



## Recommendation: HOLD

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### Investment Thesis

We recommend a **HOLD** rating for DLR. While sector competition is intensifying, Digital Realty maintains a strategic advantage in an industry where economies of scale are difficult to replicate. DLR had a strong performance in 2023, increasing revenues by nearly 17%. We expect that trend to continue marginally over the forecast horizon.

#### Thesis Drivers:

- We project revenue to decrease by 2% annually until 2029, then stabilize at 4%. The data center sector is becoming increasingly saturated, driving greater competition and compressing margins. However, despite this challenging landscape, Digital Realty's economies of scale provide a key competitive edge. They can leverage cost efficiencies as an operational advantage.
- DLR has consistently paid out high dividends, being a REIT. We expect this DLR to continue to grow dividends at a 3.00% increase in dividend per share year over year, providing stable income for investors.

#### Thesis Risks:

- As inflation remains high, this usually allows real estate to act as a hedge to this issue, but current macroeconomic issues are making it insufficient to do so, which presents that risk.
- Interest rate fluctuations present a potential risk to the Real Estate industry. Rising rates can lead to increases in borrowing costs, reducing the purchasing power of market participants and the affordability of properties.

### DLR: 5-Year Stock Performance



### Company Information

**Company:** Digital Realty Trust Inc  
**Industry:** Real Estate  
**Sector:** Data Centers  
**Exchange/Ticker:** NYSE/DLR

### Price Projections

**Target Price:** \$174-188  
**P/FFO:** \$187  
**DDM:** \$95  
**Relative Valuation (AVG):** \$195

### Financials

#### Stock Data:

**Current Price:** **\$179.67**  
**52-Week Range:** \$130.00-\$193.88  
**Market Cap:** 60.92B  
**YTD Performance:** **33.50%**  
**P/E:** 44.3x  
**Beta:** 0.81

#### Financial Metrics:

**Shares Outstanding:** 312mm  
**EPS:** \$3.04  
**Dividend Yield:** 4.88%  
**Net Income:** \$950mm  
**Profit Margin:** 9.58%  
**ROE:** 5.40%  
**ROA:** 2.15%  
**Total Asset Turnover:** .12x  
**Dividend Payout Ratio:** 96%

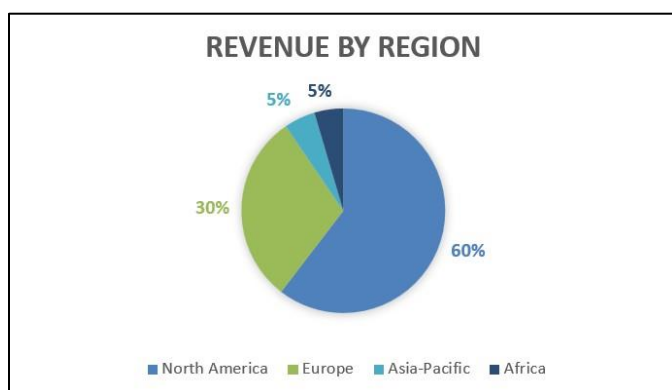
### Company Overview

Digital Realty Trust (DLR) is headquartered in Texas with an estimated 3,030 employees. DLR operates as a Real estate Investment Trust (REIT), which engages in the provision of Data Center, colocation and interconnection solutions. It services the following industries: artificial intelligence (AI), networks, cloud, digital media, mobile, financial services, healthcare, and gaming.

# Company Analysis

## Company Description:

Digital Realty Trust, Inc. (NYSE: DLR) is a global leader in data center, colocation, and interconnection solutions. Established in 2004, Digital Realty supports the data and technology needs of enterprises worldwide, including major financial institutions, cloud and IT providers, and content and media companies. The company's extensive global footprint spans over 300 data centers across six continents, with core offerings segmented into three primary categories: Colocation & Interconnection, Powered Base Building, and Fully Managed Data Centers. The company's infrastructure enables connectivity and data exchange with a focus on efficiency, high performance, and global reach. Digital Realty is committed to meeting evolving client needs and advancing environmentally responsible practices, including renewable energy initiatives and energy-efficient designs.



Source: DLR 2023 10-K

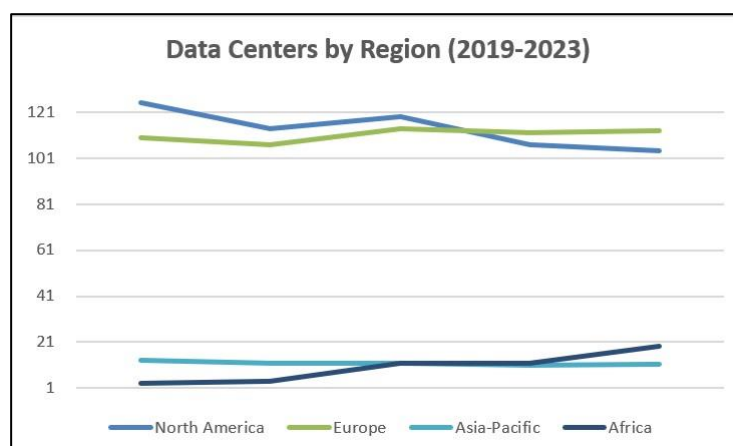
## North America Segment:

North America remains a pivotal segment for Digital Realty, comprising 46% of the company's data centers and contributing 60% of total revenue, as depicted in the accompanying pie chart. The company has been strategically consolidating its portfolio by decommissioning vintage buildings to enhance operational efficiency and optimize asset performance. Despite a reduction in the total number of data centers, overall square footage has remained stable at approximately 20 million square feet, driven by the development of new, large-scale facilities spanning hundreds of thousands of square feet to address the rising demand for robust and flexible data infrastructure. Occupancy levels in the North American segment have consistently held at around 86% over the past few years, underscoring sustained demand for

the company's offerings. Meanwhile, revenue growth in the region has varied from 2% to 9% over the last five years, influenced by changing capital market conditions and the timing of new deliverables.

## Europe Segment:

Europe represents a rapidly growing segment for Digital Realty, accounting for 46% of the company's data centers and contributing 30% of total revenue. Revenue from this region has demonstrated robust growth, exceeding 8% year-over-year over the past five years, driven by expanding digital transformation initiatives across various industries. Although occupancy levels have been in the upper 70% range, reflecting opportunities for optimization, the company has achieved strong gains in total square footage, averaging a 46% increase over recent years. This growth has been fueled by strategic investments in new large-scale developments and the expansion of existing facilities in key markets such as London, Frankfurt, and Amsterdam. Despite challenges posed by fluctuating energy costs and regulatory complexities, Digital Realty continues to enhance its European footprint, aligning infrastructure expansions with market demand while prioritizing energy efficiency and compliance with stringent environmental standards.



Source: DLR 2023 10-K

## Asia-Pacific Segment:

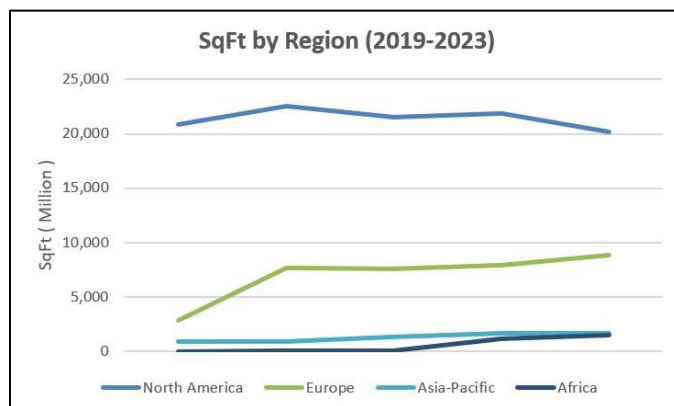
Asia Pacific represents a smaller yet steadily growing segment for Digital Realty, accounting for 10% of the company's data centers and contributing 5% of total revenue. Over the past few years, the region has seen a slight increase in square footage, though there has been limited capital activity, with no significant acquisitions or sales of data centers. Despite this, Asia Pacific has benefitted from strong sector demand and the company's ability to successfully turnover tenants in its existing facilities. As a result, revenue in the region has experienced impressive growth, averaging 25% year-over-year over the past five years.

While the sector has remained relatively stagnant in terms of capital transactions, the continued demand for data center services in Asia Pacific has helped sustain this growth,

positioning Digital Realty to capture further opportunities in the region despite the limited capital activity.

### Africa Segment:

Africa represents an emerging and rapidly growing segment for Digital Realty, accounting for 11% of the company's data centers and contributing 5% of total revenue. The region has experienced strong growth in both data center construction and revenue, with data center totals doubling year-over-year for several years. As of year-end 2023, Digital Realty's square footage in Africa has reached 1.5 million square feet, reflecting the company's aggressive expansion in the region. Revenue growth has mirrored this construction boom, with an average year-over-year increase of around 12%. Africa is the newest market for Digital Realty, having only begun institutional investing in 2022, but the company has quickly established a footprint in key markets such as South Africa, Nigeria, and Kenya. This rapid expansion is driven by increasing demand for digital infrastructure across the continent, as more businesses turn to cloud services and digital solutions. While still in its early stages, Digital Realty is well-positioned to capitalize on the continued growth of the African digital economy, with strong growth potential in the years to come.



### Cost Analysis:

Digital Realty's cost structure is primarily driven by three key factors: depreciation of its assets, maintenance on its data centers, and general and administrative (G&A) expenses. Among these, property taxes represent nearly 50% of all expenses, making them a significant component of the company's overall cost base. Depreciation also plays a major role, reflecting the wear and tear on its vast portfolio of data centers, while maintenance costs ensure that facilities remain operational up-to-date. G&A expenses, including salaries and corporate overhead, further contribute to the company's total expenditures. Additionally, the company incurs significant interest payments on the debt used to finance its acquisitions, amounting to \$440 million in interest paid. However, gains on the disposition of properties, such as the \$900 million gain recorded in 2023, help offset these costs, providing a substantial boost to revenues and lightening the load from operating expenses.

### Historical and Forecasted Costs:

Most of Digital Realty's cost projections are based on historical trends, reflecting the consistency of expenses such as property taxes, depreciation, and maintenance. However, some costs are derived through more specific calculations. For example, future interest expense is forecasted by multiplying the company's cost of debt by the total debt held. This approach is crucial, as a traditional method using a risk-free rate plus loan default would suggest an interest rate around 5%. In contrast, Digital Realty's debt portfolio is largely composed of loans taken out during periods of lower interest rates, and as a result, the company's effective interest rate is currently 2.89%. This more accurate calculation provides a clearer understanding of the company's future interest obligations and helps inform its overall financial outlook.

### Debt Analysis:

As a real estate company, Digital Realty operates with a relatively high level of debt, a characteristic common in the industry due to the need to finance the acquisition or development of large-scale data centers.

This use of leverage allows the company to expand its global portfolio while preserving cash flow for other operational and investment activities. In our analysis, we have forecasted both short-term and long-term debt by applying a debt-to-non-cash asset ratio based on historical data. Historically DLR has hovered around the 40% mark. This approach ensures that our projections reflect Digital Realty’s consistent capital structure while accounting for its ongoing expansion and asset base growth. By maintaining a balanced and well-managed level of debt, the company positions itself to take advantage of growth opportunities in the data center market while managing financial risk effectively.

Capital Expenditures:

Capital expenditures are a critical component driving our forecasts for property, plant, and equipment. We have projected these expenditures to grow at a static rate of 2%, consistent with prior years and aligned with the historical average of U.S. inflation. This 2% annual growth translates to an increase of approximately \$200 million each year, reflecting stable and predictable investment patterns.

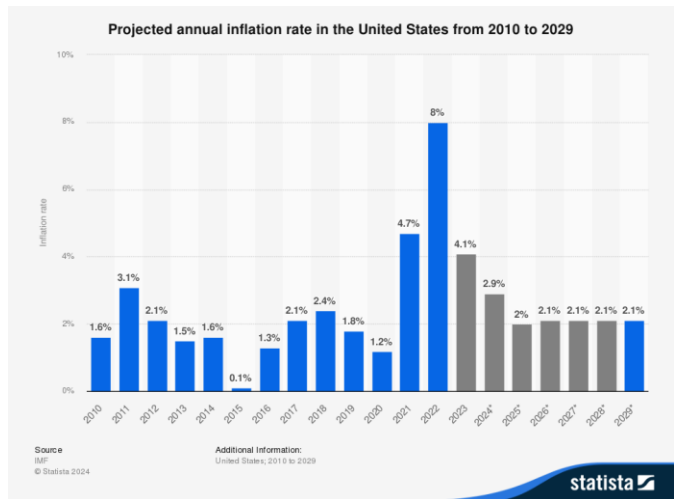
Dividend Payout:

DLR has historically paid high dividends, which is common as a structured REIT. These companies generate stable cash flow, along with holding real estate that generally appreciates with time. In 2023, DLR paid out a \$4.88 dividend per share and in our forecast we plan on growing that amount by 3% each year, which is in-line with what has been seen in previous years.

REIT EBITDA vs. Inflation March 1, 2021 - April 28, 2023



Us Economists project inflation will remain steady at a low 2.1% from 2025-2029 which isn’t great for real estate investments from the data we talked about earlier. You can look at this Data from Statista below.



**Economic Analysis**

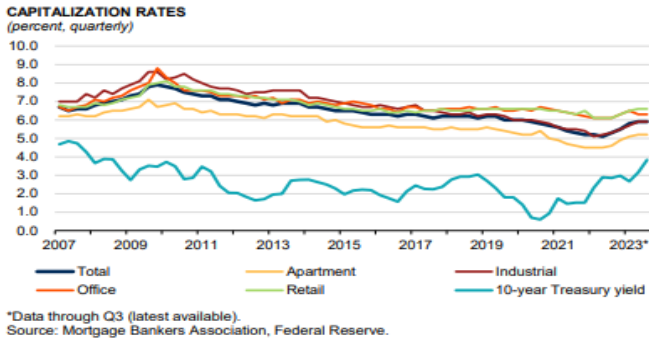
Inflation:

Inflation and REITs tend to have a positive relationship. This is since when Inflation rises, cap rates decrease so it makes it more favorable to invest in real estate during these times of high inflation. Historically, Commercial Real Estate in general, has outperformed during inflationary periods since the 1980s. Even when rent growth doesn’t keep up with inflation, due to the compression of cap rates the investment has remained profitable. Also, high inflation can cause a decrease in property value because of lower demand due to the inflated cost of borrowing. This in return makes it hard for REITs to sell the properties they own which leads to higher ROI growth for investors.

Interest Rates:

On the other hand, interest rates and Commercial Real Estate have a negative relationship mainly because of how interest rates influence capitalization rates or cap rates. We know cap measures the risk to reward ratio and on a property in real estate with higher cap rates being a riskier investment; however, can provide a greater return. The issue with having high cap rate and interest rate though is it makes borrowing a lending a lot scarcer or in other words people do not buy and sell properties using loans as much. This slows down the economy for real estate massively. If REITs and other real estate investors are not buying and selling buildings, then not as much growth or profits are being made leading to lower ROI. With the current issue with inflation and our predictions where we see

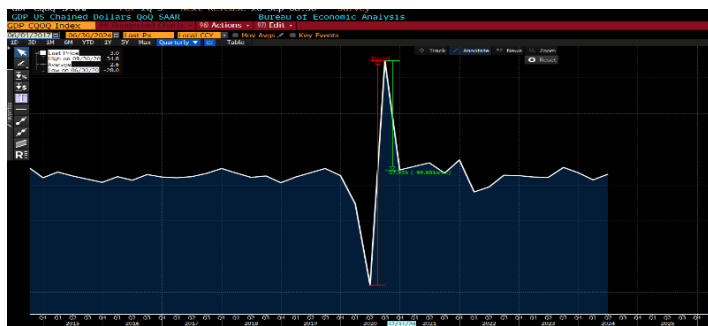
the Fed will keep inflation low that means that also interest rates will have to remain higher than usual. Because of this, investments in real estate we predict will not be as favorable in the up-and-coming years throughout 2029.



REIT CAP Rates have risen after being on a downward trend since 2010.

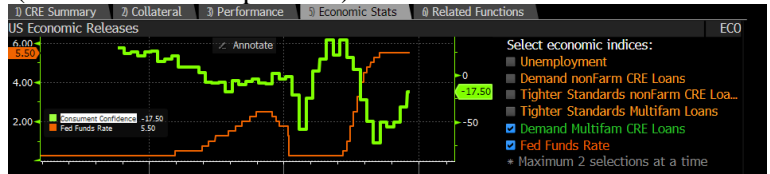
**GDP:**

Real GDP is projected to increase by 3% in Q2 2024. Historically, REITs have shown a positive correlation with GDP growth over the long term, with median home prices correlating between 60% and 95% with GDP per capita. Personal investments also tend to rise alongside GDP growth, and current forecasts suggest a sharp increase in investments accompanying this GDP expansion. However, these are expected to decline slightly in 2025 as GDP growth slows. The chart below highlights the sharp GDP decline in FY 2020, followed by a strong recovery in FY 2021, with investment patterns mirroring this trend, demonstrating a clear linear correlation.



Looking forward, GDP is anticipated to post a 2.4% increase in FY 2024, with Deloitte projecting a slowdown to 1.1% in FY 2025. This deceleration may negatively impact commercial real estate (CRE) and other investments, as previous GDP growth estimate misses have led to short-term declines in the Real Estate index. The median probability of a recession currently stands at 30%. Despite the economic headwinds, CRE loan demand, which had been on a steep decline since early 2022, has shown signs of recovery, moving from -71 to -17.

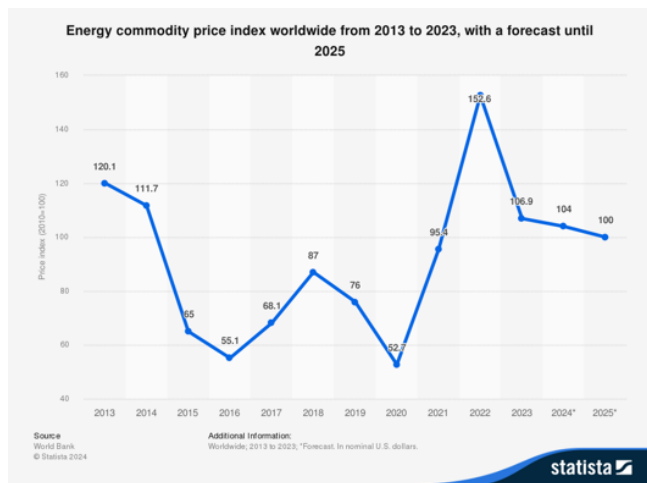
**(Inverse relationship shown)**



This trend is likely to continue as falling Fed Funds rates make borrowing more affordable, illustrating an inverse relationship between interest rates and loan demand.

**Oil/Energy Prices:**

The REIT Industry is highly connected to the global price of energy index. This is due to its necessity for determining land value, building operating costs, and essentially keeping the world interconnected. Especially for a company like DLR, a data center that uses a ton of energy to keep data running through several computers, energy prices can highly fluctuate the operating costs of a data center. For the future, the IEA forecasts that the global energy price will decline by 1.2% per year, which is driven by stagnant energy demand.



This graph represents the economists forecast into 2025 of a slight decline in the global commodity price index for energy, which we believe should continue in the long run lowering operating costs for real estate and data centers.

**Industry Analysis**

**Industry Description:**

Data Center Reits focus on owning and managing facilities that host computing infrastructure including servers, networking equipment, and storage. These centers are usually leased to a company that needs massive data storage or computing services, which can include cloud providers, financial institutions or other big businesses that need the power.

## Porters 5 Forces:

### Threat of new entrants (Low):

Due to large capital requirement and the fact that there are only a few good markets that have the infrastructure to have data centers there is a low barrier of entry to become a data center REIT.

### Threat of substitutes (High):

There is a high risk of substitutes for Data Center REITs because there are In House services they can chose. Companies may opt-in for in-house solutions over data-center solutions because they can provide greater control which can shift how businesses manage their IT. New technology also make its easier to have this In-House solution done and is a way for capital-rich companies to minimize costs.

### Bargaining power of customers (Moderate):

The ability to compare prices and quality of data storage enhances power for the buyer at this indeed is increasing but is moderate for now. Since data storage is intertwined with the broader technology sector, buyers can have more options with how they invest their capital prior to securing data storage.

### Bargaining power of suppliers (Moderate):

Economies of scale are highly influential for suppliers in this industry. Buyers' ability to leverage economies of scale significantly influences the suppliers' power and how much they can charge.

### Intensity of competitive rivalry (High):

The industry produces a very high intensity of competitive rivalry due to the increased demands of buyers to have data centers for various reasons with the more limited supply due to the lack of areas that allow for the infrastructure to have these data centers. More specifically the fight to acquire this infrastructure and market space with these buyers and which suppliers' investors feel more confident in; the process becomes very competitive.

### Industry Trends:

Major trends that help this industry directly correspond with what is happening in the external/operating environment. With increases in the need for cloud storage and other services data centers provide. Operators want to acquire more space so buyers can use their centers to perform business and expand their IT department.

### Profit Pools:

Regulations and Policy along with Tax Assistance provide profit pools for Data Center REIT's. Strong growth in corporate profit bolsters operator performance. As more commercial clients benefit from higher corporate profit, they can expand their digital footprint and outsource their IT

infrastructure services to buildings owned by data center Reits. Also, a favorable regulatory landscape offers low compliance costs. With data center operators facing very limited regulatory oversight, this creates minimal compliance costs resulting in more profits.

### Operating Environment:

Increases in the percentage of online businesses and number of mobile internet connections directly contributed to demand for colocation services, again creating demand for higher bandwidth and data storage services. Stable growth in corporate profits is likely to support revenue growth as companies can afford more data storage, increasing demand for colocation services. Improvements in technology are anticipated to decrease the cost of constructing and running data centers while increasing performance, further enticing companies to use their own facilities. However, despite favorable trends in commodity prices, high inflation hurts larger growth for operators, with higher interest rates making the cost of maintenance of data colocation service centers higher.

### Peer Comparison:

For the Peer Comparison we will look at sock price, market cap, EPS, & P/E Ratio for various companies in competition.

Company	Stock Price	Market Cap	EPS	PE Ratio
Equinix Inc	909.48	88.022B	10.41	78.12
Digital Realty Trust Inc	183.29	60.917B	3.46	44.91
Keppel DC REIT	2.19	2.826B	0.08	28.3

Equinix Inc has the highest stock price at \$909.48, reflecting strong investor confidence and a leading market position. Digital Realty Trust Inc follows with a stock price of \$183.29, indicating a balanced market perception, while Keppel DC REIT has the lowest stock price at \$2.19, suggesting a smaller market presence and potential value investment opportunities. Equinix's PE ratio of 78.12 is the highest, suggesting that investors are willing to pay a premium for its earnings and expect continued growth. Digital Realty Trust Inc has a PE ratio of 44.91, indicating moderate valuation and growth expectations. Keppel DC REIT PE ratio of 28.3 is the lowest, which could imply potential undervaluation or higher perceived risks. To conclude these points, it is fair to say that relative to the competition in the Industry DLR is moderate compared to its peers and doesn't look the best for future growth to investors

# Valuation Analysis

## Funds From Operations:

A key assumption when forecasting the price of Digital Realty is analyzing the components that contribute to its funds from operations (FFO) and understanding the factors driving it. The key drivers of FFO include net income, depreciation, gain on disposition of properties, and income tax expense. Looking ahead, we project a (CAGR) of 5% for FFO over the next five years. While growth is expected to remain stable, fluctuations in these underlying drivers, particularly property sales and the tax environment, may influence price movement. The formula used in our forecasts is shown below.

$$\begin{aligned} \text{FFO} = & + \text{Net Income} \\ & + \text{Depreciation \& Amortization} \\ & - \text{Gain on Dispositions} \\ & - \text{Interest Income} \end{aligned}$$

Source: Investopedia

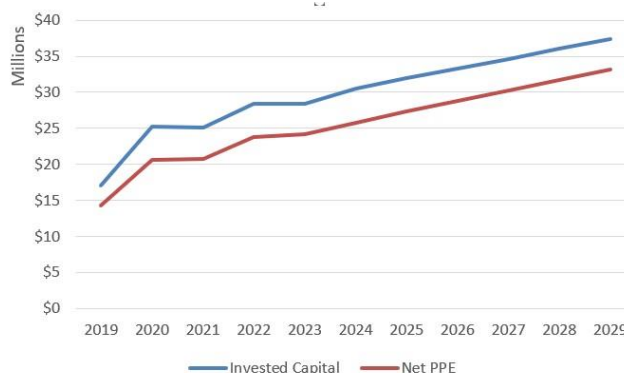
Starting with net income, this was forecasted based on every income statement item and is projected to grow at an average of 13% over the next 5 years.

Next, depreciation comprises a big portion of this equation. It is forecasted relative to previous years implied depreciation rate. In our case the average over the last three years has been at 6.80%. We used this percentage multiplied by our total Net PPE to arrive at our forecasted depreciation values.

Lastly because we aren't forecasting any interest income, we have gain on dispositions. Because there is no telling what properties they plan on disposing of, we forecasted 2024 at the average of the previous five years and grew it by our inflation rate, 2%, thereafter.

## Invested Capital:

A consideration when calculating Free Cash Flow (FCF) and Return on Invested Capital (ROIC) for Digital Realty is analyzing the components that contribute to its invested capital (IC) and understanding the driving factors. One driver of IC includes normal cash, a % of revenue that averages in previous years at 2.78%. Other accounts that are included in IC are other operating working capital items, net PPE and other operating assets. Looking ahead, we forecast an increase of \$2mm in invested capital over the next five years. We are aware that PPE has a very big impact on this calculation being a real estate company. Generally, our IC follows net PPE growth as you can see in the attached chart.



Source: DLR 10-K, 2023

## Effective Borrowing Rate:

Digital Realty has benefited significantly from securing debt during a period of historically low interest rates, resulting in an effective interest rate of just 2.89%. This favorable financing environment has allowed the company to manage its capital structure efficiently, minimizing interest expenses and freeing up resources for further investment and growth. However, if Digital Realty were to issue new debt in today's higher interest rate environment, it would face substantial financial challenges. Higher borrowing costs would necessitate carrying a significantly larger amount of debt on the balance sheet to achieve the same level of capital, increasing financial risk and potentially impacting the company's overall profitability and credit standing. The current low-rate debt structure has thus provided a critical advantage, but future refinancing in a less favorable rate climate could pose considerable hurdles.

## Cost of Equity:

We calculated DLR's cost of equity to be 8.03%, using the Capital Asset Pricing Model. This projection includes a risk-free rate based on the current U.S. 5-year treasury at 4.30%, our Bloomberg raw beta of 0.81, and a 4.60% equity risk premium based on Damodaran's 12-month cash yield data [9]. Given that the cost of equity serves as the discount rate in our dividend discount model, this is a crucial part of the process and is calculated consistently through the forecast.

## Model Valuations

### Price to Funds from Operations (P/FFO):

Share Price: \$174-187

The main valuation method we considered was Price to Funds from operations. This is a relative valuation method and was used based on its peers. When estimating using this pricing method we took its three most similar competitors and noted their estimated FFO for the two upcoming years. Once we had each company's P/FFO we averaged it and it returned a value of 24.04x and 22.56x in 2024 and 2025, respectively.

The last step of the process was gathering DLR's FFO and multiplying it by the peer FFO multiplier. Digital Realty's FFO was obtained using the method mentioned in the section above. When multiplying our FFO by the multiplier we obtained \$173.77 and \$187.66 as a price estimate for our model.

This relative valuation is heavily weighted in our recommendation because we believe it is the best estimate for estimating intrinsic value. It is a more intuitive way of estimating because a REIT should be valued based on the cash it generates, net of any one-off sales. The reasoning for this is because a REIT is required to pay out 90% of all taxable income and these one-off sales do not add to the company's taxable income.

### Dividend Discount Model:

Share Price: \$95.33

The DDM model is an important valuation method for DLR, given its consistently high dividend payout, which is expected to continue. We discounted the projected dividends per share from 2025-2029 to present value using our cost of equity of 8.03%. Additionally, the terminal value was calculated by dividing our terminal year dividend by difference of our cost of equity and the CV ROE. Once calculated it was discounted to its present value. After summing these discounted cash flows and making the necessary partial-year adjustment, we derived an implied per share price of \$95.33.

### Relative Price to Earnings Ratio:

Share Price: \$194-213

The price to earnings method was also used in our evaluation and was calculated similarly to the P/FFO. We used three peer comparisons to estimate the P/E multiplier that would give us a relative stock price. The peer's average P/E ratio is 60.01x and 52.85x in 2024 and 2025 respectively. Using these two values multiplied by our EPS estimates of 3.25 and 4.02 we arrived at a target price of \$194.79 - \$212.55.

This method gives us the ability to accurately price our DLR relative to its peers with accuracy. Unlike other methods it is not sensitive to single assumptions and is a reliable method to estimate intrinsic value.

### Discounted Cash Flow & Economic Profit Analysis:

Share Price: \$49.59

The first couple of intrinsic valuation methods we used to compute our implied per-share price were the Discounted Cash Flow (DCF) and Economic Profit (EP) analysis. Since DLR is a Real Estate company, we calculated the free cash flow to firm (FCFF) for 2024-2029 and discounted it back to the present value using the WACC of 7.43%. After accounting for minority interest and operating lease liabilities, dividing by the shares outstanding, and adjusting for timing, we arrived at our implied per-share price of \$49.59.

## Sensitivity Analysis

### Beta vs. Equity Risk Premium:

Beta and the equity risk premium are crucial components when determining the cost of equity. Beta represents the company's risk; a higher beta reduces valuation, while a lower beta increases it. Similarly, the equity risk premium, which measures the difference between the expected market return and the risk-free rate, affects valuation in the same manner. For instance, a 0.05 increase in beta can lead to nearly a \$4 decline in the stock price, while a 0.10% rise in the equity risk premium causes the stock price to drop by almost \$2.



		Beta							
		95.33	0.66	0.71	0.76	0.81	0.86	0.91	0.96
ERP	4.90%	104.23	99.59	95.36	91.49	87.94	84.66	81.63	
	4.80%	105.56	100.89	96.64	92.74	89.15	85.85	82.79	
	4.70%	106.93	102.23	97.94	94.02	90.40	87.07	83.99	
	4.60%	108.33	103.61	99.29	95.33	91.69	88.33	85.22	
	4.50%	109.78	105.02	100.68	96.69	93.02	89.63	86.49	
	4.40%	111.26	106.48	102.10	98.09	94.39	90.97	87.81	
	4.30%	112.78	107.97	103.57	99.53	95.80	92.36	89.16	

		Tax Rate							
		173.77	3.26%	4.26%	5.26%	6.26%	7.26%	8.26%	9.26%
Revenue Growth	8.00%	164.17	163.42	162.66	161.91	161.16	160.40	159.65	
	10.00%	168.25	167.46	166.66	165.86	165.07	164.27	163.48	
	12.00%	172.33	171.49	170.66	169.82	168.98	168.14	167.30	
	14.00%	176.41	175.53	174.65	173.77	172.89	172.01	171.13	
	16.00%	180.49	179.57	178.65	177.73	176.80	175.88	174.96	
	18.00%	184.57	183.61	182.64	181.68	180.72	179.75	178.79	
	20.00%	188.65	187.65	186.64	185.63	184.63	183.62	182.61	

### Inflation vs. Depreciation %:

Now looking at how depreciation rate and inflation affect our price. First, you can see how depreciation % is a big factor once you start to move it. You can see almost a 2x increase in price if you decrease the rate by 2% and inversely a full 50% cut if you increase it by 2%. As for inflation, you can see it does not have a big impact in our model. If we were to increase inflation to 3.50% it results in < 1% change in price.

		Inflation							
		194.79	0.50%	1.00%	1.50%	2.00%	2.50%	3.00%	3.50%
Depreciation %	3.80%	340.60	340.57	340.53	340.50	340.46	340.43	340.39	
	4.80%	292.09	292.05	292.02	291.98	291.95	291.91	291.88	
	5.80%	243.57	243.54	243.50	243.47	243.43	243.40	243.36	
	6.80%	195.06	195.02	194.99	194.95	194.92	194.88	194.84	
	7.80%	146.54	146.51	146.47	146.44	146.40	146.36	146.33	
	8.80%	98.03	97.99	97.96	97.92	97.89	97.85	97.81	
	9.80%	49.51	49.48	49.44	49.41	49.37	49.33	49.30	

### Internal Debt Effective Rate vs. Revenue Growth:

Similar to the last table we will look at revenue growth but instead with the effective borrowing rate of DLR. DLR is lucky in that most of their debt was taken out when interest rates were low but that bars the risk of what happens if they were to gain new debt at a higher rate. You can see in the table this has a drastic effect on price with a 1% increase in interest rate results in \$30 stock price dip.

		Revenue Growth							
		194.79	5.00%	8.00%	11.00%	14.00%	17.00%	20.00%	23.00%
Internal debt rate	1.39%	197.78	212.41	227.04	241.67	256.30	270.93	285.56	
	1.89%	182.21	196.82	211.43	226.04	240.65	255.26	269.87	
	2.39%	166.65	181.24	195.83	210.41	225.00	239.59	254.18	
	2.89%	151.08	165.65	180.22	194.79	209.35	223.92	238.49	
	3.39%	135.52	150.07	164.61	179.16	193.71	208.25	222.80	
	3.89%	119.95	134.48	149.01	163.53	178.06	192.58	207.11	
	4.39%	104.39	118.90	133.40	147.91	162.41	176.92	191.42	

### Dividend Growth vs. CV EPS Growth:

This sensitivity table we will look at the affects of our dividend growth assumption along with the CV EPS % growth. The main driver you see is the EPS assumption. With only 1% decrease in EPS, we see a \$10 drop in price. As for dividend growth, a 1% increase only drops our price ~\$4. So, you can see how each one affects our model differently.

		Dividend Growth							
		95.33	1.50%	2.00%	2.50%	3.00%	3.50%	4.00%	4.50%
CV Year EPS Growth	1.00%	73.86	75.74	77.67	79.64	81.66	83.72	85.82	
	1.50%	77.92	79.92	81.97	84.07	86.22	88.41	90.65	
	2.00%	82.65	84.79	86.99	89.24	91.53	93.88	96.29	
	2.50%	88.23	90.55	92.91	95.33	97.81	100.35	102.94	
	3.00%	94.93	97.44	100.01	102.65	105.34	108.09	110.91	
	3.50%	103.10	105.86	108.68	111.57	114.53	117.55	120.65	
	4.00%	113.30	116.37	119.50	122.71	126.00	129.36	132.80	

### Revenue Growth vs. Tax Rate:

The next table compares the effects of Revenue growth assumptions and our marginal tax rate. Tax rate has a very minimal impact on the model while revenue growth is a key driver of value. Where a small 2% increase results in a ~\$5 increase to the stock price.

## Conclusion

We placed a HOLD rating on Digital Realty due to already having a foot in the door in one of the most popular upcoming investments, data centers. DLR continues to pay a strong dividend and our expectation of an increase in dividends per share makes this an attractive investment. We advise that the Krause Fund adds this company to the portfolio.

## Important Disclaimer

This report was created by students enrolled in the 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 with 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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Digital Realty  
Sensitivity Tables

ERP

Beta							
95.33	0.66	0.71	0.76	0.81	0.86	0.91	0.96
4.90%	104.23	99.59	95.36	91.49	87.94	84.66	81.63
4.80%	105.56	100.89	96.64	92.74	89.15	85.85	82.79
4.70%	106.93	102.23	97.94	94.02	90.40	87.07	83.99
4.60%	108.33	103.61	99.29	95.33	91.69	88.33	85.22
4.50%	109.78	105.02	100.68	96.69	93.02	89.63	86.49
4.40%	111.26	106.48	102.10	98.09	94.39	90.97	87.81
4.30%	112.78	107.97	103.57	99.53	95.80	92.36	89.16

Depreciation %

Inflation							
194.79	0.50%	1.00%	1.50%	2.00%	2.50%	3.00%	3.50%
3.80%	340.60	340.57	340.53	340.50	340.46	340.43	340.39
4.80%	292.09	292.05	292.02	291.98	291.95	291.91	291.88
5.80%	243.57	243.54	243.50	243.47	243.43	243.40	243.36
6.80%	195.06	195.02	194.99	194.95	194.92	194.88	194.84
7.80%	146.54	146.51	146.47	146.44	146.40	146.36	146.33
8.80%	98.03	97.99	97.96	97.92	97.89	97.85	97.81
9.80%	49.51	49.48	49.44	49.41	49.37	49.33	49.30

CV EPS

Dividend Growth							
95.33	1.50%	2.00%	2.50%	3.00%	3.50%	4.00%	4.50%
1.00%	73.86	75.74	77.67	79.64	81.66	83.72	85.82
1.50%	77.92	79.92	81.97	84.07	86.22	88.41	90.65
2.00%	82.65	84.79	86.99	89.24	91.53	93.88	96.29
2.50%	88.23	90.55	92.91	95.33	97.81	100.35	102.94
3.00%	94.93	97.44	100.01	102.65	105.34	108.09	110.91
3.50%	103.10	105.86	108.68	111.57	114.53	117.55	120.65
4.00%	113.30	116.37	119.50	122.71	126.00	129.36	132.80

Revenue Growth

Tax Rate							
173.77	3.26%	4.26%	5.26%	6.26%	7.26%	8.26%	9.26%
8.00%	164.17	163.42	162.66	161.91	161.16	160.40	159.65
10.00%	168.25	167.46	166.66	165.86	165.07	164.27	163.48
12.00%	172.33	171.49	170.66	169.82	168.98	168.14	167.30
14.00%	176.41	175.53	174.65	173.77	172.89	172.01	171.13
16.00%	180.49	179.57	178.65	177.73	176.80	175.88	174.96
18.00%	184.57	183.61	182.64	181.68	180.72	179.75	178.79
20.00%	188.65	187.65	186.64	185.63	184.63	183.62	182.61

Internal debt rate

Revenue Growth							
194.79	5.00%	8.00%	11.00%	14.00%	17.00%	20.00%	23.00%
1.39%	197.78	212.41	227.04	241.67	256.30	270.93	285.56
1.89%	182.21	196.82	211.43	226.04	240.65	255.26	269.87
2.39%	166.65	181.24	195.83	210.41	225.00	239.59	254.18
2.89%	151.08	165.65	180.22	194.79	209.35	223.92	238.49
3.39%	135.52	150.07	164.61	179.16	193.71	208.25	222.80
3.89%	119.95	134.48	149.01	163.53	178.06	192.58	207.11
4.39%	104.39	118.90	133.40	147.91	162.41	176.92	191.42





Digital Realty

Balance Sheet

Scale (Thousands)

<b>Fiscal Years Ending Dec. 31</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>
<b>Assets</b>											
Investments in real estate:											
Investments in properties, net	14,230,575	20,582,954	20,762,241	23,774,662	24,236,088	25,806,829	27,339,292	28,837,712	30,306,041	31,747,954	33,166,882
Investments in unconsolidated entities	1,287,109	1,148,158	1,807,689	1,991,426	2,295,889	2,280,161	2,260,316	2,236,686	2,209,759	2,179,884	2,149,478
<b>Net investments in real estate</b>	<b>15,517,684</b>	<b>21,731,112</b>	<b>22,569,930</b>	<b>25,766,088</b>	<b>26,531,977</b>	<b>28,086,989</b>	<b>29,599,608</b>	<b>31,074,398</b>	<b>32,515,799</b>	<b>33,927,838</b>	<b>35,316,360</b>
Operating lease right-of-use assets, net	628,681	1,386,959	1,405,441	1,351,329	1,414,256	1,497,144	1,577,772	1,656,384	1,733,217	1,808,484	1,882,497
Cash & cash equivalents	89,817	108,501	142,698	141,773	1,625,495	(46,896)	(870,944)	(1,509,714)	(2,003,653)	(2,388,170)	(2,838,857)
Accounts & other receivables, net	305,501	603,111	671,721	969,292	1,278,110	1,457,045	1,631,891	1,795,080	1,938,686	2,055,008	2,137,208
Deferred rent, net	478,744	528,180	547,385	601,590	624,427	812,116	909,570	1,000,527	1,080,569	1,145,403	1,191,220
Goodwill	3,363,070	8,330,996	7,937,440	9,208,497	9,239,871	9,239,871	9,239,871	9,239,871	9,239,871	9,239,871	9,239,871
Customer relationship value, deferred leasing costs & intangibles, net	2,195,324	3,122,904	2,735,486	3,092,627	2,500,237	2,584,693	2,359,047	2,135,274	1,913,920	1,702,282	1,532,692
Assets held for sale	229,934	-	-	-	478,503	-	-	-	-	-	-
Other assets	184,561	264,528	359,459	353,802	420,382	427,334	443,436	462,683	485,223	510,825	539,397
<b>Total assets</b>	<b>23,068,131</b>	<b>36,076,291</b>	<b>36,369,560</b>	<b>41,484,998</b>	<b>44,113,258</b>	<b>44,058,297</b>	<b>44,890,251</b>	<b>45,854,503</b>	<b>46,903,633</b>	<b>48,001,540</b>	<b>49,000,388</b>
<b>Liabilities and Equity</b>											
Total I-t and s-t debt	10,122,448	13,304,717	13,448,210	16,596,803	17,425,907	17,595,045	18,255,680	18,895,179	19,510,761	20,102,150	20,680,418
Operating lease liabilities	693,539	1,468,712	1,512,187	1,471,044	1,542,094	1,622,019	1,709,373	1,794,542	1,877,782	1,959,327	2,039,514
Accounts payable & other accrued liabilities	1,007,761	1,420,162	1,543,623	1,868,885	2,168,984	2,273,735	2,546,583	2,801,242	3,025,341	3,206,861	3,335,136
Deferred tax liabilities, net	-	698,308	666,451	1,192,752	1,151,096	1,208,651	1,269,083	1,332,538	1,399,164	1,469,123	1,542,579
Accrued dividends & distributions	234,620	324,386	338,729	363,716	387,988	391,566	403,314	415,413	427,875	440,712	453,933
Security deposits & prepaid rents	208,724	371,659	336,578	369,654	401,867	485,048	543,253	597,579	645,385	684,108	711,472
Obligations associated with assets held for sale	2,700	-	-	-	39,001	-	-	-	-	-	-
<b>Total liabilities</b>	<b>12,418,566</b>	<b>17,587,944</b>	<b>17,845,778</b>	<b>21,862,854</b>	<b>23,116,937</b>	<b>23,576,063</b>	<b>24,727,286</b>	<b>25,836,491</b>	<b>26,886,309</b>	<b>27,862,281</b>	<b>28,763,052</b>
<b>Stockholders' Equity</b>											
Preferred stock	1,434,420	950,940	731,690	731,690	731,690	731,690	731,690	731,690	731,690	731,690	731,690
<b>Total common equity</b>	<b>11,579,393</b>	<b>20,629,685</b>	<b>21,078,687</b>	<b>22,145,755</b>	<b>24,399,885</b>	<b>24,399,885</b>	<b>24,399,885</b>	<b>24,399,885</b>	<b>24,399,885</b>	<b>24,399,885</b>	<b>24,399,885</b>
Accumulated other comprehensive income (loss), net	(87,922)	173,890	(135,000)	(595,798)	(751,393)	(751,393)	(751,393)	(751,393)	(751,393)	(751,393)	(751,393)
Accumulated dividends in excess of earnings (Retained Earnings)	(3,046,579)	(3,997,938)	(3,631,929)	(4,698,313)	(5,262,648)	(5,759,570)	(6,057,728)	(6,177,938)	(6,150,715)	(5,998,032)	(5,868,733)
<b>Total stockholders' equity</b>	<b>9,879,312</b>	<b>17,717,697</b>	<b>18,004,568</b>	<b>17,583,334</b>	<b>19,117,534</b>	<b>18,620,612</b>	<b>18,322,454</b>	<b>18,202,244</b>	<b>18,229,467</b>	<b>18,382,150</b>	<b>18,511,449</b>
Noncontrolling interests	728,788	728,639	472,219	524,131	483,973	466,808	445,697	420,954	393,043	362,295	331,073
<b>Total equity</b>	<b>10,608,100</b>	<b>18,446,336</b>	<b>18,476,787</b>	<b>18,107,465</b>	<b>19,601,507</b>	<b>19,087,420</b>	<b>18,768,151</b>	<b>18,623,198</b>	<b>18,622,510</b>	<b>18,744,445</b>	<b>18,842,522</b>
Redeemable noncontrolling interests	41,465	42,011	46,995	1,514,679	1,394,814	1,394,814	1,394,814	1,394,814	1,394,814	1,394,814	1,394,814
<b>Total liabilities and equity</b>	<b>23,068,131</b>	<b>36,076,291</b>	<b>36,369,560</b>	<b>41,484,998</b>	<b>44,113,258</b>	<b>44,058,297</b>	<b>44,890,251</b>	<b>45,854,503</b>	<b>46,903,633</b>	<b>48,001,540</b>	<b>49,000,388</b>

Digital Realty  
Historical Cash Flow Statement

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023
<b>Cash flows from operating activities:</b>					
Net income	599,221	362,730	1,747,412	380,325	950,312
<b>Adjustments to reconcile net income to net cash provided by operating activities:</b>					
Loss (gain) on disposition of properties, net	(384,356)	(271,243)	(1,380,795)	(176,754)	(900,531)
Equity in (earnings) loss of unconsolidated entities	(8,067)	57,629	(62,283)	13,497	29,791
Distributions from unconsolidated entities	44,293	39,878	66,232	42,376	73,518
Depreciation & amortization	1,163,774	1,366,379	1,486,632	1,577,933	1,694,859
Amortization of share-based compensation	(8,435)	2,432	84,083	92,461	80,532
Loss from early extinguishment of debt	39,157	103,215	18,672	51,135	-
Straight-lined rents & amortization of above & below market leases	-	-	(30,793)	(64,954)	(50,931)
Amortization of acquired above-market leases and acquired below-market leases, net	17,097	12,686	6,074	-	-
Amortization of deferred financing costs and debt discount/premium	15,622	19,202	18,694	18,848	26,834
Other operating activities, net	-	-	81,038	(45,141)	(8,216)
Other items, net	(26,535)	(4,443)	27,341	-	-
<b>Changes in assets and liabilities:</b>					
Increase in accounts receivable and other assets	(103,162)	(103,327)	(389,116)	(272,452)	(155,317)
Increase (decrease) in accounts payable and other liabilities	72,660	94,909	62,452	42,114	(224,434)
<b>Net cash flows from operating activities</b>	<b>1,513,817</b>	<b>1,706,541</b>	<b>1,702,228</b>	<b>1,659,388</b>	<b>1,634,780</b>
Improvements to investments in real estate	(1,436,902)	(2,064,066)	(2,520,772)	(2,643,097)	(3,525,598)
Cash paid for business combination and asset acquisitions, net of cash and restricted cash acquired	(75,704)	(908,567)	(192,015)	(1,930,178)	(52,297)
Investments in and advances from unconsolidated entities	-	-	(59,450)	(299,427)	(336,456)
Proceeds from (investment in) unconsolidated entities, net	1,296,699	(144,323)	2,665	-	-
Proceeds from sale of real estate	-	564,615	1,691,072	271,567	2,619,778
Other investing activities, net	(59,085)	(47,006)	(42,671)	(101,600)	(62,511)
<b>Net cash flows from investing activities</b>	<b>(274,992)</b>	<b>(2,599,347)</b>	<b>(1,061,721)</b>	<b>(4,699,403)</b>	<b>(1,115,111)</b>
Proceeds from credit facilities	-	162,111	2,521,497	5,510,267	2,870,841
Net proceeds from (payments on) credit facilities	(1,412,388)	-	(2,611,051)	(3,820,086)	(3,293,644)
Borrowings on secured or unsecured debt	2,869,240	3,573,120	1,824,389	2,791,027	869,132
Repayments on secured or unsecured debt	(1,915,301)	(2,928,924)	(990,968)	(1,036,577)	(111,979)
Premium paid for early extinguishment of debt	(35,067)	(96,124)	(16,482)	(49,662)	-
Capital contributions from noncontrolling interests, net	63,173	102,285	124,134	44,312	4,474
Proceeds from issuance of common stock, net	535,620	1,879,957	172,096	928,432	2,207,259
Redemption of preferred stock	(365,050)	(500,000)	(201,250)	-	-
Payments of dividends & distributions	(996,766)	(1,239,318)	(1,379,198)	(1,450,637)	(1,520,644)
Other financing activities, net	(15,482)	(17,418)	(33,797)	52,073	(61,965)
<b>Net cash flows from financing activities</b>	<b>(1,272,021)</b>	<b>935,689</b>	<b>(590,630)</b>	<b>2,969,149</b>	<b>963,474</b>
Net increase (decrease) in cash, cash equivalents & restricted cash	(33,196)	42,883	49,877	(70,866)	1,485,774
Effect of exchange rate changes on cash, cash equivalents & restricted cash	(4,773)	(16,484)	(22,044)	70,077	2,631
Cash, cash equivalents & restricted cash at beginning of period	135,222	97,253	123,652	151,485	150,696
<b>Cash, cash equivalents &amp; restricted cash at end of period</b>	<b>97,253</b>	<b>123,652</b>	<b>151,485</b>	<b>150,696</b>	<b>1,636,470</b>



Digital Realty  
Forecasted Cash Flow Statement

<b>Fiscal Years Ending Dec. 31</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>
<b>Cash flows from operating activities:</b>						
Net income	1,052,177	1,293,986	1,516,699	1,710,814	1,884,782	1,913,808
Add back: Depreciation and Amortization	1,805,077	1,910,871	2,013,780	2,114,116	2,212,180	2,308,247
Change in accounts receivable	(178,935)	(174,845)	(163,189)	(143,606)	(116,321)	(82,200)
Change in deferred rent	(187,689)	(97,454)	(90,957)	(80,042)	(64,834)	(45,816)
Change in other assets	(6,952)	(16,102)	(19,246)	(22,541)	(25,602)	(28,572)
Change in accounts payable	104,751	272,848	254,658	224,099	181,520	128,274
Change in deferred tax liability	57,555	60,433	63,454	66,627	69,958	73,456
Change in security deposits and prepaid rents	83,181	58,206	54,325	47,806	38,723	27,364
<b>Net cash flows from operating activities</b>	<b>2,729,164</b>	<b>3,307,941</b>	<b>3,629,524</b>	<b>3,917,274</b>	<b>4,180,407</b>	<b>4,294,562</b>
Capex	(3,375,818)	(3,443,334)	(3,512,201)	(3,582,445)	(3,654,093)	(3,727,175)
Change in operating ROU assets	(82,888)	(80,628)	(78,612)	(76,832)	(75,267)	(74,014)
Change in goodwill	-	-	-	-	-	-
Change in CRV and intangibles	(84,456)	225,646	223,773	221,354	211,638	169,590
Change in assets held for sale	478,503	-	-	-	-	-
Change in liabilities associated with assets held for sale	(39,001)	-	-	-	-	-
Change in minority interest	15,728	19,845	23,630	26,927	29,875	30,406
Change in noncontrolling interest	(17,165)	(21,110)	(24,744)	(27,910)	(30,749)	(31,222)
<b>Net cash flows from investing activities</b>	<b>(3,087,931)</b>	<b>(3,278,472)</b>	<b>(3,343,409)</b>	<b>(3,410,996)</b>	<b>(3,487,848)</b>	<b>(3,601,193)</b>
Total dividends paid	(1,566,264)	(1,613,254)	(1,661,652)	(1,711,502)	(1,762,847)	(1,815,732)
Change in lt & st debt	169,138	660,635	639,499	615,582	591,389	578,268
Change in operating lease liabilities	79,925	87,353	85,169	83,241	81,545	80,187
Change in accrued dividends and distributions	3,578	11,748	12,099	12,462	12,836	13,221
Change in preferred stock	-	-	-	-	-	-
Change in total common equity	-	-	-	-	-	-
Change in AOIC	-	-	-	-	-	-
<b>Net cash flows from financing activities</b>	<b>(1,313,623)</b>	<b>(853,518)</b>	<b>(924,885)</b>	<b>(1,000,216)</b>	<b>(1,077,076)</b>	<b>(1,144,056)</b>
Net increase (decrease) in cash, cash equivalents & restricted cash	(1,672,391)	(824,049)	(638,770)	(493,939)	(384,517)	(450,687)
Cash, cash equivalents & restricted cash at beginning of period	1,625,495	(46,896)	(870,944)	(1,509,714)	(2,003,653)	(2,388,170)
<b>Cash, cash equivalents &amp; restricted cash at end of period</b>	<b>(46,896)</b>	<b>(870,944)</b>	<b>(1,509,714)</b>	<b>(2,003,653)</b>	<b>(2,388,170)</b>	<b>(2,838,857)</b>

Digital Realty  
Common Size Income Statement

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E
<b>Operating Revenues:</b>											
Rental & other services revenues	99.60%	99.56%	99.26%	99.38%	99.14%	99.39%	99.39%	99.39%	99.39%	99.39%	99.39%
Fee income & other operating revenues	0.40%	0.44%	0.74%	0.62%	0.86%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%
<b>Total operating revenues</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>Operating Expenses:</b>											
Rental property operating & maintenance	31.80%	34.11%	35.47%	38.91%	43.48%	36.76%	36.76%	36.76%	36.76%	36.76%	36.76%
Property taxes & insurance	5.37%	4.68%	4.69%	4.09%	3.95%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Amortization of Intangibles excluding Goodwill	-	-	-	-	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
Depreciation & amortization	36.26%	35.00%	33.57%	33.63%	30.94%	28.91%	27.33%	26.18%	25.45%	25.12%	25.20%
General & administrative	6.58%	9.00%	9.05%	9.00%	8.20%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Transactions & integration	0.87%	2.73%	1.07%	1.47%	-	1.53%	1.53%	1.53%	1.53%	1.53%	1.53%
Impairment of investments in real estate	0.17%	0.17%	0.41%	0.06%	-	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
Other operating expenses	0.44%	0.03%	0.06%	0.27%	0.14%	0.19%	0.19%	0.19%	0.19%	0.19%	0.19%
<b>Total operating expenses</b>	<b>81.48%</b>	<b>85.72%</b>	<b>84.33%</b>	<b>87.43%</b>	<b>90.42%</b>	<b>84.20%</b>	<b>82.20%</b>	<b>80.73%</b>	<b>79.67%</b>	<b>78.72%</b>	<b>79.18%</b>
<b>Operating income (loss)</b>	<b>18.52%</b>	<b>14.28%</b>	<b>15.67%</b>	<b>12.57%</b>	<b>9.58%</b>	<b>15.80%</b>	<b>17.80%</b>	<b>19.27%</b>	<b>20.33%</b>	<b>21.28%</b>	<b>20.82%</b>
<b>Other Income (Expenses):</b>											
Equity in earnings (loss) of unconsolidated entities	0.25%	-1.48%	1.41%	-0.29%	-0.54%	-0.13%	-0.13%	-0.13%	-0.13%	-0.13%	-0.13%
Gain on disposition of properties, net	10.44%	8.12%	31.18%	3.77%	16.44%	13.99%	13.99%	13.99%	13.99%	13.99%	13.99%
Other income (expenses), net	2.06%	0.52%	-0.10%	0.19%	1.25%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%
Interest expense	-11.00%	-8.53%	-6.64%	-6.38%	-7.99%	-8.14%	-7.54%	-7.10%	-6.79%	-6.60%	-6.53%
Gain (loss) from early extinguishment of debt	-1.22%	-2.64%	-0.42%	-1.09%	1.55%	-0.77%	-0.77%	-0.77%	-0.77%	-0.77%	-0.77%
Income tax expense	-0.37%	-0.97%	-1.64%	-0.67%	-1.38%	-1.14%	-1.26%	-1.34%	-1.40%	-1.45%	-1.42%
Net Income (loss)	18.67%	9.29%	39.46%	8.11%	17.35%	17.13%	18.81%	20.04%	20.93%	21.75%	21.24%
Net income (loss) attributable to noncontrolling interests	-0.61%	-0.16%	-0.86%	-0.06%	-0.03%	-0.34%	-0.34%	-0.34%	-0.34%	-0.34%	-0.34%
Net income attributable to Digital Realty Trust, Inc.	18.07%	9.13%	38.60%	8.05%	17.32%	16.85%	18.50%	19.72%	20.59%	21.40%	20.90%
Preferred stock dividends, including undeclared dividend	-2.34%	-1.96%	-1.03%	-0.87%	-0.74%	-0.65%	-0.58%	-0.53%	-0.49%	-0.46%	-0.44%
Gain (loss) on redemption of preferred stock	-0.37%	-0.42%	0.41%	-	-	-	-	-	-	-	-
<b>Net income (loss) available to common stockholders</b>	<b>15.36%</b>	<b>6.75%</b>	<b>37.98%</b>	<b>7.18%</b>	<b>16.58%</b>	<b>16.20%</b>	<b>17.92%</b>	<b>19.19%</b>	<b>20.10%</b>	<b>20.94%</b>	<b>20.45%</b>

Digital Realty  
Common Size Balance Sheet

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E
<b>Assets</b>											
Investments in real estate:	443.42%										
Investments in properties, net	443.42%	527.28%	468.90%	506.72%	442.50%	413.32%	390.95%	374.88%	364.79%	360.51%	362.14%
Investments in unconsolidated entities	40.11%	29.41%	40.83%	42.44%	41.92%	41.63%	41.27%	40.84%	40.35%	39.80%	39.25%
Net investments in real estate	483.53%	556.69%	509.72%	549.17%	484.42%	449.83%	423.27%	403.96%	391.39%	385.27%	385.61%
Operating lease right-of-use assets, net	19.59%	35.53%	31.74%	28.80%	25.82%	23.98%	22.56%	21.53%	20.86%	20.54%	20.55%
Cash & cash equivalents	2.80%	2.78%	3.22%	3.02%	29.68%	-0.75%	-12.45%	-19.63%	-24.12%	-27.12%	-31.00%
Accounts & other receivables, net	9.52%	15.45%	15.17%	20.66%	23.34%	23.34%	23.34%	23.34%	23.34%	23.34%	23.34%
Deferred rent, net	14.92%	13.53%	12.36%	12.82%	11.40%	13.01%	13.01%	13.01%	13.01%	13.01%	13.01%
Goodwill	104.79%	213.42%	179.26%	196.27%	168.70%	147.98%	132.13%	120.12%	111.22%	104.92%	100.89%
Customer relationship value, deferred leasing costs & intangibles, n	68.41%	80.00%	61.78%	65.92%	45.65%	41.40%	33.73%	27.76%	23.04%	19.33%	16.74%
Assets held for sale	7.16%	-	-	-	8.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other assets	5.75%	6.78%	8.12%	7.54%	7.68%	6.84%	6.34%	6.01%	5.84%	5.80%	5.89%
<b>Total assets</b>	<b>718.80%</b>	<b>924.18%</b>	<b>821.38%</b>	<b>884.20%</b>	<b>805.42%</b>	<b>804.41%</b>	<b>819.60%</b>	<b>837.21%</b>	<b>856.36%</b>	<b>876.41%</b>	<b>894.65%</b>
<b>Liabilities and Equity</b>											
Global revolving credit facilities, net	7.29%	13.63%	8.99%	45.83%	33.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Unsecured term loans, net	25.25%	13.75%	-	17.00%	28.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Unsecured senior notes, net of discount	279.60%	307.33%	291.41%	279.64%	245.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Secured debt, including premiums	3.27%	6.13%	-	-	-	-	-	-	-	-	-
Secured & other debt, including premiums	-	-	3.31%	11.27%	11.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Operating lease liabilities	21.61%	37.62%	34.15%	31.35%	28.16%	29.61%	31.21%	32.76%	34.28%	35.77%	37.24%
Accounts payable & other accrued liabilities	31.40%	36.38%	34.86%	39.83%	39.60%	41.51%	46.50%	51.14%	55.24%	58.55%	60.89%
Deferred tax liabilities, net	-	17.89%	15.05%	25.42%	21.02%	22.07%	23.17%	24.33%	25.55%	26.82%	28.16%
Accrued dividends & distributions	7.31%	8.31%	7.65%	7.75%	7.08%	7.15%	7.36%	7.58%	7.81%	8.05%	8.29%
Security deposits & prepaid rents	6.50%	9.52%	7.60%	7.88%	7.34%	7.77%	7.77%	7.77%	7.77%	7.77%	7.77%
Obligations associated with assets held for sale	0.08%	0.00%	0.00%	0.00%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total liabilities</b>	<b>386.96%</b>	<b>450.56%</b>	<b>403.03%</b>	<b>465.98%</b>	<b>422.07%</b>	<b>430.45%</b>	<b>451.47%</b>	<b>471.72%</b>	<b>490.89%</b>	<b>508.71%</b>	<b>525.15%</b>
<b>Stockholders' Equity</b>											
Redeemable noncontrolling interests	1.29%	1.08%	1.06%	32.28%	25.47%	25.47%	25.47%	25.47%	25.47%	25.47%	25.47%
Preferred stock	44.70%	24.36%	16.52%	15.59%	-	-	-	-	-	-	-
Common Equity	360.81%	528.48%	476.04%	472.01%	445.49%	390.78%	348.91%	317.19%	293.70%	277.07%	266.42%
Accumulated other comprehensive income (loss), net	-2.74%	4.45%	-3.05%	-12.70%	-13.72%	-13.72%	-13.72%	-13.72%	-13.72%	-13.72%	-13.72%
<b>Total stockholders' equity</b>	<b>307.84%</b>	<b>453.88%</b>	<b>406.62%</b>	<b>374.76%</b>	<b>349.05%</b>	<b>339.97%</b>	<b>334.53%</b>	<b>332.34%</b>	<b>332.83%</b>	<b>335.62%</b>	<b>337.98%</b>
Noncontrolling interests in operating partnership	22.07%	15.60%	-	-	-	-	-	-	-	-	-
Noncontrolling interests in consolidated joint ventures	0.64%	3.07%	-	-	-	-	-	-	-	-	-
Noncontrolling interests	22.71%	18.67%	10.66%	11.17%	8.84%	8.52%	8.14%	7.69%	7.18%	6.61%	6.04%
<b>Total equity</b>	<b>330.55%</b>	<b>472.55%</b>	<b>417.28%</b>	<b>385.94%</b>	<b>357.88%</b>	<b>348.50%</b>	<b>342.67%</b>	<b>340.02%</b>	<b>340.01%</b>	<b>342.24%</b>	<b>344.03%</b>
<b>Total liabilities and equity</b>	<b>718.80%</b>	<b>924.18%</b>	<b>821.38%</b>	<b>884.20%</b>	<b>805.42%</b>	<b>804.41%</b>	<b>819.60%</b>	<b>837.21%</b>	<b>856.36%</b>	<b>876.41%</b>	<b>894.65%</b>

Digital Realty  
Value Driver Estimation

<b>Fiscal Years Ending Dec. 31</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>
<b>Free Cash Flow (FCF):</b>											
NOPLAT	588,300	1,248,821	753,707	1,154,113	469,742	1,072,276	1,323,135	1,554,508	1,757,002	1,938,808	1,978,387
Change in IC		8,072,149	(115,792)	3,343,644	51,924	2,028,223	1,423,825	1,391,431	1,363,002	1,344,634	1,361,457
FCF		(6,823,328)	869,499	(2,189,531)	417,817	(955,947)	(100,690)	163,077	394,000	594,175	616,931
<b>Return on Invested Capital (ROIC):</b>											
NOPLAT	588,300	1,248,821	753,707	1,154,113	469,742	1,072,276	1,323,135	1,554,508	1,757,002	1,938,808	1,978,387
Beginning IC		17,104,826	25,176,975	25,061,183	28,404,827	28,456,751	30,484,974	31,908,799	33,300,230	34,663,232	36,007,865
ROIC		7.30%	2.99%	4.61%	1.65%	3.77%	4.34%	4.87%	5.28%	5.59%	5.49%
<b>Economic Profit (EP):</b>											
Beginning IC		17,104,826	25,176,975	25,061,183	28,404,827	28,456,751	30,484,974	31,908,799	33,300,230	34,663,232	36,007,865
x (ROIC - WACC)		0.23%	-4.08%	-2.47%	-5.42%	-3.31%	-2.73%	-2.20%	-1.80%	-1.48%	-1.58%
EP	-	38,900	(1,027,202)	(618,606)	(1,539,492)	(940,631)	(833,239)	(702,582)	(598,512)	(513,118)	(568,652)

## Digital Realty

### Weighted Average Cost of Capital (WACC) Estimation

#### Cost of Equity:

Risk-Free Rate	4.30%
Beta	0.81
Equity Risk Premium	4.60%
<b>Cost of Equity</b>	<b>8.03%</b>

#### Cost of Debt:

Risk-Free Rate	4.30%
Implied Default Premium	1.60%
Pre-Tax Cost of Debt	5.90%
Marginal Tax Rate	6.26%
<b>After-Tax Cost of Debt</b>	<b>5.53%</b>

#### Cost of Preferred Stock:

Annual Pfd. Dividend	1.30
Price of Pfd. Shares	25
<b>Cost of Preferred:</b>	<b>5.20%</b>

#### Market Value of Common Equity:

		MV Weights
Total Shares Outstanding	311,608	
Current Stock Price	\$178.13	
<b>MV of Equity</b>	<b>55,506,658</b>	67.40%

#### Market Value of Debt:

S & L term debt	18,968,001	
PV of Operating Leases	83,441	
<b>MV of Total Debt</b>	<b>19,051,442</b>	23.14%

#### Market Value of Preferred Stock:

Total Shares Outstanding	311,608	
Price of Pfd. Shares	25	
<b>MV of Preferred</b>	<b>7,790,195</b>	9.46%

#### Market Value of the Firm

82,348,295 100.00%

Estimated WACC **7.07%**

**Digital Realty**

Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models

## Key Inputs:

CV Growth of NOPLAT	2.50%
CV Year ROIC	5.49%
WACC	7.07%
Cost of Equity	8.03%
IC (t-1)	28,456,751
NOPLAT(CV)	1,978,387

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

Free Cash Flow (FCF)	(955,947)	(100,690)	163,077	394,000	594,175	616,931
Continuing Value (CV)						23,574,402
PV of FCF	(892,795)	(87,826)	132,845	299,756	422,185	16,750,562

Value of Operating Assets:	16,624,727
Non-Operating Adjustments	
+ (BS Cash - Normal Cash)	-
+ Minority interest	2,280,161
- Operating Lease Liability	(1,622,019)
- PV lease	(83,441)
- Pref. stock	(731,690)
Value of Equity	16,467,737
Shares Outstanding	311,608
Intrinsic Value of Last FYE	\$ 52.85
<b>Implied Price as of Today</b>	<b>\$ 54.29</b>

**EP Model:**

Economic Profit (EP)	(940,631)	(833,239)	(702,582)	(598,512)	(513,118)	(568,652)
Continuing Value (CV)						(12,433,464)
PV of EP	(878,490)	(726,784)	(572,335)	(455,348)	(364,591)	(8,834,477)

Total PV of EP	(11,832,024)
Invested Capital (last FYE)	28,456,751
Value of Operating Assets:	16,624,727
Non-Operating Adjustments	
+ (BS Cash - Normal Cash)	-
+ Minority interest	2,280,161
- Operating Lease Liability	(1,622,019)
- PV lease	(83,441)
- Pref. stock	(731,690)
Value of Equity	16,467,737
Shares Outstanding	311,608
Intrinsic Value of Last FYE	\$ 52.85
<b>Implied Price as of Today</b>	<b>\$ 54.29</b>

## Digital Realty

Dividend Discount Model (DDM) or Fundamental P/E Valuation Model

<b>Fiscal Years Ending</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>	<b>2028E</b>	<b>2029E</b>
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EPS	\$ 3.25	\$ 4.02	\$ 4.74	\$ 5.36	\$ 5.92	\$ 6.01
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### Key Assumptions

CV growth of EPS	2.50%
CV Year ROE	10.58%
Cost of Equity	8.03%

### Future Cash Flows

P/E Multiple (CV Year)						13.81
Div (CV Year)						\$ 5.83
Stock Price (CV-1)						\$ 105.36
Dividends Per Share	\$ 5.03	\$ 5.18	\$ 5.33	\$ 5.49	\$ 5.66	
Discounted Cash Flows	\$ 4.65	\$ 4.44	\$ 4.23	\$ 4.03	\$ 3.84	\$ 71.60

Intrinsic Value as of Last FYE	\$ 92.80
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<b>Implied Price as of Today</b>	<b>\$ 95.33</b>
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## Digital Realty

### Relative Valuation Models

Ticker	Company	Price	EPS		P/E 24	P/E 25	FFO 24	FFO 25	P/FFO 24	P/FFO 25
			2024E	2025E						
EQIX	Equinix, Inc	\$901.15	\$11.41	\$12.84	78.98	70.18	35.23	37.98	25.58	23.73
AMT	American Tower Corp.	\$195.16	\$5.69	\$6.70	34.30	29.13	10.51	10.62	18.57	18.38
IRM	Iron Mountain	\$126.16	\$1.89	\$2.13	66.75	59.23	4.51	4.93	27.97	25.59
			Average		<b>60.01</b>	<b>52.85</b>			<b>24.04</b>	<b>22.56</b>
DLR	Digital Realty	\$178.13	3.25	4.02	54.9	44.3	7.23	8.32	24.64	21.42

### Implied Relative Value:

P/E (EPS24)	\$ 194.79
P/E (EPS25)	\$ 212.55
P/FFO (FFO24)	\$ 173.77
P/FFO (FFO25)	\$ 187.66



Digital Realty  
Key Management Ratios

Fiscal Years Ending Dec. 31	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E
<b>Liquidity Ratios:</b>											
Current Ratio = Current assets / Current liabilities	1.86	2.05	2.04	1.90	1.91	1.87	1.82	1.77	1.74	1.72	1.70
Cash Ratio = Cash & Cash Equivalents / Current Liabilities	0.01	0.01	0.01	0.01	0.07	(0.00)	(0.04)	(0.06)	(0.07)	(0.09)	(0.10)
Net Working Capital to Revenue Ratio = NWC / Net Revenue	7.19	9.24	8.21	8.84	8.05	7.06	6.42	5.96	5.65	5.45	5.35
<b>Asset-Management Ratios:</b>											
Total Asset Turnover = Net Revenue / Average Total Assets	0.14	0.11	0.12	0.11	0.12	0.14	0.16	0.17	0.18	0.18	0.19
Fixed Asset Turnover = Net Revenue / Net PPE	0.21	0.18	0.20	0.18	0.21	0.22	0.24	0.25	0.26	0.26	0.26
Working Capital Turnover = Net Revenue / Average Working Capital	0.14	0.11	0.12	0.11	0.12	0.14	0.16	0.17	0.18	0.18	0.19
<b>Financial Leverage Ratios:</b>											
Debt to Assets Ratio = Total Debt / Total Assets	0.44	0.37	0.37	0.40	0.40	0.40	0.41	0.41	0.42	0.42	0.42
Debt to Equity Ratio = Total Debt / Total Equity	1.02	0.75	0.75	0.94	0.91	0.94	1.00	1.04	1.07	1.09	1.12
Debt to EBITDA Ratio = Total Debt / EBITDA	16.88	22.13	16.93	24.56	31.38	16.25	13.55	11.88	10.82	10.08	10.18
<b>Profitability Ratios:</b>											
Return on Equity = Net Income / Beg. TSE		3.67%	9.86%	2.11%	5.40%	5.59%	7.06%	8.41%	9.55%	10.51%	10.58%
Return on Assets = Net Income / Total Assets	2.60%	1.01%	4.80%	0.92%	2.15%	2.43%	2.93%	3.36%	3.71%	3.99%	3.97%
Operating Profit Margin = Operating Profit / Sales	18.52%	14.28%	15.67%	12.57%	9.58%	15.80%	17.80%	19.27%	20.33%	21.28%	20.82%
<b>Payout Policy Ratios:</b>											
Dividend Payout Ratio = Total Dividends / Net Income	82%	73%	96%	89%	96%	95%	95%	96%	96%	96%	96%
Retention Ratio = (Net Income - Dividends) / Net Income	18%	27%	4%	11%	4%	5%	5%	4%	4%	4%	4%
Dividend Cover Ratio = Net Income / Total Dividends	122%	138%	104%	113%	105%	106%	105%	104%	104%	104%	104%