

Krause Fund
Fall 2024

HOLD

Crown Castle, Inc. (NYSE: CCI)

Current Price: \$103.80

Real Estate

November 19, 2024

Target Price: \$110 - \$117

Investment Thesis

We recommend a **HOLD** rating for Crown Castle Inc. (CCI). CCI is positioned to experience steady growth driven by its leadership in communications infrastructure and strategic investments in 5G technologies. However, this growth faces challenges from the high-interest rate environment, which increases the cost of capital, slows business transactions, and reduces property valuations.

THEESIS DRIVERS

Leadership in Wireless Communication Technologies: CCI is at the forefront of 5G integration, with over 120,000 small cell towers advancing the adoption of this next-generation network. While its primary competitor, American Tower Corporation (AMT), focuses on rural infrastructure, CCI strategically concentrates on urban areas, positioning itself for a competitive advantage in 5G and future 6G technologies.

Long-Term Lease Contracts: CCI's revenue comes from leasing tower space to major U.S. telecommunications companies, such as T-Mobile, AT&T, and Verizon Wireless. These long-term contracts with industry leaders provide reliable and predictable revenue streams, ensuring financial stability.

THEESIS RISKS

Tenant Concentration Risk: A significant portion of CCI's revenue depends on its top three tenants: T-Mobile, AT&T, and Verizon Wireless. This high concentration exposes CCI to financial risk if one of these companies experiences economic difficulties, restructures contracts, or consolidates operations, potentially leading to reduced leasing demand or renegotiated terms.

Regulatory and Technological Shifts: Changes in regulatory policies, such as zoning restrictions or stricter environmental standards, could delay the deployment of small cell sites or limit tower expansions. Rapid technological advancements, like satellite-based communications or alternative infrastructure models, could also disrupt the demand for traditional cell towers and small cell networks.

Intense Competition in Small Cell Deployment: Although CCI is a leader in small cell infrastructure, increased competition from emerging players and infrastructure-sharing agreements among telecom companies could erode market share. Competitors like American Tower Corporation (AMT) and SBA Communications may outpace CCI in adopting new technologies or expanding networks in high-demand areas, reducing CCI's ability to command premium leasing rates.

CONCLUSION

In summary, we recommend a **HOLD** rating for Crown Castle Inc. (CCI) due to its balanced outlook of growth opportunities and risks. CCI's leadership in 5G integration and reliance on long-term contracts with significant telecommunications companies provide reliable revenue and position it strategically in the evolving communications infrastructure market. However, the company faces considerable challenges, including macroeconomic headwinds like high interest rates, tenant concentration risks, regulatory uncertainties, and increasing competition in small cell deployment. While CCI's strengths make it a stable investment in the near term, these risks limit its growth potential, warranting a cautious approach.

Company Description

Crown Castle International Corp. (CCI), operating as a real estate investment trust (REIT), specializes in communications infrastructure across the United States. Its extensive portfolio includes cell towers and fiber-optic networks that power small cell base stations in urban areas. By securing long-term leases with leading telecommunication companies, CCI ensures steady and reliable cash flows. This strategic approach places CCI as a key enabler of resilient and high-performance communication networks in 2024 and beyond.

Snapshot

Valuation Methods

DCF/EP: \$111.78
DDM: \$83.74
Relative Valuation Avg: \$91.6

Price Data

Current Price: \$103.80
52-Week Range: \$92.48 - \$120.92

Key Metrics

Market Capitalization (B): 45.111
Shares Outstanding (M): 434.0
Beta: 0.91
Forward P/E: \$33.67

Financial Overview

2023 Revenue (M) \$6,981
2024E Revenue (M) \$7,493
2023 Profit Margin 21.52%
2024E Profit Margin 26.78%

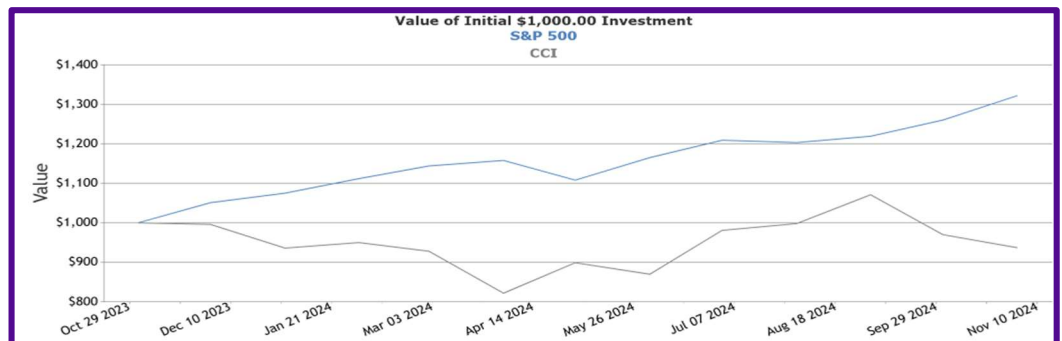
Financial Ratios (2024E)

Current Ratio .14
Debt to Equity 4.48
ROA 5.14%

Relative P/FFO

Relative FFO 2024E

\$7.00	\$13.30	\$10.50	\$1.09
CCI	SBAC	AMT	UNIT



Source: Alpha Vantage[®]

Executive Summary

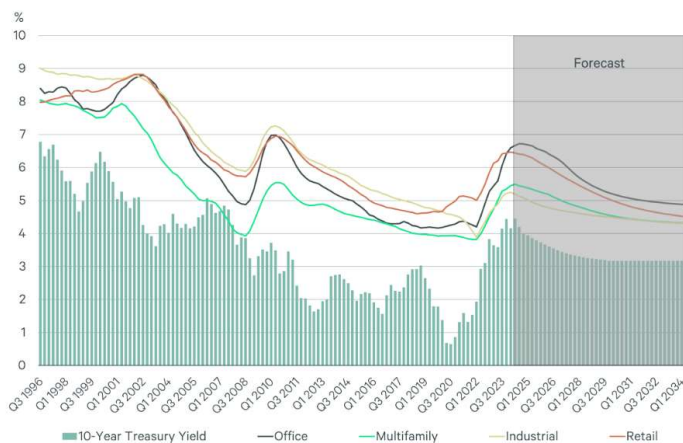
We suggest maintaining a HOLD rating for Crown Castle Inc. (CCI). This recommendation is grounded in the company's forward-thinking business strategy, stable revenue streams, and promising growth prospects. As a robust Real Estate Investment Trust (REIT), CCI strategically navigates the evolving communication infrastructure landscape, evidenced by its expansive network of cell towers and small cell supporting fiber strategically positioned near every major U.S. city. While potential risks include the loss of tenants through mergers and acquisitions and the impact of the current inflationary environment on borrowing costs, CCI's established position and adaptability do, to some extent, mitigate these concerns. Investors should exercise caution in the face of economic uncertainties but recognize CCI as a top choice within the communication infrastructure REIT sector for those seeking a stable, long-term investment.

Economic Analysis

Capitalization Rates and The Treasury Yield

The capitalization rate (cap rate) is an important indicator used to analyze the expected return on property investment by describing the relationship between the net operating income (NOI) of a property and its market value as of the current date, where $\text{Cap Rate (\%)} = \text{NOI} / \text{MV of Property}^1$. The 10-year U.S. Treasury bill (10-Y T-Bill) is considered a "risk-free" investment with a locked-in rate of return since it's unlikely the government is at risk of default. The interest rate or yield that the bond pays is important because, for many commercial real estate loans, the interest rate a firm pays is derived from the U.S. 10-Y Treasury Rate. Commercial real estate cap rates and the 10-Year Treasury are historically highly correlated.

Figure 3: Cap Rates & 10-Year Treasury Yields



Source: CBRE Econometric Advisors²

The cap rate/10-Y T-Bill spread is helpful to show the trade-off in returns investors are willing to accept for higher risk investments compared to a "risk-free" investment". From the graph we can observe that the spread between cap rate and 10-Y Treasury Yield is shrinking as we are leaving an

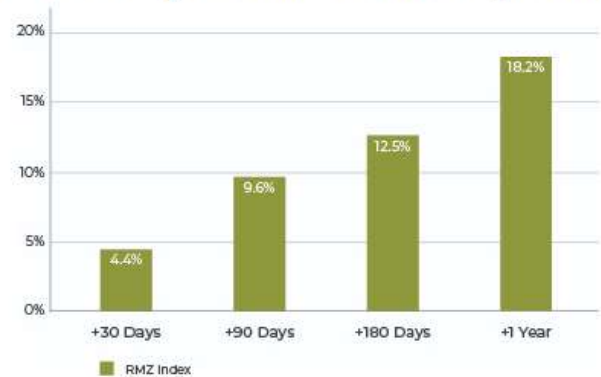
economic slowdown environment. The smaller spread creates a positive economic outlook for CCI as investment in their sector looks safer to investors.

Inflation

REITs can be viewed as a long-term inflation hedge because in periods of high inflation, capitalization rates have tended to reduce. REITs also provide protection against inflation through their ability to continue to increase revenue through rent repricing, as well as inflation-linked growth of their portfolio values, since replacement cost value increases display a strong correlation with inflation. Further, REITs are total return investments that offer high dividend returns, stable cash flow growth, and long-term price appreciation⁷.

Historically, following a Fed tightening cycle, like recently experienced when the Fed increased the Fed Funds Rate to discourage spending to curb inflation, REITs have returned 18.2% in the 12 months following.

RMZ Average Return - Post Fed Tightening



Source: Duff & Phelps, Factset, Evercore ISI Research⁷

CCI's position in the cell tower sector of REITs makes them particularly less sensitive to economic conditions from their long lease duration of cell towers compared to other sectors.



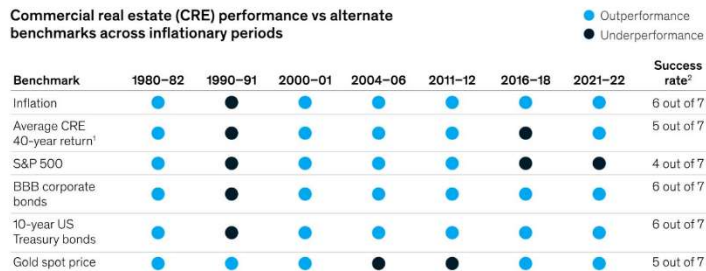
Source: Duff & Phelps Investment Management Co.⁷

Cell tower real estate's low economic sensitivity has allowed CCI to maintain a growth outlook of ~4.5% tower organic growth, 10% small cell organic growth, and higher-than anticipated non-recurring revenues for FY2024²⁹. Although communication infrastructure is resilient during economic tightening, a potential recession can delay new

capital projects and land acquisitions causing slower growth. However, as CCI has been able to maintain growth and the Fed has begun reducing the Fed Funds Rate in the tail-end of 2024, indicating the avoidance of a recession, CCI is further presented with a positive economic outlook to continue growing in the future.

Capital Markets Outlook

During seven inflationary periods, commercial real estate returns generally outperformed inflation, their own historic average, and other asset classes.



Source: Bloomberg; National Council of Real Estate Investment Fiduciaries Property Index; US Federal Reserve ¹¹

Historically, we can see that commercial real estate (CRE) returns generally outperformed inflation and broader investment benchmarks during inflationary periods. As the market recovers from its most recent tightening period, now could be a strong time to invest in REITs. As previously reported, REITs show high returns following Fed tightening periods, and as the Fed continues to incrementally cut the Fed Funds Rate, the REIT market could see an increase in demand and push the industry to outperform its peers.

REITs present an attractive opportunity to long-term investors looking to protect their purchasing power over time as the underlying asset can be an inflationary hedge and historic cash flow growth offers a high, consistent dividend yield.

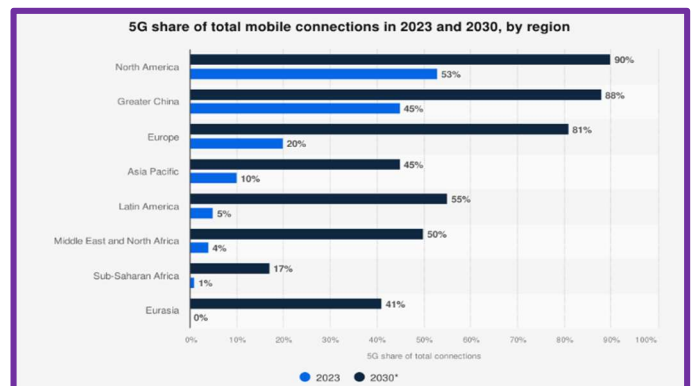
Industry Analysis

Industry Overview

In the landscape of real estate, Crown Castle International (CCI) stands out as a premier player within the niche sector of Telecom Tower Real Estate Investment Trusts (REITs). This specialized industry occupies a unique intersection of real estate and cutting-edge technology, where rapid transformation is fueled by the ever-expanding demand for wireless connectivity and the relentless pace of advancements in communication technologies. CCI plays a pivotal role in supporting the infrastructure that supports modern wireless networks, enabling innovations such as 5G, IoT (Internet of Things), and smart city solutions. As the global reliance on seamless and high-speed communication grows, CCI remains at the forefront, adapting its portfolio and strategies to meet the evolving needs of a digitally connected world.

Trends and Developments

The REITs industry, particularly within the telecom infrastructure space, is experiencing growth fueled by surging demand for wireless services. This trend is driven by increasing data consumption, propelled by the widespread adoption of necessary smartphones and the proliferation of data-intensive applications like streaming, gaming, and smart technologies. Emerging markets play a pivotal role in this expansion, as rising mobile penetration and digital access unlock new opportunities for growth. Advancements such as 5G and the Internet of Things (IoT) continue to revolutionize communication networks, driving the necessity for robust and scalable wireless infrastructure across the telecom REIT industry. Companies in this sector are meeting the challenge by focusing on network densification, expanding their portfolios of towers, small cells, and fiber assets to support the surging demand for high-speed, reliable connectivity. These efforts are particularly critical in urban and suburban areas, where data consumption and connectivity demands are highest. The below graph highlights the potential growth of 5G adoption worldwide, emphasizing the industry's essential role in facilitating this technological shift and reinforcing the strategic importance of ongoing infrastructure investments.



Source: Statista ⁹

Telecom REITs, as pivotal enablers of next-generation technologies, are positioning themselves to support a future defined by seamless connectivity and smart innovations. By aligning their strategies with global trends, such as the rising penetration of 5G and the expanding IoT ecosystem, these companies ensure their relevance in an evolving market. As the demand for wireless communication intensifies, the telecom REIT industry remains at the forefront of delivering the foundational infrastructure required to power digital transformation and global connectivity. CCI has positioned itself to capitalize on this trajectory by enhancing its portfolio of wireless infrastructure assets, including towers, small cells, and fiber networks. These investments align with wireless carriers' needs as they race to meet the skyrocketing demand for bandwidth and coverage.

Navigating Industry Growth Amid Shifts

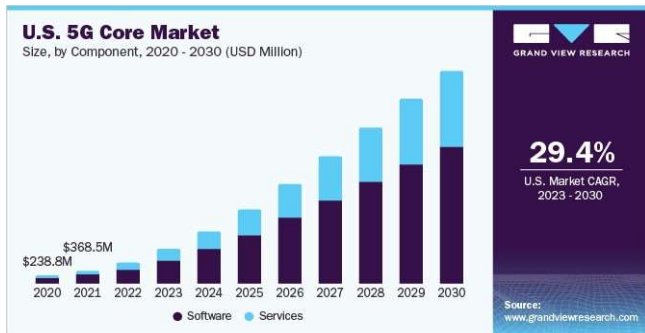
The telecommunications infrastructure sector has shown resilience and growth, expanding at a compounded annual growth rate (CAGR) of 0.2% beyond inflation, outpacing the U.S. economy to reach \$48 billion in 2024. The pandemic

reshaped industry priorities, driving increased demand for bandwidth in low-income residential areas and pushing operators to enhance infrastructure in urban and rural communities. The accelerated deployment of 5G technology, particularly its millimeter wave components, fueled revenue growth of 1.8% and maintained a profit margin of 7.2%, totaling \$3.5 billion in profit for 2024. Innovations in rooftop real estate, with micro-cell networks providing cost-effective urban coverage, and government initiatives like the NTIA's \$420 million funding for open radio units, have further bolstered the sector. Meanwhile, trends such as direct-to-satellite communication threaten traditional rural cell site operations, while smartphone adoption and property maintenance needs continue to drive wireless communication site demand.

The telecom REIT landscape is also shaped by shifting industry dynamics. Verizon's strategy of owning towers contrasts with competitors who rely heavily on leasing, though its sale of 6,000 towers in 2024 reflects a broader industry trend. The T-Mobile/Sprint merger significantly impacted cell tower REITs, reducing cash flow as redundant leases expired, but subsequent deals like T-Mobile's long-term agreement with American Tower and its acquisition of U.S. Cellular's assets for \$4.4 billion underscore continued opportunities for growth. Low-cost Mobile Virtual Network Operators (MVNOs) are emerging as influential players, creating a lucrative niche by leasing cell sites and unlocking 5G capabilities. Simultaneously, advancements in AI, drone technology, and 3D imaging are transforming construction and maintenance efficiency, further enhancing the industry's ability to adapt to growing connectivity demands and technological advancements.

Market CAGR

The below chart highlights a projected Compound Annual Growth Rate (CAGR) of 29.4% for the U.S. 5G core market, signaling rapid expansion in this sector. With Crown Castle operating exclusively within the United States and maintaining a dominant position in the market, this growth trend creates a highly advantageous landscape for the company to capitalize on the increasing demand for advanced wireless infrastructure.



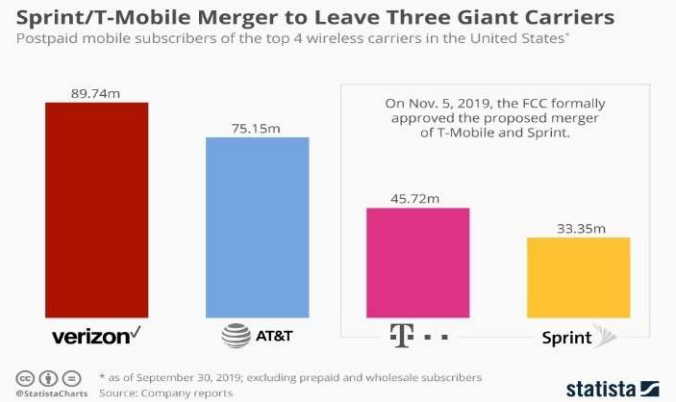
Source: Grand View Research²⁵

Managing Tenant Risk in the Evolving Telecom REITs Landscape

Tenant risk remains a significant challenge for Communication Infrastructure Real Estate Investment Trusts (REITs), and this issue has grown increasingly

relevant for Crown Castle in 2024.

With a concentrated client base of large-cap telecommunications providers, REITs face potential revenue disruptions stemming from industry mergers and consolidations. Such mergers, like the T-Mobile and Sprint union, enable the combined entities to streamline operations and reduce their reliance on multiple networks. This optimization often leads to decreased demand for tower leases, directly impacting REITs' rental income and overall valuations.



Source: Statista²⁶

The above graph showing the T-Mobile-Sprint merger shows the risks posed by such consolidations. Following their merger, the newly unified company significantly reduced its dependence on Crown Castle's towers, opting to consolidate operations on shared infrastructure. This shift not only left several CCI towers tenantless as a region could now be covered by one tower, but it also created the current "big 3" carriers which creates more risk of a possible merger. As the telecommunications landscape continues to evolve, REITs like Crown Castle must adapt by diversifying their tenant base or improving capability.

An Exploration into REIT Activities

The U.S. equity REIT landscape, including key players Crown Castle International (CCI), American Tower (AMT), SBA Communications (SBAC), and Uniti Group (UNIT), reflects the challenges of a slowed capital market. Within the Telecom Tower REIT sector, oligopolistic dynamics dominate, with the majority of cell towers concentrated among CCI, AMT, and SBAC. CCI's domestic-only focus contrasts with AMT's extensive international footprint, creating distinct revenue models and risk profiles. Meanwhile, SBAC maintains a leaner operational approach, emphasizing profitability through efficient asset management, and UNIT explores opportunities in fiber-optic infrastructure. This concentrated market structure fosters competition while compelling each REIT to prioritize growth through diversification, infrastructure expansion, and strategic leasing agreements to stay ahead in an evolving industry.

Cell Site Operation and Leasing Porter's Five Forces

Barriers to Entry: Moderate/Increasing

New entrants face significant legal barriers when entering the industry as they must comply with a variety of state and local regulations on environmental compliance and telecommunication laws. Further, start-up costs to purchase land, construct the cell site, and hire employees for construction and maintenance present another high barrier for new entrants, so the threat of new entrants to this industry is low ³⁴.

Threat of Substitutes: Moderate/Steady

Wi-Fi Networks are a direct substitute that provides an alternative data connectivity and may offer competitive pricing to cellular services. Wireless telecommunication carriers can have carrier-owned towers which directly compete with cell site leasing companies like CCI. Cell site leasing firms can promote their advantage of handling maintenance and site management for carriers, and CCI has made growth YoY handling cell sites for major carriers like Verizon and AT&T³⁴.

Bargaining Power of Buyers: High/Steady

The regulatory landscape influences buyer power which impacts existing operators' ability to acquire additional cell sites for growth. Operators can face higher compliance costs with new regulations making it more difficult to lease a larger number of cell sites ³⁴.

Bargaining Power of Suppliers: Moderate/Increasing

Larger economies impact supplier power as they favor more-established operators that can leverage this trend to lower operating costs. Further, favorable economies of scale are beneficial to major telecommunication providers because costs are lower and carriers are able to achieve greater coverage from a single deal ³⁴.

Market Share Concentration: Low

Low concentration indicates that the industry's top 4 companies account for less than or equal to 40% of revenue, where CCI currently occupies 13.5% of the market. The prevalence of smaller cell site operators, which make up ~70% of the market, makes it difficult for existing operators to capture a larger market share. Cell sites are primarily localized near highly populated areas which allows for smaller operators to acquire larger numbers of cell sites. Existing operators face significant operating costs which limit opportunities for growth and encourage capturing niche market areas of operation.

Competitive Analysis

Overview

Crown Castle International Inc. operates in the highly competitive wireless tower industry, facing significant competition from key players such as American Tower Corporation (AMT), SBA Communications Corporation

(SBAC), and Uniti Group (UNIT). This analysis explores the competitive dynamics within the sector, comparing the business models, growth strategies, and operational approaches of these major players, highlighting how each company navigates challenges and leverages opportunities to strengthen its position in the market.

Relevant CCI Competitors Summaries:

American Tower (AMT)

American Tower Corporation is a dominant global player in the wireless communication infrastructure sector, with an extensive portfolio of over 220,000 communication sites spanning 25 countries. This positions AMT as a significant competitor with a strong international presence, allowing it to capitalize on growth opportunities in emerging markets, particularly in regions like Africa and Oceania. AMT's expansive reach, combined with its substantial number of towers, makes it a key partner for wireless carriers, broadcasters, and government entities, enabling it to maintain a competitive edge through its diverse geographic footprint.

SBA Communications (SBAC)

SBA Communications Corporation has carved out a strong presence in the wireless infrastructure industry, particularly in the U.S. and globally. With a portfolio of over 28,000 communication towers across 15 countries, SBA has strategically expanded its operations internationally, focusing on regions with growing demand for wireless connectivity. SBA's business model is heavily centered on the ownership and operation of cell towers, making it a critical player in the infrastructure needs of wireless carriers. Its ongoing international expansion, especially in Africa, underscores the company's growth strategy in high-demand markets.

Uniti Group (UNIT)

Uniti Group Inc. is a telecommunications REIT that specializes in acquiring and managing communication infrastructure, particularly fiber optic networks and cell towers. Unlike other players in the market, UNIT's strategy focuses on acquiring existing infrastructure rather than building new sites, which provides a more immediate return on investment. With a portfolio that includes fiber networks and towers, Uniti Group plays an essential role in expanding broadband access and supporting the growing demand for high-speed internet and wireless services, particularly in underserved and rural areas.

Peer Comparisons:

Operational Comparison:

Company	Employees	Number of Towers	Countries Operating In	Route Miles of Fiber
Crown Castle	4,700	40k+	1	90k+
SBA Comm Corp	1,787	28k+	15	43k+
American Tower Corp	5,643	220k+	25	130k+
Uniti Group Inc	813	850+	1	144k+

Source: Uniti Group¹² CCI²³ GuruFocus^{27 & 28}

When comparing Crown Castle (CCI) to its competitors operationally, CCI stands out with a unique emphasis on fiber infrastructure, boasting over 90,000 miles of fiber compared to its tower count of over 40,000. While American Tower (AMT) leads in both tower quantity and international presence, with operations in 25 countries and 220,000 towers, CCI remains focused solely on the U.S. market. SBA Communications (SBAC) has a significant international footprint in 15 countries with 28,000 towers, while Uniti Group (UNIT), though smaller in tower count with just over 800 sites, excels in fiber, managing 144,000 route miles. CCI's strategy of prioritizing fiber infrastructure in the U.S. sets it apart from these competitors, who are more tower-centric and internationally focused.

Financial Comparisons:

Company	Stock Price	Market Cap	EPS
Crown Castle	103.80	45.45B	3.46
SBA Comm Corp	221.61	23.83B	2.25
American Tower Corp	198.84	92.92B	0.89
Uniti Group Inc	5.70	1.36B	0.42

Source: Uniti Group¹² CCI²³ GuruFocus^{27 & 28}

Market Capitalization Comparison

The primary competitors that could influence Crown Castle's (CCI) ongoing success in the REIT communications industry are SBA Communications (SBAC), American Tower Corporation (AMT), and, to a lesser extent, Uniti Group (UNIT). While Crown Castle has the second-largest market cap among communication infrastructure REITs, American Tower holds the largest due

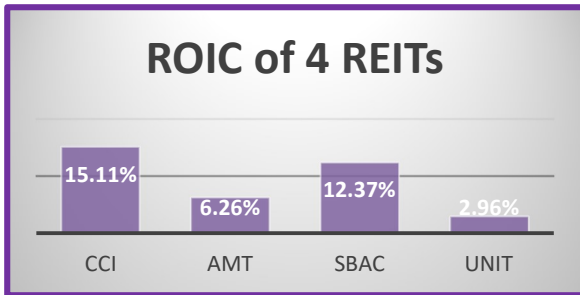
to its extensive global presence, whereas CCI has remained focused exclusively on the U.S. market. This strategic decision allows CCI to avoid the complexities of international regulations and concentrate on dominating the domestic sector. In comparison, AMT's international footprint gives it broader diversification but at the cost of higher operational complexity. Despite CCI's strong domestic focus, there remains potential for growth by revisiting international expansion once its position in the U.S. market is more secure.

EPS Comparison

In terms of Earnings Per Share (EPS), Crown Castle (CCI) reported an EPS of 0.80, which is relatively modest compared to its competitors. American Tower Corporation (AMT) has a slightly higher EPS of 0.89, reflecting its larger market presence and diversified international operations. SBA Communications (SBAC) outpaces both with an EPS of 2.25, indicating strong profitability despite a smaller market cap. On the other hand, Uniti Group (UNIT) has a lower EPS of 0.42, which aligns with its smaller scale and focuses on acquiring existing infrastructure rather than expanding operations. While CCI's EPS is competitive, it lags behind SBAC and AMT, reflecting its strategic focus on fiber infrastructure and the challenges of its domestic-only model.

Return on Invested Capital (ROIC) Comparison

Return on Invested Capital (ROIC) is a key metric for evaluating how effectively a company allocates its capital to profitable investments. A higher ROIC indicates better capital management. Crown Castle (CCI) boasts a strong ROIC of 15.11%, significantly outperforming its competitors like American Tower Corporation (AMT), which has an ROIC of 6.26%, and Uniti Group (UNIT), with an ROIC of just 2.96%. While SBA Communications (SBAC) has a solid ROIC of 12.37%, CCI's performance stands out, particularly given its focus on domestic operations and fiber infrastructure. CCI's higher ROIC relative to its market cap reflects strong capital management, and by expanding its fiber-optic solutions or exploring international opportunities, it could further enhance its ROIC and compete more closely with AMT.



Source: Uniti Group¹² GuruFocus^{27 & 28}

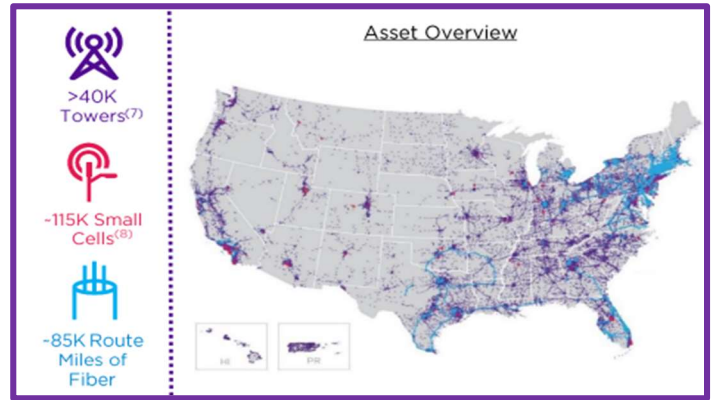
Company Analysis

Company Description

Crown Castle International Corp. (CCI), based in Houston, TX, is a leading real estate investment trust (REIT) specializing in communication infrastructure. As one of the largest infrastructure providers in the U.S., CCI owns, operates, and leases a vast portfolio of telecommunications assets. The company primarily focuses on owning over 40,000 cell towers, more than 115,000 small cell sites, and maintaining an expansive fiber-optic network stretching across 90,000 miles. CCI's infrastructure is strategically located in high-demand areas, particularly in dense urban regions, to support the growing demand for wireless communication services.

Crown Castle's business model is built around long-term leasing agreements with major telecommunications companies such as T-Mobile, AT&T, and Verizon Wireless, ensuring stable and predictable cash flows. The company's ability to secure reliable tenants and offer cutting-edge solutions—such as fiber optics for small cell base stations—positions it as a key player in the telecom industry. By focusing on dense metropolitan areas and prioritizing high-demand locations, CCI capitalizes on its ability to provide reliable and scalable communication networks. The company's continued investment in its portfolio and its commitment to expanding fiber-optic solutions and small cell sites further enhances its position in the market, offering consistent revenue generation and growth opportunities for the future. Through these strategic initiatives, Crown Castle remains a cornerstone in the evolving telecom infrastructure landscape,

facilitating the next generation of wireless technologies and connectivity.



Source: CCI Third Quarter 2024 Earnings Conference Call²⁹

The map above provides a recent overview of CCI's extensive network, highlighting its small cells, towers, and fiber-optic solutions across the United States. It clearly demonstrates Crown Castle's strong presence, particularly in densely populated urban regions where demand for robust communication infrastructure is highest.

SWOT Analysis

Crown Castle has notable strengths, including its extensive portfolio of cell towers and fiber networks, which position it well to benefit from the growing demand for 5G and data connectivity. Its long-term contracts with major wireless carriers provide consistent revenue streams, and its focus on small cell deployments aligns with future network densification needs. However, the company faces weaknesses such as high capital expenditure for network expansion and potential over-reliance on a few large customers, which could pose revenue risks. Opportunities abound in the accelerating 5G rollout, increasing demand for fiber networks, and potential growth in IoT and edge computing markets. Conversely, Crown Castle must navigate threats like regulatory changes, rising interest rates that could impact its REIT structure, and competition from other tower and infrastructure providers, which may limit market share expansion.

Company Objectives

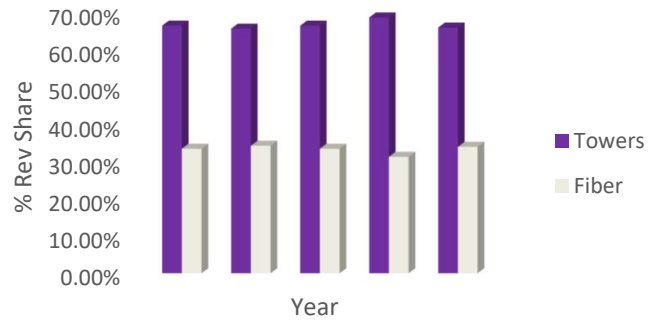
Crown Castle International (CCI) has established a robust strategy centered around organic growth, with a strong focus on fostering sustainable long-term value for its shareholders. The company is committed to increasing its dividend per share annually, typically within the range of 7% to 8% growth. This emphasis on a reliable and competitive dividend return not only attracts and retains investors but also ensures a consistent and predictable income stream, providing financial stability for CCI. This stable income foundation is crucial as the company continues to invest in its expansive portfolio of over 40,000 towers and 90,000 miles of high-capacity fiber.

CCI's growth strategy extends beyond dividends, focusing on the organic expansion of its existing assets. Through strategic leasing and portfolio optimization, CCI seeks to maximize the value of its infrastructure and maintain a competitive edge in the market. The combination of strong dividend growth and ongoing investment in its infrastructure portfolio reflects CCI's commitment to enhancing shareholder value while positioning itself for continued success in the dynamic communications infrastructure industry. By balancing consistent returns with strategic portfolio development, Crown Castle ensures that it remains well-positioned for sustainable growth and long-term financial health.

Revenue Discussion

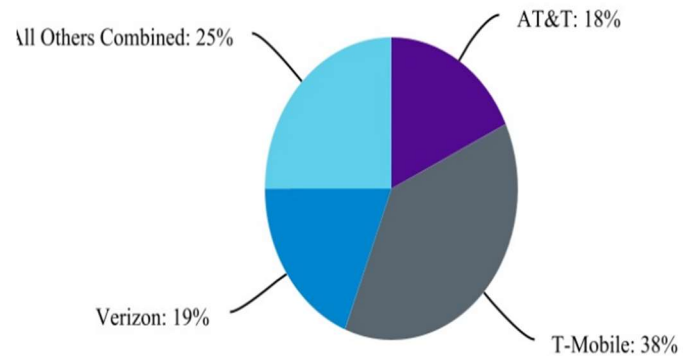
CCI's operational structure is split into two key segments: towers and fiber; CCI operates solely in the United States. Pertaining to both segments, site rental revenues account for 94% of revenues whereas services and other account for 6%. The towers segment, historically CCI's largest revenue generator accounts for 67.8% of total revenues. As of 2023, the tower segment operated with a sizeable portfolio of 115,000 towers under contract. Revenue streams through the towers segment prove to be exceedingly stable as the majority are under long term contract (5-20 Years) providing recurring monthly and upfront payments. On the other hand, the fiber segment, which represents 32.2% of revenues, has become a focal point of growth to meet strong demand for connectivity following the introduction of 5G. Growth of the fiber segment has come primarily through acquisition, most notably being CCI's largest acquisition to date of NextEra subsidiaries in 2017. Through these strategic acquisitions, as of 2023 the fiber segment contains fiber assets of 90,000 route miles.

CCI Revenue Segment Breakdown



Furthermore, Crown Castle derives $\frac{3}{4}$ of site rental revenues from three major tenants, AT&T, Verizon, and T-Mobile. A majority of towers come through acquisitions from these companies dating back to 1999. 31% and 22% of Crown Castle's towers are subleased, leased, or managed with T-Mobile and AT&T respectively.

Site Rental Revenues by Tenant



Source: CCI 10K 2023 30

Revenue Forecasts

Crown Castles revenue FY 2023 came in at \$6.98 billion, as the demand for connectivity increases through 5G and AI innovation, we forecast revenues to grow at an average growth rate of 6.88% through 2029. Management stated they have a strong focus on increasing tower share and improving operations. Looking specifically at the tower segment, we forecast revenue per tower to grow at a rate between 6-7% yoy based on average historical growth rates coupled with managements expedited efforts to optimize tower share. With that said, along with forecasted number of tower growth rates of 50 basis points per year, we are forecasting tower revenues to grow at an average rate of 7.10%.

Regarding the fiber segment, we forecast revenue per mile of fiber to take a slight hit in 2024 due to industry demand, however, due to increasing demand for connectivity, we expect it to steadily increase at an average rate of 5.07% beginning in 2025. While 5G drives fiber demand, we expect CCI to engage in further

acquisitions adding to fiber assets at a rate of 2% per year due to demand and historical additions. Through those assumptions, we expect fiber revenues to increase at an average of 7.11%, slightly outpacing tower revenues.

Expense Analysis

For the year-end 2023, Crown Castle reported total operating expenses of \$4.61 billion. Of that, the largest cost being costs of site rental operations reported at \$1.66 billion FY 2023. Other structurally important costs include costs of services, selling general and administrative expenses and depreciation, amortization & accretion costs.

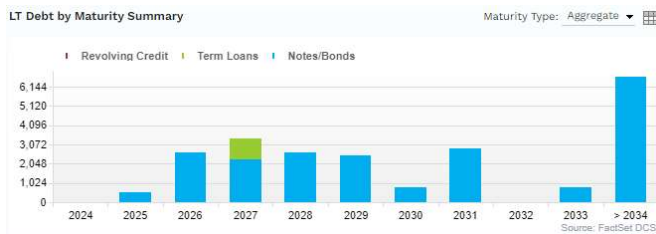
Interest expenses FY 2024 are projected to be \$78-123 million higher than FY 2023 due to additional debt financing for discretionary capital expenditures. With that, discretionary capital expenditures for 2024 are expected to be \$1.2- \$1.3 billion, with \$1.1 billion in the fiber segment and \$180 million in the towers segment.

As inflationary pressure continues to loom, driving up costs of operations, paired with inflation adjusted expected revenue growth rates of ~4%, we expect operating profit margins to increase in 2024 then steadily decline for the near future. Historically, profit margins have held in the range of 33-35% and we expect margins to slowly decline by ~0.5% per year following 2024 for an average 5Y margin of 33%.

Debt

As of September 30, 2024, CCI reported \$611 million in short term debt and \$23.452 billion in long term debt, putting Crown Castles total debt position at \$24.063 billion. S&P currently rates CCI's long term debt at BBB, positioning their debt securities as investment grade. Considering stable revenue forecasts through strong, predictable revenue streams, we assume CCI continues to maintain stability in turn, LT debt will continue to be rated as an investment grade security.

In terms of maturity, about 44% of LT notes/bonds have maturity dates > 2034 while the other 56% being spread throughout the next 9 years. With the majority of debt having greater than 10-year maturities, CCI will continue to boast strong financial standing throughout our forecast period.



While the current treasury yield curve stands inverted, meaning the short-term end of the curve yields higher than the long-term maturing bonds, CCI continues to offer higher yields to longer term holdings, highlighting increased risk. Currently, Crown Castles 10-year bond yields a noteworthy 5.55% whereas the AAA rated US treasury bonds yield 4.44% for the same 10-year maturity. Looking at the short-term end of the yield curve, it is seen that Crown Castle yields 5.04% while the treasury yields 4.48% for their 6-month maturity. See "issuer credit curve" to compare yield.



Source: Factset 33

Cash Usage

Crown Castle employs their cash through two primary channels, debt repayment and dividend payouts. Deriving from their strong debt position, a large majority of cash goes toward debt servicing. In specific, FY 2023, CCI allocated 68.33% of total cash usage to debt servicing. Moreover, in 2023, CCI issued ~\$7 billion worth of debt and has historically issued debt in the range of \$5-7 billion YOY for the past five years. As a real estate company, CCI will continue to maintain a strong debt position and will therefore continue to heavily allocate cash to debt servicing as they have in the past.

On the other hand, Crown Castle utilizes the remaining portion of cash usage to return value to shareholders in the form of a dividend. Currently, Crown Castles offers a dividend yield of 6.03% pertaining to common shares, they have not paid a preferred dividend for the past 3 years. Dividends paid have increased every year for the past 10 years and we therefore are projecting dividends to increase steadily over the next five years. Of the \$8.6 billion of cash used in 2023, dividends paid to common stock shareholders amounted to \$2.72 billion.

In this table, we tested the impact of changing CCI's pre-tax cost of debt and revenue growth per mile of fiber on the share price. As the pre-tax cost of debt increases, the share price decreases across all revenue per mile of fiber estimates. This occurs because higher debt costs reduce net income and overall valuation. This table displays that CCI's share price is particularly dependent on maintaining low financing costs because increases hurt its value.

CV Growth of NOPLAT vs. WACC

CV Growth of NOPLAT	WACC							
	111.78	6.44%	6.64%	6.84%	7.04%	7.24%	7.44%	7.64%
2.45%	121.18	112.67	104.94	97.87	91.38	85.41	79.90	
2.50%	122.76	114.08	106.19	98.99	92.39	86.33	80.73	
2.55%	124.37	115.51	107.47	100.14	93.43	87.26	81.58	
3.00%	141.03	130.21	120.51	111.77	103.84	96.62	90.02	
3.05%	143.15	132.07	122.15	113.22	105.13	97.78	91.06	
3.10%	145.33	133.98	123.83	114.71	106.46	98.97	92.13	
3.15%	147.59	135.95	125.56	116.24	107.82	100.18	93.21	

In this table, we tested the impact of changing CCI's CV growth rate of NOPLAT and WACC on the share price. When the CV growth of NOPLAT is high, and WACC is low, share price is at its highest level in the table. Higher growth in NOPLAT improves LT profitability which boosts the share price's valuation, while a higher WACC indicates higher required returns by investors which reduces the present value of future cash flows.

Revenue Per Tower vs. Risk-Free Rate

Revenue Per Tower	Risk Free Rate							
	111.78	4.16%	4.20%	4.24%	4.28%	4.32%	4.36%	4.40%
9.28%	117.96	116.28	114.63	113.01	111.43	109.87	108.35	
9.78%	118.46	116.77	115.12	113.49	111.90	110.34	108.81	
10.28%	118.97	117.27	115.61	113.98	112.38	110.81	109.27	
10.78%	119.47	117.76	116.09	114.46	112.85	111.28	109.73	
11.28%	119.97	118.26	116.58	114.94	113.33	111.74	110.19	
11.78%	120.47	118.75	117.07	115.42	113.80	112.21	110.65	
12.28%	120.97	119.25	117.56	115.90	114.27	112.68	111.11	

In this table, we tested the impact of changing CCI's risk-

free rate and revenue growth per tower on the share price. As the risk-free rate rises, share price declines despite revenue per tower increasing. This occurs because of the higher discount rate applied to future cash flows when the risk-free rate increases which reduces the present value of CCI's projected earnings.

Beta vs. Equity Risk Premium

Beta	Equity Risk Premium							
	111.78	4.30%	4.40%	4.50%	4.60%	4.70%	4.80%	4.90%
0.69	130.57	128.68	126.84	125.03	123.26	121.52	119.82	
0.71	128.23	126.34	124.49	122.68	120.90	119.17	117.46	
0.76	122.63	120.73	118.87	117.06	115.28	113.54	111.83	
0.81	117.37	115.46	113.60	111.78	110.00	108.26	106.55	
0.86	112.41	110.50	108.64	106.82	105.05	103.30	101.60	
0.91	107.73	105.83	103.97	102.15	100.38	98.64	96.94	
0.96	103.30	101.41	99.55	97.74	95.97	94.25	92.56	

In this table, we tested the impact of changing CCI's beta and equity risk premium on the share price. We can observe that for increases in beta and equity risk premium, the result is a lower share price. Higher beta indicates higher market risk, while higher equity risk premium increases the required rate of return on equity which both reduce the present value of future cash flows. We can also observe how the share price is sensitive to higher perceived risk factors by investors.

Marginal Tax Rate vs. Dividend Yield

Marginal Tax Rate	Dividend Yield							
	111.78	3.98%	4.48%	4.98%	5.48%	5.98%	6.48%	6.98%
0.70%	113.62	113.13	112.65	112.17	111.68	111.20	110.71	
0.80%	113.49	113.01	112.52	112.04	111.55	111.07	110.59	
0.90%	113.36	112.88	112.39	111.91	111.43	110.94	110.46	
1.00%	113.23	112.75	112.27	111.78	111.30	110.82	110.33	
1.10%	113.10	112.62	112.14	111.66	111.17	110.69	110.21	
1.20%	112.97	112.49	112.01	111.53	111.05	110.56	110.08	
1.30%	112.84	112.36	111.88	111.40	110.92	110.44	109.95	

In this table, we tested the impact of changing CCI's marginal tax rate and dividend yield on the share price. The share price has an inverse relationship with the marginal tax rate as higher marginal tax rate reduces net income and free cash flow available for dividends or reinvestment. Similarly, as the dividend yield increases, share price declines because when a dividend is issued, the number of shares outstanding increases while the firm's value remains the same which dilutes the book value per share and causes the stock price to drop.

Conclusion

In conclusion, we recommend a HOLD rating for Crown Castle Inc. (CCI) as its solid foundation in communications infrastructure and strategic focus on urban 5G deployment position the company for steady, albeit limited, growth. The stability provided by long-term lease agreements with major telecommunications companies and its leadership in small cell technology underscore its resilience in the sector. However, the high-interest rate environment, tenant concentration risk, and competitive and regulatory pressures temper its upside potential. Investors should monitor how CCI navigates these challenges while leveraging its strengths, maintaining a cautious outlook until clearer growth catalysts emerge.

Important Disclaimer

This report was created by students enrolled in the FIN:4250 Applied Equity Valuation class at the University of Iowa. The report was originally created to offer an internal investment recommendation for the University of Iowa Krause Fund and its advisory board. The report also provides potential employers and other interested parties an example of the students' skills, knowledge and abilities. Members of the Krause Fund are not registered investment advisors, brokers or officially licensed financial professionals. The investment advice contained in this report does not represent an offer or solicitation to buy or sell any of the securities mentioned. Unless otherwise noted, facts and figures included in this report are from publicly available sources. This report is not a complete compilation of data, and its accuracy is not guaranteed. From time to time, the University of Iowa, its faculty, staff, students, or the Krause Fund may hold a financial interest in the companies mentioned in this report.

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Crown Castle Inc.
Income Statement
Scale (Millions)

Fiscal Years Ending Dec. 31

	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E
Net revenues:											
Site rental revenues	5,093	5,320	5,719	6,289	6,532	6,978	7,456	8,000	8,567	9,177	9,858
Services & other revenues	670	520	621	697	449	515	553	545	562	528	547
Net revenues	5,763	5,840	6,340	6,986	6,981	7,493	8,009	8,545	9,129	9,705	10,405
Operating expenses:											
Costs of site rental operations	1,462	1,521	1,554	1,602	1,664	1,712	1,830	1,963	2,102	2,252	2,419
Costs of services & other operations	524	448	439	466	316	352	391	429	468	505	543
Selling, general & administrative expenses	614	678	680	750	759	695	875	933	997	1,060	1,136
Restructuring charges (credit)	0	0	0	0	85	0	0	0	0	0	0
Asset write-down charges	19	74	21	34	33	43	46	49	53	56	60
Acquisition & integration costs	13	10	1	2	1	7	7	8	8	9	9
Depreciation, amortization & accretion	1,572	1,608	1,644	1,707	1,754	1,892	2,041	2,202	2,375	2,562	2,764
Total operating expenses	4,204	4,339	4,339	4,561	4,612	4,701	5,189	5,583	6,003	6,443	6,931
Other operating expense (income)	0	(362)	0	0	0	0	0	0	0	0	0
Operating income (loss)	1,559	1,863	2,001	2,425	2,369	2,792	2,820	2,961	3,126	3,262	3,474
Interest expense and amortization of deferred financing costs	(683)	(689)	(657)	(699)	(850)	(888)	(846)	(828)	(805)	(777)	(745)
Gains (losses) on retirement of long-term obligations	(2)	(95)	(145)	(28)	0	0	0	0	0	0	0
Interest income	6	2	1	3	15	12	12	20	38	67	108
Other income (loss)	1	(5)	(21)	(10)	(6)	0	0	0	0	0	0
Income (loss) from continuing operations before income taxes	881	1,076	1,179	1,691	1,528	1,915	1,986	2,154	2,359	2,552	2,837
Benefit (provision) for income taxes	(21)	(20)	(21)	(16)	(26)	(32)	(32)	(33)	(34)	(36)	(37)
Income (loss) from continuing operations	860	1,056	1,158	1,675	1,502	1,883	1,954	2,121	2,325	2,516	2,799
Discontinued operations:											
Income (loss) from discontinued operations, net of taxes	0	0	(62)	0	0	0	0	0	0	0	0
Net income (loss) attributable to Crown Castle Inc. stockholders	860	1,056	1,096	1,675	1,502	1,883	1,954	2,121	2,325	2,516	2,799
Dividends or distributions on preferred stock	(113)	(57)	0	0	0	0	0	0	0	0	0
Net income (loss) attributable to Crown Castle Inc. common stockholders	747	999	1,096	1,675	1,502	1,883	1,954	2,121	2,325	2,516	2,799
Net income (loss)	860	1,056	1,096	1,675	1,502	1,883	1,954	2,121	2,325	2,516	2,799
Basic EPS (EPS)	1.80	2.36	2.54	3.87	3.46	2.89	3.00	3.26	3.57	3.87	4.30
Total Shares Outstanding (basic)	416	431	432	433	434	434	434	434	434	434	434
Weighted Average Shares Outstanding (basic)	416	423	432	433	434	434	434	434	434	434	434
Dividends per share	4.58	4.93	5.46	5.98	6.26	6.30	6.33	6.36	6.40	6.45	6.50

Crown Castle Inc.

Balance Sheet

Scale (Millions)

<i>Fiscal Years Ending Dec. 31</i>	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E
Current assets:											
Cash & cash equivalents	196	232	292	156	105	112	293	718	1,385	2,363	3,865
Restricted cash	137	144	169	166	171	178	186	194	202	210	219
Accounts receivable	596	431	543	593	481	516	552	589	629	669	717
Prepaid expenses	107	95	105	102	103	111	118	126	135	143	154
Deferred site rental receivables	0	0	0	127	0	0	0	0	0	0	0
Other current assets	168	202	145	73	56	58	60	63	65	68	70
Current portion of deferred site rental receivables	0	0	0	0	116	0	0	0	0	0	0
Total current assets	1,204	1,104	1,254	1,217	1,032	975	1,209	1,689	2,415	3,453	5,025
Deferred site rental receivables	1,424	1,408	1,588	1,954	2,239	2,403	2,569	2,740	2,928	3,113	3,337
Total gross property & equipment	24,334	25,965	27,206	28,478	29,945	30,843	31,769	32,722	33,703	34,714	35,756
Less: accumulated depreciation - property & equipment	9,668	10,803	11,937	13,071	14,279	16,171	18,212	20,414	22,789	25,351	28,114
Property & equipment, net	14,666	15,162	15,269	15,407	15,666	14,672	13,557	12,308	10,915	9,364	7,641
Operating lease right-of-use assets	6,133	6,464	6,682	6,526	6,187	5,795	5,354	4,861	4,310	3,698	3,018
Goodwill	10,078	10,078	10,078	10,085	10,085	10,085	10,085	10,085	10,085	10,085	10,085
Site rental contracts & tenant relationships, net	4,764	4,365	3,982	3,535	3,122	3,351	3,587	3,840	4,111	4,401	4,711
Other intangible assets, net	72	68	64	61	57	57	58	58	59	59	59
Other assets, net	116	119	123	136	139	144	150	156	162	168	175
Total assets	38,457	38,768	39,040	38,921	38,527	37,483	36,569	35,737	34,985	34,340	34,051
Current Liabilities:											
Accounts payable	334	230	246	236	252	309	330	352	376	400	429
Accrued interest	169	199	182	183	219	224	240	250	268	290	308
Deferred revenues	657	704	776	736	605	817	866	907	944	1,000	1,100
Other accrued liabilities	361	378	401	407	342	446	477	509	544	578	620
Current maturities of debt & other obligations	100	129	72	819	835	873	850	815	705	581	602
Current portion of operating lease liabilities	299	329	349	350	332	570	557	548	542	540	517
Total current liabilities	1,920	1,969	2,026	2,731	2,585	3,238	3,320	3,381	3,379	3,389	3,576
Debt & other long-term obligations	18,021	19,151	20,557	20,910	22,086	20,270	19,669	18,980	18,202	17,313	16,332
Operating lease liabilities	5,511	5,808	6,031	5,881	5,561	5,215	4,818	4,375	3,879	3,328	2,716
Other long-term liabilities	2,516	2,379	2,168	1,950	1,914	2,316	2,152	2,024	1,942	1,899	1,872
Total liabilities	27,968	29,307	30,782	31,472	32,146	31,039	29,959	28,760	27,402	25,929	24,496
Stockholders' equity:											
Common stock and additional paid-in capital	17,859	17,937	18,015	18,120	18,274	19,188	20,147	21,154	22,212	23,323	24,489
Accumulated other comprehensive income (loss)	(5)	(4)	(4)	(5)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Dividends or distributions in excess of earnings	(7,365)	(8,472)	(9,753)	(10,666)	(11,889)	(12,740)	(13,533)	(14,173)	(14,625)	(14,908)	(14,930)
Total equity	10,489	9,461	8,258	7,449	6,381	6,444	6,610	6,977	7,582	8,410	9,555
Total liabilities & equity	38,457	38,768	39,040	38,921	38,527	37,483	36,568	35,737	34,984	34,340	34,051

Crown Castle Inc.*Historical Cash Flow Statement*

Scale (Millions)

<i>Fiscal Years Ending Dec. 31</i>	2019	2020	2021	2022	2023
Cash flows from operating activities:					
Net income (loss) from continuing operations	860	1,056	1,158	1,675	1,502
Adjustments to reconcile income (loss) from continuing operations to net cash provided by (used for) operating activities:					
Depreciation, amortization & accretion	1,572	1,608	1,644	1,707	1,754
Losses (gains) on retirement of long-term obligations	2	95	145	28	0
Amortization of deferred financing costs & other non-cash interest, net	1	6	13	17	29
Stock-based compensation expense	117	138	129	156	157
Asset write-down charges	19	74	21	34	33
Deferred income tax provision (benefit)	2	3	4	3	8
Other non-cash adjustments, net	(2)	5	21	5	14
Changes in assets and liabilities, excluding the effects of acquisitions:					
Increase (decrease) in accrued interest	21	31	(17)	0	36
Increase (decrease) in accounts payable	19	(77)	15	(5)	(14)
Increase (decrease) in other liabilities	254	(65)	(118)	(281)	(265)
Decrease (increase) in receivables	(96)	166	(113)	(49)	115
Decrease (increase) other assets	(71)	15	(113)	(412)	(243)
Net cash flows from operating activities	2,698	3,055	2,789	2,878	3,126
Cash flows from investing activities:					
Capital expenditures	(2,057)	(1,624)	(1,229)	(1,310)	(1,424)
Payments for acquisitions, net of cash acquired	(17)	(107)	(111)	(35)	(96)
Other investing activities, net	(7)	(10)	8	(7)	1
Net cash flows from investing activities	(2,081)	(1,741)	(1,332)	(1,352)	(1,519)
Cash flows from financing activities:					
Proceeds from issuance of long-term debt	1,894	3,733	3,985	748	3,843
Principal payments on debt & other long-term obligations	(86)	(105)	(1,076)	(74)	(79)
Purchases & redemptions of long-term debt	(12)	(2,490)	(2,089)	(1,274)	(750)
Borrowings under revolving credit facility	2,110	2,430	1,245	3,495	3,613
Payments under revolving credit facility	(2,660)	(2,665)	(870)	(2,855)	(4,248)
Net issuances (repayments) under commercial paper program	155	130	(20)	976	(1,241)
Payments for financing costs	(24)	(38)	(42)	(14)	(39)
Purchases of common stock	(44)	(76)	(70)	(65)	(30)
Dividends or distributions paid on common stock	(1,912)	(2,105)	(2,373)	(2,602)	(2,723)
Dividends or distributions paid on preferred stock	(113)	(85)	0	0	0
Net cash flows from financing activities	(692)	(1,271)	(1,310)	(1,665)	(1,654)
Net increase (decrease) in cash, cash equivalents, & restricted cash	(75)	43	147	(139)	(47)
Discontinued operations:					
Net increase (decrease) in cash, cash equivalents, & restricted cash - discontinued operations	0	0	(62)	0	0
Effect of exchange rate changes on cash	0	0	0	0	1
Cash, cash equivalents, & restricted cash at beginning of period	413	338	381	466	327
Cash, cash equivalents, & restricted cash at end of period	338	381	466	327	281

Crown Castle Inc.

Forecasted Cash Flow Statement

<i>Fiscal Years Ending Dec. 31</i>	2024E	2025E	2026E	2027E	2028E	2029E
Cash flows from operating activities:						
Net income	1,883	1,954	2,121	2,325	2,516	2,799
Changes in working capital						
Depreciation, amortization & accretion	1,892	2,041	2,202	2,375	2,562	2,764
Changes in assets and liabilities, excluding the effects of acquisitions:						
Accounts receivable, net	(35)	(36)	(37)	(40)	(40)	(48)
Prepaid expenses	(8)	(8)	(8)	(9)	(9)	(10)
Deferred site rental recivables	0	0	0	0	0	0
Other current assets	(2)	(2)	(2)	(2)	(3)	(3)
Accounts payable	57	21	22	24	24	29
Accrued interest	5	16	10	18	22	18
Deferred site rental receivables	(164)	(165)	(172)	(187)	(185)	(224)
Deferred revenues	212	49	41	37	56	100
Operating lease liabilities	(346)	(397)	(444)	(495)	(551)	(612)
Current portion of deferred site rental receivables	116	0	0	0	0	0
Other accrued liabilities	104	31	32	35	34	42
Net cash flows from operating activities	3,714	3,505	3,764	4,080	4,428	4,854
Cash flows from investing activities:						
Capital expenditures	(898)	(925)	(953)	(982)	(1,011)	(1,041)
Other intangible assets	(0.47)	(0.44)	(0.42)	(0.40)	(0.38)	(0.36)
Other assets	(5)	(6)	(6)	(6)	(6)	(7)
Operating lease right-of-use assets	392	441	493	550	612	680
Site rental contracts & tenant relationships	(229)	(236)	(253)	(271)	(290)	(310)
Restricted cash	(7)	(8)	(8)	(8)	(8)	(9)
Net cash flows from investing activities	(748)	(734)	(727)	(717)	(704)	(687)
Cash flows from financing activities:						
Common stock and additional paid-in capital	914	959	1,007	1,058	1,111	1,166
Other long-term liabilities	402	(164)	(127)	(82)	(43)	(27)
Dividends distribution	(2,734)	(2,747)	(2,760)	(2,778)	(2,799)	(2,821)
Current maturities of debt & other obligations	38	(23)	(35)	(110)	(124)	21
Current portion of operating lease liabilities	238	(13)	(9)	(6)	(2)	(23)
Debt & other long-term liabilities	(1,816)	(601)	(689)	(778)	(889)	(981)
Net cash flows from financing activities	(2,958)	(2,589)	(2,613)	(2,696)	(2,746)	(2,664)
Net increase (decrease) in cash, cash equivalents, & restricted cash	7	181	425	667	978	1,502
Cash, cash equivalents, & restricted cash at beginning of period	105	112	293	718	1,385	2,363
Cash, cash equivalents, & restricted cash at end of period	112	293	718	1,385	2,363	3,865

Crown Castle Inc.
Common Size Income Statement

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E
Net revenues:											
Site rental revenues	88.37%	91.10%	90.21%	90.02%	93.57%	93.12%	93.10%	93.62%	93.84%	94.55%	94.75%
Services & other revenues	11.63%	8.90%	9.79%	9.98%	6.43%	6.88%	6.90%	6.38%	6.16%	5.45%	5.25%
Net revenues	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Operating expenses:											
Costs of site rental operations	25.37%	26.04%	24.51%	22.93%	23.84%	24.54%	24.54%	24.54%	24.54%	24.54%	24.54%
Costs of services & other operations	9.09%	7.67%	6.92%	6.67%	4.53%	6.98%	6.98%	6.98%	6.98%	6.98%	6.98%
Selling, general & administrative expenses	10.65%	11.61%	10.73%	10.74%	10.87%	10.92%	10.92%	10.92%	10.92%	10.92%	10.92%
Restructuring charges (credit)	-	-	-	-	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%
Asset write-down charges	0.33%	1.27%	0.33%	0.49%	0.47%	0.58%	0.58%	0.58%	0.58%	0.58%	0.58%
Acquisition & integration costs	0.23%	0.17%	0.02%	0.03%	0.01%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%
Depreciation, amortization & accretion	27.28%	27.53%	25.93%	24.43%	25.13%	25.25%	25.48%	25.77%	26.02%	26.40%	26.56%
Total operating expenses	72.95%	74.30%	68.44%	65.29%	66.07%	69.41%	69.41%	69.41%	69.41%	69.41%	69.41%
Other operating expense (income)	-	-6.20%	-	-	-	-	-	-	-	-	-
Operating income (loss)	27.05%	31.90%	31.56%	34.71%	33.93%	37.26%	35.21%	34.66%	34.24%	33.61%	33.38%
Interest expense and amortization of deferred financing costs	-11.85%	-11.80%	-10.36%	-10.01%	-12.18%	-11.85%	-10.57%	-9.69%	-8.82%	-8.01%	-7.16%
Gains (losses) on retirement of long-term obligations	-0.03%	-1.63%	-2.29%	-0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interest income	0.10%	0.03%	0.02%	0.04%	0.21%	0.16%	0.15%	0.24%	0.42%	0.69%	1.04%
Other income (loss)	0.02%	-0.09%	-0.33%	-0.14%	-0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Income (loss) from continuing operations before income taxes	15.29%	18.42%	18.60%	24.21%	21.89%	25.56%	24.79%	25.21%	25.85%	26.30%	27.26%
Benefit (provision) for income taxes	-0.36%	-0.34%	-0.33%	-0.23%	-0.37%	-0.42%	-0.40%	-0.39%	-0.38%	-0.37%	-0.36%
Income (loss) from continuing operations	14.92%	18.08%	18.26%	23.98%	21.52%	25.14%	24.39%	24.82%	25.47%	25.93%	26.90%
Discontinued operations:											
Income (loss) from discontinued operations, net of taxes	-	-	-0.98%	-	-	-	-	-	-	-	-
Net income (loss) attributable to Crown Castle Inc. stockholders	14.92%	18.08%	17.29%	23.98%	21.52%	25.14%	24.39%	24.82%	25.47%	25.93%	26.90%
Dividends or distributions on preferred stock	-1.96%	-0.98%	-	-	-	-	-	-	-	-	-
Net income (loss) attributable to Crown Castle Inc. common stockholders	12.96%	17.11%	17.29%	23.98%	21.52%	25.14%	24.39%	24.82%	25.47%	25.93%	26.90%
Net income (loss)	14.92%	18.08%	17.29%	23.98%	21.52%	25.14%	24.39%	24.82%	25.47%	25.93%	26.90%

Crown Castle Inc.
Common Size Balance Sheet

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E
Current assets:											
Cash & cash equivalents	3.40%	3.97%	4.61%	2.23%	1.50%	1.50%	3.66%	8.40%	15.17%	24.35%	37.15%
Restricted cash	2.38%	2.47%	2.67%	2.38%	2.45%	2.55%	2.66%	2.77%	2.89%	3.01%	3.14%
Accounts receivable	10.34%	7.38%	8.56%	8.49%	6.89%	6.89%	6.89%	6.89%	6.89%	6.89%	6.89%
Prepaid expenses	1.86%	1.63%	1.66%	1.46%	1.48%	1.48%	1.48%	1.48%	1.48%	1.48%	1.48%
Deferred site rental receivables	-	-	-	1.82%	-	-	-	-	-	-	-
Other current assets	2.92%	3.46%	2.29%	1.04%	0.80%	0.78%	0.75%	0.73%	0.71%	0.70%	0.68%
Current portion of deferred site rental receivables	-	-	-	-	1.66%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total current assets	20.89%	18.90%	19.78%	17.42%	14.78%	13.19%	15.44%	20.27%	27.14%	36.42%	49.33%
Deferred site rental receivables	24.71%	24.11%	25.05%	27.97%	32.07%	32.07%	32.07%	32.07%	32.07%	32.07%	32.07%
Total gross property & equipment	422.25%	444.61%	429.12%	407.64%	428.95%	411.63%	396.67%	382.96%	369.20%	357.69%	343.65%
Less: accumulated depreciation - property & equipment	167.76%	184.98%	188.28%	187.10%	204.54%	215.81%	227.40%	238.91%	249.64%	261.21%	270.21%
Property & equipment, net	254.49%	259.62%	240.84%	220.54%	224.41%	195.81%	169.27%	144.04%	119.56%	96.48%	73.44%
Operating lease right-of-use assets	106.42%	110.68%	105.39%	93.42%	88.63%	77.33%	66.85%	56.89%	47.22%	38.10%	29.00%
Goodwill	174.87%	172.57%	158.96%	144.36%	144.46%	134.59%	125.92%	118.03%	110.47%	103.91%	96.93%
Site rental contracts & tenant relationships, net	82.67%	74.74%	62.81%	50.60%	44.72%	44.72%	44.79%	44.94%	45.03%	45.34%	45.28%
Other intangible assets, net	1.25%	1.16%	1.01%	0.87%	0.82%	0.77%	0.72%	0.68%	0.64%	0.61%	0.57%
Other assets, net	2.01%	2.04%	1.94%	1.95%	1.99%	1.93%	1.87%	1.82%	1.77%	1.73%	1.68%
Total assets	667.31%	663.84%	615.77%	557.13%	551.88%	500.24%	488.03%	476.94%	466.89%	458.29%	454.44%
Current Liabilities:											
Accounts payable	5.80%	3.94%	3.88%	3.38%	3.61%	4.12%	4.12%	4.12%	4.12%	4.12%	4.12%
Accrued interest	2.93%	3.41%	2.87%	2.62%	3.14%	2.98%	2.99%	2.92%	2.93%	2.99%	2.96%
Deferred revenues	11.40%	12.05%	12.24%	10.54%	8.67%	10.90%	10.81%	10.61%	10.34%	10.31%	10.57%
Other accrued liabilities	6.26%	6.47%	6.32%	5.83%	4.90%	5.96%	5.96%	5.96%	5.96%	5.96%	5.96%
Current maturities of debt & other obligations	1.74%	2.21%	1.14%	11.72%	11.96%	11.65%	10.61%	9.54%	7.72%	5.99%	5.79%
Current portion of operating lease liabilities	5.19%	5.63%	5.50%	5.01%	4.76%	7.61%	6.95%	6.41%	5.94%	5.56%	4.97%
Total current liabilities	33.32%	33.72%	31.96%	39.09%	37.03%	46.39%	47.55%	48.43%	48.40%	48.55%	51.22%
Debt & other long-term obligations	312.70%	327.93%	324.24%	299.31%	316.37%	0.00%	281.75%	271.88%	260.74%	248.00%	233.95%
Operating lease liabilities	95.63%	99.45%	95.13%	84.18%	79.66%	74.70%	69.02%	62.66%	55.57%	47.67%	38.91%
Other long-term liabilities	43.66%	40.74%	34.20%	27.91%	27.42%	33.17%	30.82%	29.00%	27.82%	27.20%	26.82%
Total liabilities	485.30%	501.83%	485.52%	450.50%	460.48%	444.63%	429.15%	411.97%	392.52%	371.43%	350.90%
Stockholders' equity:											
Additional paid-in capital	309.89%	307.14%	284.15%	259.38%	261.77%	274.86%	288.60%	303.03%	318.18%	334.09%	350.79%
Accumulated other comprehensive income (loss)	-0.09%	-0.07%	-0.06%	-0.07%	-0.06%	-0.06%	-0.06%	-0.06%	-0.06%	-0.06%	-0.06%
Dividends or distributions in excess of earnings	-127.80%	-145.07%	-153.83%	-152.68%	-170.31%	-182.49%	-193.86%	-203.02%	-209.50%	-213.55%	-213.87%
Total equity	182.01%	162.00%	130.25%	106.63%	91.41%	92.30%	94.68%	99.95%	108.62%	120.47%	136.87%
Total liabilities & equity	667.31%	663.84%	615.77%	557.13%	551.88%	536.93%	523.83%	511.92%	501.14%	491.90%	487.77%

Crown Castle Inc.*Weighted Average Cost of Capital (WACC) Estimation***Cost of Equity:**

Risk-Free Rate	4.28%
Beta	0.81
Equity Risk Premium	4.60%
Cost of Equity	8.01%

ASSUMPTIONS:

10-year Treasury bond
 Average Weekly Beta over 5 yr
 Long term S&P 500 -10 year treasury

Cost of Debt:

Risk-Free Rate	4.28%
Implied Default Premium	1.60%
Pre-Tax Cost of Debt	5.88%
Marginal Tax Rate	1%
After-Tax Cost of Debt	5.82%

10-year Treasury bond

Rf + BBB loan default rate

Market Value of Common Equity:

Total Shares Outstanding	434.57
Current Stock Price	\$104.72
MV of Equity	45,508.17

MV Weights

55.77%

Market Value of Debt:

Short-Term Debt	332
Current Portion of LTD	835
Long-Term Debt	27,647
PV of Operating Leases	7,284
MV of Total Debt	36,098.00

44.23%

Market Value of the Firm

81,606.17

100.00%

Estimated WACC

7.04%

Crown Castle Inc.*Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models*

Key Inputs:

CV Growth of NOPLAT	3.00%
CV Year ROIC	28.98%
WACC	7.04%
Cost of Equity	8.01%
NOPLAT(t)	3,692
IC (t-1)	18,286

Fiscal Years Ending Dec. 31	2024E	2025E	2026E	2027E	2028E	2029E
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DCF Model:

Free Cash Flow (FCF)	4,205	4,071	4,293	4,566	4,838	5,210
Continuing Value (CV)						81,945
PV of FCF	3,929	3,553	3,501	3,478	3,443	58,318

Value of Operating Assets:	76,220.8
Non-Operating Adjustments	
Add Restricted Cash	178.2
Less Accrued Interest	(223.5)
Less ST Debt	(332.0)
Less Current portion of LT Debt	(835.0)
Less Debt and Other Obligations	(20,270.1)
Less PV of Operating Leases	(7,284.0)
Value of Equity	47,454
Shares Outstanding	434
Intrinsic Value of Last FYE	\$ 109.34
Implied Price as of Today	\$ 111.78

EP Model:

Economic Profit (EP)	1,837.3	1,924.8	2,111.7	2,326.6	2,519.2	2,795.6
Continuing Value (CV)						69,205.0
PV of EP	1,716.5	1,680.0	1,721.9	1,772.3	1,792.8	49,251.1

Total PV of EP	57,934.6
Invested Capital (last FYE)	18,286.2
Value of Operating Assets:	76,220.8
Non-Operating Adjustments	
Add Restricted Cash	178.2
Less Accrued Interest	(223.5)
Less ST Debt	(332.0)
Less Current portion of LT Debt	(835.0)
Less Debt and Other Obligations	(20,270.1)
Less PV of Operating Leases	(7,284.0)
Value of Equity	47,454.3
Shares Outstanding	434.0
Intrinsic Value of Last FYE	\$ 109.34
Implied Price as of Today	\$ 111.78

Crown Castle Inc.*Dividend Discount Model (DDM) or Fundamental P/E Valuation Model*

Fiscal Years Ending	2024E	2025E	2026E	2027E	2028E	2029E
EPS	2.89	3.00	3.26	3.57	3.87	4.30
Key Assumptions						
CV growth of EPS	2.50%					
CV Year ROE	33.28%					
Cost of Equity	8.01%					
Future Cash Flows						
P/E Multiple (CV Year)						16.80
EPS (CV Year)						4.30
Future Stock Price						78.09
Dividends Per Share	6.57	6.90	7.25	7.61	7.99	
Discounted Cash Flows	6.08	5.91	5.75	5.59	5.44	53.13
Intrinsic Value as of Last FYE	81.92					
Implied Price as of Today	83.74					

Crown Castle Inc.

Relative Valuation Models

Ticker	Company	Price	FFO 2024E	FFO 2025E	P/FFO 24	P/FFO 25
SBAC	SBA Communications Corp	\$225.59	\$13.30	\$13.12	16.96	17.19
AMT	American Tower Corp	\$198.40	\$10.50	\$10.13	18.90	19.59
UNIT	Unti Group	\$5.99	\$1.09	\$1.03	5.50	5.82
Average					13.78	14.20

CCI Crown Castle Inc. \$104.72 \$7.00[▼] \$6.91[▼] 15.0 15.2

Implied Relative Value:

P/FFO (FFO24) \$ 96.49
P/FFO (FFO25) \$ 98.11

Ticker	Company	Price	EPS 2024E	EPS 2025E	P/E 24	P/E 25
SBAC	SBA Communications Corp	\$225.59	\$7.42	\$9.22	30.40	24.47
AMT	American Tower Corp	\$198.40	\$5.52	\$6.79	47.68	29.22
UNIT	Unti Group	\$5.99	\$0.39	\$0.40	15.36	14.98
Average					31.15	22.89

CCI Crown Castle Inc. \$104.72 2.89 3.00 36.19 34.89

Implied Relative Value:

P/E (EPS 24) \$ 90.12
P/E (EPS25) \$ 68.69

Crown Castle Inc.
Key Management Ratios

<i>Fiscal Years Ending Dec. 31</i>	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E
Liquidity Ratios:											
Current Ratio = Current assets / Current liabilities	0.63	0.56	0.62	0.45	0.40	0.30	0.36	0.50	0.71	1.02	1.41
Cash Ratio = Cash & Cash Equivalents / Current Liabilities	0.10	0.12	0.14	0.06	0.04	0.03	0.09	0.21	0.41	0.70	1.08
Net Working Capital to Revenue Ratio = NWC / Net Revenue	▼ (0.11) ▼	▼ (0.13) ▼	▼ (0.13) ▼	▼ (0.10) ▼	▼ (0.09)	▼ (0.15)	▼ (0.15)	▼ (0.15)	▼ (0.14)	▼ (0.14)	▼ (0.15)
Asset-Management Ratios:											
Total Asset Turnover = Net Revenue / Average Total Assets	0.15	0.15	0.16	0.18	0.18	0.20	0.22	0.24	0.26	0.28	0.31
Fixed Asset Turnover = Net Revenue / Net PPE	0.39	0.39	0.42	0.45	0.45	0.51	0.59	0.69	0.84	1.04	1.36
Working Capital Turnover = Net Revenue / Average Working Capital		5.06	5.38	5.65	6.21	7.47	7.33	5.90	4.45	3.31	2.45
Financial Leverage Ratios:											
Debt to Assets Ratio = Total Debt / Total Assets	0.73	0.76	0.79	0.81	0.83	0.83	0.82	0.80	0.78	0.76	0.72
Debt to Equity Ratio = Total Debt / Total Equity	2.67	3.10	3.73	4.22	5.04	4.82	4.53	4.12	3.61	3.08	2.56
Debt to EBITDA Ratio = Total Debt / EBITDA	14.60	15.21	12.95	11.21	11.42	9.80	9.42	8.71	7.96	7.29	6.55
Profitability Ratios:											
Return on Equity = Net Income / Beg. TSE		10.07%	11.58%	20.28%	20.16%	29.52%	30.32%	32.09%	33.32%	33.19%	33.28%
Return on Assets = Net Income / Total Assets	2.24%	2.72%	2.81%	4.30%	3.90%	5.02%	5.34%	5.93%	6.65%	7.33%	8.22%
Operating Profit Margin = Operating Profit / Sales	27.05%	25.70%	31.56%	34.71%	33.93%	37.26%	35.21%	34.66%	34.24%	33.61%	33.38%
Payout Policy Ratios:											
Dividend Payout Ratio = Total Dividends / Net Income	2.35	2.07	2.17	1.55	1.81	1.45	1.41	1.30	1.19	1.11	1.01
Retention Ratio = (Net Income - Dividends) / Net Income	-1.35	-1.07	-1.17	-0.55	-0.81	-0.45	-0.41	-0.30	-0.19	-0.11	-0.01
Dividend Cover Ratio = Net Income / Total Dividends	0.42	0.48	0.46	0.64	0.55	0.69	0.71	0.77	0.84	0.90	0.99

Crown Castle Inc.
Sensitivity Tables

		Revenue per Mile of Fiber							
		111.78	0.97%	1.47%	1.97%	2.47%	2.97%	3.47%	3.97%
Pre-Tax Cost of Debt	5.72%	114.45	114.45	114.45	114.45	114.45	114.45	114.45	114.45
	5.78%	113.44	113.44	113.44	113.44	113.44	113.44	113.44	113.44
	5.83%	112.61	112.61	112.61	112.61	112.61	112.61	112.61	112.61
	5.88%	111.78	111.78	111.78	111.78	111.78	111.78	111.78	111.78
	5.93%	110.97	110.97	110.97	110.97	110.97	110.97	110.97	110.97
	5.98%	110.16	110.16	110.16	110.16	110.16	110.16	110.16	110.16
	6.03%	109.36	109.36	109.36	109.36	109.36	109.36	109.36	109.36

		WACC							
		111.78	6.44%	6.64%	6.84%	7.04%	7.24%	7.44%	7.64%
CV Growth of NOPLAT	2.45%	121.18	112.67	104.94	97.87	91.38	85.41	79.90	
	2.50%	122.76	114.08	106.19	98.99	92.39	86.33	80.73	
	2.55%	124.37	115.51	107.47	100.14	93.43	87.26	81.58	
	3.00%	141.03	130.21	120.51	111.77	103.84	96.62	90.02	
	3.05%	143.15	132.07	122.15	113.22	105.13	97.78	91.06	
	3.10%	145.33	133.98	123.83	114.71	106.46	98.97	92.13	
	3.15%	147.59	135.95	125.56	116.24	107.82	100.18	93.21	

		Risk Free Rate							
		111.78	4.16%	4.20%	4.24%	4.28%	4.32%	4.36%	4.40%
Revenue Per Tow	9.28%	117.96	116.28	114.63	113.01	111.43	109.87	108.35	
	9.78%	118.46	116.77	115.12	113.49	111.90	110.34	108.81	
	10.28%	118.97	117.27	115.61	113.98	112.38	110.81	109.27	
	10.78%	119.47	117.76	116.09	114.46	112.85	111.28	109.73	
	11.28%	119.97	118.26	116.58	114.94	113.33	111.74	110.19	
	11.78%	120.47	118.75	117.07	115.42	113.80	112.21	110.65	
	12.28%	120.97	119.25	117.56	115.90	114.27	112.68	111.11	

		Equity Risk Premium							
		111.78	4.30%	4.40%	4.50%	4.60%	4.70%	4.80%	4.90%
Beta	0.69	130.57	128.68	126.84	125.03	123.26	121.52	119.82	
	0.71	128.23	126.34	124.49	122.68	120.90	119.17	117.46	
	0.76	122.63	120.73	118.87	117.06	115.28	113.54	111.83	
	0.81	117.37	115.46	113.60	111.78	110.00	108.26	106.55	
	0.86	112.41	110.50	108.64	106.82	105.05	103.30	101.60	
	0.91	107.73	105.83	103.97	102.15	100.38	98.64	96.94	
	0.96	103.30	101.41	99.55	97.74	95.97	94.25	92.56	

		Dividend Yield							
		111.78	3.98%	4.48%	4.98%	5.48%	5.98%	6.48%	6.98%
Marginal Tax Rate	0.70%	113.62	113.13	112.65	112.17	111.68	111.20	110.71	
	0.80%	113.49	113.01	112.52	112.04	111.55	111.07	110.59	
	0.90%	113.36	112.88	112.39	111.91	111.43	110.94	110.46	
	1.00%	113.23	112.75	112.27	111.78	111.30	110.82	110.33	
	1.10%	113.10	112.62	112.14	111.66	111.17	110.69	110.21	
	1.20%	112.97	112.49	112.01	111.53	111.05	110.56	110.08	
	1.30%	112.84	112.36	111.88	111.40	110.92	110.44	109.95	