation and amortization; g = perpetuity growth rate; $\frac{g}{n}$ = return on invested capital. The Court of Chancery has adopted the assumption that capital expenditures will equal depreciation in the final period of a perpetual growth model in the past. See e.g., *Cede III*, 2003 WL 23700218, at *2 ("I will calculate fixed capital investment as 1.8% of the following year's net sales, and depreciation as 1.8% of net sales."); *Merion Cap. L.P. v. Lender Processing Servs., Inc.*, 2016 WL 7324170, at *27 (Del. Ch. Dec. 16, 2016) (citing ROBERT W. HOLTHAUSEN & MARK E. ZMIJEWSKI, CORPORATION VALUATION THEORY, EVIDENCE & PRACTICE 232 (2014)). But see, Gilbert E. Mathews & Arthur H. Rosenbloom, *Delaware's Unwarranted Assumption That Capex Should Equal Depreciation in a DCF Model*, BUS. VALUATION UPDATE, Aug. 2018, at 1 (criticizing the assumption that capital expenditure should equal depreciation as one that should only be made if growth and inflation are assumed to be zero and stating that the valuation community increasingly accepts the notion capital expenditures should exceed depreciation in the estimation of terminal period cashflow). Thus, this court does not find that a showing of a high implied ROIC using a GGM model is sufficient to demonstrate that a GGM should not be used because to do so would place significant constraints on the use of GGMs.

²⁹⁸ JX 227, at 54; Thormann & Rasmussen, *supra* note 292, at 43 ("[T]he RONIC=WACC model should not provide very attractive or precise valuations for fast-growing companies that have not yet matured but might only be suitable for stable and mature firms").

projections. In this iteration, Jackson’s terminal value is \$259,245,000. In present value terms that is \$128,898,000.

Putting together the above pieces of the DCF, Jackson’s equity value using Thompson’s projections is \$151,510,000, resulting in a per-share value of \$9,679.29. Using Musey’s revenue projections, Jackson’s equity value is \$244,660,000 resulting in a per share value is \$15,630.23. Considering all relevant factors, the fair value of Petitioner’s stock as of the valuation is the weighted average of these two per share fair values—\$11,464.57 per-share.

E. Costs and Interest

The appraisal statute permits “[t]he costs of the proceeding [to] be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances.” 8 *Del. C.* § 262(j). “Customarily, it is the rule of this Court to assess all costs not specifically allocated by the statute against the surviving corporation, unless there is a showing of bad faith on the part of the dissenting shareholders.”²⁹⁹

Ramcell obtained an award of fair value that was higher than the merger consideration. The litigation was hard-fought, but the Petitioner did not engage in bad faith conduct. Nor is there any indication that Ramcell incurred excessive costs.

²⁹⁹ *Charlip v. Lear Siegler, Inc.*, 1985 WL 11565, at *5 (Del. Ch. July 2, 1985); *see, e.g., Owen v. Cannon*, 2015 WL 3819204, at *33 (Del. Ch. June 17, 2015) (awarding costs as a matter of course)).

Therefore, any costs to which the petitioner is entitled as the prevailing party will be paid by Alltel.

Similarly, the court finds no basis to deviate from the presumptive statutory interest rate on the appraisal award. Accordingly, Petitioner is awarded “interest from the effective date of the merger . . . through the date of payment of the judgment [which] shall be compounded quarterly and shall accrue at 5% over the Federal Reserve discount rate (including any surcharge) as established from time to time during the period between the effective date of the merger . . . and the date of payment of the judgment.”³⁰⁰

III. CONCLUSION

The fair value of Jackson stock on the valuation date was \$11,464.57 per share. Ramcell sought appraisal for 155.4309 shares of Jackson’s stock. Accordingly, Ramcell is awarded \$1,781,948.74.

Ramcell is awarded its costs and interest pursuant to the appraisal statute.³⁰¹

IT IS SO ORDERED

³⁰⁰ 8 *Del. C.* § 262(h).

³⁰¹ 8 *Del. C.* §§ 262(h), (j).