Quanta Services

NYSE: PWR

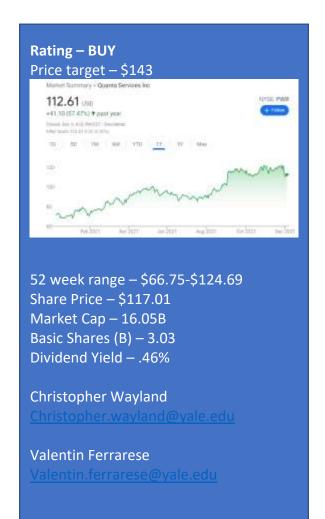
This report covers Quanta Services (PWR)

Core business of building and maintaining electric power infrastructure will benefit from federal legislation and increased North American utility capex and opex spending and allocation on wires (transmission & distribution)

Recent acquisition of Blattner Holding Company provides access to fast growing EPC market for renewable generation projects and creates a holistic service offering across utility value chains

Deferred spending and pent-up demand for natural gas infrastructure due to COVID-19 should allow for recovery of revenues in non-core business segment

Re-entry into network communications infrastructure provides additional growth segment



1. Overview

1.1 Background

Quanta Services is a leading specialty contractor that **provides infrastructure services** for **electric power and gas utilities** and **industrial, communications, and pipeline firms**. Quanta was formed in 1997 with the merger of several electrical contractors in response to increased outsourcing of infrastructure services due to deregulation in the utility sector. Since its IPO in 1998, it has acquired more than 200 companies and expanded its product offerings. Its current services and capabilities include the planning, engineering and project management, construction and installation, and repair and maintenance of network infrastructure such as electric power transmission and distribution systems, gas pipeline transmission facilities, and cable networks. These services are provided by more than 40,000 highly skilled employees, many of whom are trained at the **firm's educational institute (Northwest Linemen College)** across **71 operating units or subsidiaries** which are split into two units – (1) **Electric Power** (2) **Underground Utility**. Quanta's customers include leading electric and gas utilities in North America and Australia, many of whom have Multi-Year Service Agreements that provide recurring revenue for the company. For five straight years they have been selected by **Engineering News Record** as the **#1 Specialty, Electrical, and Utility Contractor**.

Exhibits 1 - 4

· FirstEnergy Corp.

NextBridge Infrastru
 NextEm Energy, Inc.

· NiSource Inc.

· PG&E Corpor

Scripts Energy
 The Southern Company

· Pages Sound Energy, Inc.

TC finergy Corporation

Valero Energy Corporation

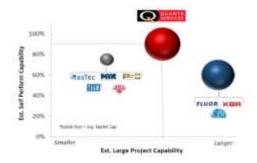
· Vertoon Communications Inc.

Fortis lise.
National Grid ple

Selected Customer List

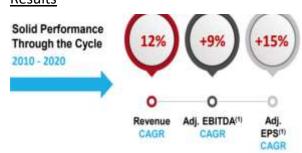
- American Electric Power Company, Inc.
 ATCO Electric
- Berkuhire Harbaway, Inc.
- Berkshire Hathaway, Inc.
 CenterPoint Energy, Inc.
- Concast Corporation
- Dominion Energy, Inc.
- . Duke Energy Corporation
- Eisbridge loc.
- · Entergy Corporation
- Enterprise Products Partners L.P.
- Evenource Energy
 Exclor Corporation
- *Quanta 2020 10K

Quanta Competitive Position



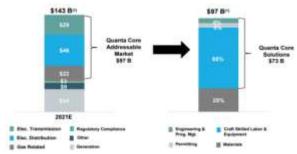
*Quanta Investor Presentation September/August 2021

Results



*Quanta August/September 2021 Investor Presentation

Core Solutions TAM

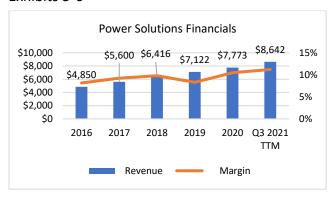


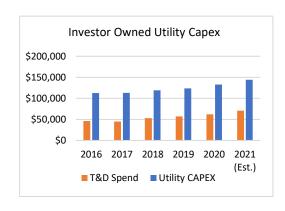
*Quanta August/September 2021 Investor Presentation

1.2 Historical Financials

Power Solutions

Exhibits 5-6





*Edison Electric Institute, Utility Capex

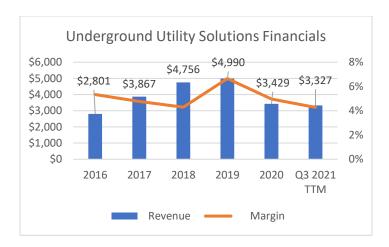
From 2016-Q3 2021 the Power Solutions segment grew at an **annual rate of 12%** while seeing steady **margin growth from 8% - 11%.** The majority of the Power Solutions revenue came from **new construction and multi-year service agreements** with electric utilities. Some key projects include the multi-year undergrounding of 10,000 miles of PG&E transmission lines to reduce potential wildfire damage, a partnership to operate and maintain the entire Puerto Rican power grid, and a project to connect the world's largest solar-powered battery storage project to the grid.

Over the same timeframe, investor-owned electric utilities increased their capex from ~\$112 billion to ~\$144 billion which is a CAGR of 4%. More specifically their spending on transmission and distribution grew from ~\$45 billion to ~\$70 billion which is a CAGR of 7%. While the power solutions segment includes revenue streams outside of transmission and distribution, outpacing market growth suggests that Quanta has captured some market share from competitors. In the latest earnings call, management highlighted grid modernization and system hardening, electric vehicle infrastructure, renewable project interconnections, and high-margin emergency response work as key drivers of recent growth in this segment.

Underground Utility Solutions

Exhibit 7

^{*}Company Financials



After growing by ~75% from 2016 – 2019, revenue in the underground utility segment was strongly impacted by COVID-19, dropping by more than 30% in 2020. In addition to decreased demand due to COVID, structural factors such as permitting delays have limited new construction spending suggesting a potential end to the shale-build cycle. Indeed, revenue has not recovered through the first nine months of 2021. Management cited Hurricane Ida and the rise of the delta variant as additional impediments to revenues in 2021. Management does expect revenue to continue to begin recovering in 2022 due to deferred spending and pent-up demand in the sector, however they have not released guidance for this segment.

In the long-term, management is seeking to pivot its underground utility segment to focus more on carbon neutral and energy transition activities. In the latest investor presentation, management cited future growth drivers such as blended hydrogen and carbon sequestration. However, it is **unclear when and if those initiatives** will have a material impact on earnings.

2. Investment Thesis

2.1 Infrastructure and Build Back Better Bills Accelerate Robust Topline Growth

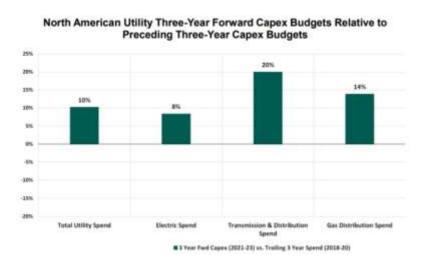
The **Biden administration** has exhibited a commitment to **supporting electric utilities** as they seek to transition and upgrade the nation's aging electric infrastructure. As the leading electric utility contractor, **Quanta Services would benefit** from federal support that would accelerate spending on the electric grid. We have highlighted some of the key provisions in signed and pending legislation below —

Infrastructure Bill (signed into law)

- \$65 billion to modernize electric power grid infrastructure
- \$7.5 billion to support buildout of EV charging infrastructure
- \$5 billion revolving loan fund to support grid resiliency due to extreme weather events
- \$2.5 billion Transmission Facilitation Program with loans for new or enhanced transmission lines

The \$72.5 billion in funding from items 1,3, and 4 is equivalent to ~1 year of investor-owned utility capex on transmission and distribution. Adding \$14 million per year through the infrastructure bill over the next 5 years and boosting utility capex by a few percentage points above the historic 7% growth, suggests T&D capex could double by 2027. This represents a significant expansion of Quanta's total addressable market, and, given Quanta's recent ability to outgrow the market, they could more than double their core solutions revenue over the next five years. In the short-term, wealth management firm D.A. Davidson expects the utility T&D capex to be 20% higher from 21-23 then it was in the preceding three years continuing its high single digit annual growth. Finally, the \$7.5 billion in federal support for new EV infrastructure would help Quanta grow this nascent business segment.

Exhibit 8



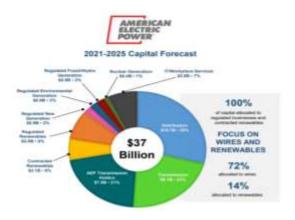
*Quanta Dec. 2021 Investor Presentation, D.A. Davidson estimates

Build Back Better Bill (Passed by the House, expect watered down passage in Q1 2022)

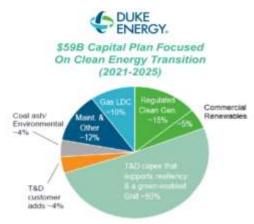
- \$320 billion in expanded tax credits for clean energy projects, including credits for new transmission projects
- \$4 billion for installing advanced technology at industrial and manufacturing facilities

While the infrastructure bill is focused on modernizing the electric grid, the build back better bill would extend tax incentives to **further incentivize renewable energy generation**. This aligns with the recent acquisition of Blattner, the **leading renewable energy EPC** in North America.

Exhibits 9-10: Selected Customer Projected Capex



*AEP 2021 Q3 Investor Presentation



*Duke 2021 Q1 Investor Presentation

2.2 Blattner Acquisition Enhances Capabilities in Fast-Growing Renewables Market

Exhibits 11-12: Blattner Overview

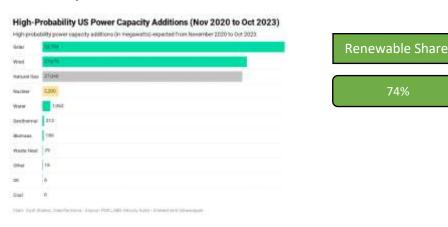




*Quanta September Blattner Presentation

On October 14th, Quanta completed a **\$2.7 billion acquisition** of Blattner Holding Company. When the deal was announced on September 2nd, **Quanta shares rose by 12**% suggesting the company received a good price for its investment. The acquisition provides Quanta with an entry into the rapidly expanding renewable generation market and complements Quanta's core electric transmission and substation solutions, creating a **holistic EPC offering** for customers. **Renewables** accounted for **78**% **of total energy capacity additions** in **2020**, and the share of new capacity additions will likely rise over the next decade.

Exhibit 13 Renewable Generation Projections



In 2020 Blattner generated \$2.4 billion in revenue and \$291 million in adjusted EBITDA. For 2022, management is targeting accretions of \$2.4 – \$2.7 billion in revenue, \$250-\$290 million adjusted EBITDA, and \$.8 - \$1 adjusted earnings per share. Management also expects Blattner to deliver double-digit revenue growth through 2026.

*Clean Technica, FERC, ABB Velocity Suite

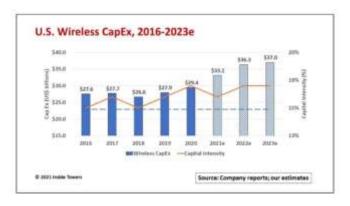
^{*}Quanta September Blattner Presentation

	Base Business	Blätmer	Combined Company
Revenue	\$13,255	\$2,600	\$15,855
Ebitda	\$1,313	\$270	\$1,583
D&A	\$265	\$52	6317
Interest Expense	\$30	\$47	\$77
Pretax Income	\$1,018	\$171	\$1,189
Tax Expense	\$224	\$38	\$262
Net Income	\$794	\$133	\$927
Shares Outstanding	148	148	148
Adjusted EPS	65.37	60,90	\$6.27
			Bioamberg 8

*Bloomberg Intelligence Estimates

2.3 Re-Entry into Communications Infrastructure Provides Additional Growth Segment

Exhibit 15



*Inside Towers

Over the next half decade capital expenditure on broadband and wireless networks is likely to increase due to federal support from the infrastructure bill and the rollout of 5G networks. The Infrastructure Bill included **\$42.5 billion** in direct funding for states and territories to improve internet infrastructure with a focus on rural areas.

After exiting the communications business in 2012, Quanta re-entered the sector in 2016. Management does not breakout revenue by communications, however in investor presentations they highlighted that communications revenue grew by 40% in 2020 to ~\$500-\$550 million and are targeting \$700 million (30% YoY growth) in total revenue in 2021 for the segment. Management has highlighted this segment as a key growth sector for the firm.

3. Projections

3.1 Revenue & EBIT

Power Solutions Projections

Exhibit 16



*Factset

Given the potential external factors listed in the investment theses that may accelerate topline growth in the next 5 years, we looked for comparable companies to estimate revenue in this segment. We found that **Fluor Corporation** (an engineering and construction firm with comparable clients) was in a similar situation from 2003-2009. During this period, Fluor was **awarded billions in government contracts** for reconstruction and logistic projects in Iraq and Afghanistan and Hurricane Katrina disaster recovery projects while its **oil and gas business** benefitted from the **fracking boom** in America. In 2003, its revenue was **\$8.8 billion** which is almost equivalent to the Power Solutions Q3 2021 TTM revenue (**\$8.6 billion**). Its 5-year and 7-year revenue CAGR from 2003 was **14%** (using these CAGRs smooths some of the large jumps in revenue).

Exhibit 17 Power solutions Revenue Projections

	2020	2021e	2022	2023	2024	2025	2026
Revenue	\$7,122	9,000	\$11,852	\$13,511	\$15,403	\$17,559	\$20,018
% Change	11%	16%	32%	14%	14%	14%	14%
Operating Inc.	\$815	\$996	\$1,244	\$1,486	\$1,771	\$2,107	\$2,502
Margin	10%	10%	10.5%	11.0%	11.5%	12.0%	12.5%

To project revenue and income 2021, we used management's guidance which has historically been very accurate in the short-term. To project future revenue in the Power Solutions segment in 2022, we took the **non-Blattner revenue for 2021** and **grew that by 14% (Fluor Corp's CAGR)** and added the **projected Blattner revenue**. For 2023-2026 we grew revenue by

the **Fluor Corp CAGR**. Additionally, we project margins to continue to **steadily increase by .5%** per year which is roughly in line with the growth rate of ~.6% over the previous five years.

Underground Utility Solutions Projections

Exhibit 18

North America	an E&P	capex	(USD I	billion)	1										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Onshore	249.5	273.0	290.8	318.0	153.6	88.5	147.0	183.9	161.0	84.0	108.0	141.0	156.0	165.0	178.0
Offshore	17.0	17.7	23.6	23.1	22.9	15.0	13.2	12.3	11.0	10.0	9.0	12.0	12.0	12.0	15.0
Total spending	266.6	290.7	314.3	341.2	176.5	103.5	160.1	196.2	172.0	94.0	117.0	152.0	168.0	177.0	193.0
Source: IHS Markit														© 20211	HS Markit

^{*}IHS Markit

The COVID-19 induced demand shock in the oil and gas sector pushed forward a **new era of capital discipline**. Firms across the energy value chain significantly lowered capital expenditures in 2020, which improved cash flows and allowed companies to both de-leverage their balance sheets while still driving shareholder returns through dividends and buybacks. IHS Markit projects that capital expenditures will not return to 2019 levels until 2024.

Exhibit 19

	2016	2017	2018	2019	2020	2021e	2022e	2023e	2024e	2025e	2026e
NA Capex	\$103,500	\$160,100	\$196,200	\$172,000	\$94,000	\$117,000	\$152,000	\$168,000	\$177,000	\$193,000	\$106,150
PWR Revenue	\$2,801	\$3,867	\$4,756	\$4,990	\$3,429	\$3,488	\$3,970	\$4,388	\$4,623	\$5,040	\$3,873
Capex %	2.7%	2.4%	2.4%	2.9%	3.6%	3.0%	2.6%	2.6%	2.6%	2.6%	3.6%
Op. Inc.	\$150	\$184	\$204	\$332	\$170	\$174	\$206	\$228	\$240	\$262	\$201
Margin	5.3%	4.8%	4.3%	6.7%	5.0%	5.0%	5.2%	5.2%	5.2%	5.2%	5.2%

^{*}Company financial, our estimates

From 2016-2019, we found that PWR's underground utility revenue was on average 2.6% of North American oil and gas capex. From 2022-2025 we used the IHS Markit capex forecasts and we project that segment revenue will return to 2.6% of the market as capital expenditures begin to increase. We also noticed that spending cycles in the sector last for 4-5 years, therefore we project a significant decline in capital expenditures in 2026, although less than the COVID-driven decline in 2020. During down years, expenditures appear to be more focused on maintenance which is a strength of Quanta and shields them from some downside risk. Therefore, we project Quanta's market share in 2026 to mirror its market share in 2020. Operating income fluctuates around 5% and is dependent on the percentage of large projects each year (a large pipeline project in Canada helped drive the 6.7% margin in 2019). Therefore, we took the 5-year average of 5.2% and projected that forward for 2022-2026.

3.2 Corporate non-allocated costs

Exhibit 20

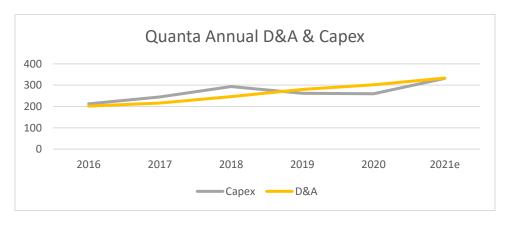
	2016	2017	2018	2019	2020	2021e	2022e	2023e	2024e	2025e	2026e
Revenue	\$7,651	\$9,466	\$11,171	\$12,112	\$11,203	\$12,488	\$15,822	\$17,899	\$20,026	\$22,600	\$23,890
Corp. non-allocated costs	\$224	\$323	\$292	\$368	\$385	\$462	\$508	\$575	\$643	\$726	\$767
% Revenue	2.9%	3.4%	2.6%	3.0%	3.4%	3.7%	3.2%	3.2%	3.2%	3.2%	3.2%

^{*}Company financial, our estimates

To project company-wide operating income, we also had to account for corporate and non-allocated costs which include items such as intangible asset amortization, equity compensation, and other administrative expenses. From 2016-2020 these costs were relatively consistent as a percentage of revenue. The increase in 2021 above the historical range is due to some costs associated with the large acquisition of Blattner. Therefore, we used the **5-year average (2016-2020)** as a percentage of revenue (3.2%) and projected that forward from 2022-2026.

3.3 Capex & D&A

Exhibit 21



*Company Financials

As the chart above illustrates, D&A and Capex have been nearly identical over the past five years. While Capex has been more variable, D&A growth has been constant. Additionally, management has given no indication that they are seeking to change their existing strategy which will require further capital expenditures to grow the company. Therefore, we took the five-year combined average growth rate from **2016-2021e** of ~8% and used that to project D&A and Capex moving forward.

3.4 Net Working Capital

Exhibit 22

	2017	2018	2019	2020	2021e	2022e	2023e	2024e	2025e	2026e
Revenue	\$9,466	\$11,171	\$12,112	\$11,203	\$12,488	\$15,822	\$17,840	\$19,891	\$22,370	\$23,541
Gross Change	\$1,815	\$1,705	\$941	-\$909	\$1,285	\$3,334	\$2,018	\$2,051	\$2,479	\$1,172
% Change	24%	18%	8%	-8%	11%	27%	13%	11%	12%	5%

Change in NWC -\$82 \$353	\$102 -\$5	\$499 \$650	\$450	\$450	\$450	\$200
---------------------------	------------	-------------	-------	-------	-------	-------

^{*}Company financial, our estimates

According to management, working capital needs increase with revenue as Quanta must pay more for labor, equipment, and subcontractors. Therefore, we project changes in net working capital to increase significantly during the projected period and to track both the overall and percentage changes in revenue.

4. Valuation

We decided to perform a discounted cashflow analysis on the projected Free cash Flow to the Firm (FCFF). To discount the FCFF we used WACC since the debt-to-Equity ratio since 2018 has been relatively stable **fluctuating within a 5% range** (.5-.55).

D/E Ratio 5,000 0.6 4,500 0.5 4,000 3,500 0.4 3,000 E:0 Rati 2,500 2,000 0.2 1,500 1,000 0.1 500 0 0 2017 2018 2019 2020 Q3 2021 TTM Debt Equity —— D/E

Exhibit 23 – Debt to Equity Ratio

We calculated the five-year rolling Beta for Quanta Services and we found there was a stepwise jump in the beta in Q3 2018. The Beta has stayed within a band of 1.2-1.6 since the stepwise jump. We therefore used the average Beta since Q3 2018 of 1.35.

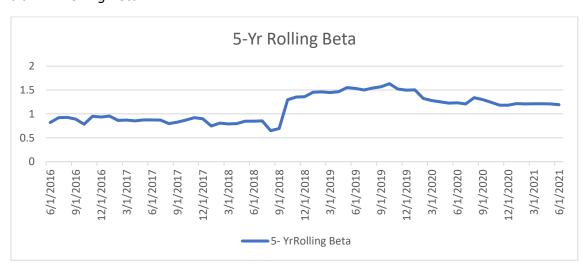


Exhibit 24 - Rolling Beta

Exhibit 25 – DCF Values

Quanta						
Services	2021E	2022E	2023E	2024E	2025E	2026E
Revenues	\$12,488	\$15,822	\$17,840	\$19,891	\$22,370	\$23,541
EBIT	\$709	\$943	\$1,135	\$1,357	\$1,623	\$1,904
EBIT*(1-t)	\$554	\$735	\$885	\$1,059	\$1,266	\$1,485
+D&A	\$333	\$361	\$390	\$422	\$457	\$494
-CAPEX	\$332	\$359	\$389	\$420	\$455	\$492
-Change WC	\$499	\$650	\$450	\$450	\$450	\$200
FCF	\$56	\$87	\$437	\$611	\$818	\$1,287
Terminal value			-	-	-	\$33,262
Present value	\$56	\$82	\$385	\$506	\$637	\$25,256

Exhibit 26 – CAPM Inputs

Input	Rate	Source
Risk Free Rate	1.40%	10-Yr Treasury
		Compared to
Beta	1.355	W^5000
Equity Risk Premium	4.72%	Damodaran
Cost of Equity	7.79%	CAPM
		Corporate bond spread + Risk-Free
Cost of Debt	4.27%	rate
Tax Rate	22%	Statutory tax
Market D/E Ratio	0.42	Target level
Wacc	6.47%	

EV	\$26,991
Debt	\$6,789
Cash	\$184
Equity Value	\$20,386
Current Equity Value	\$16,047
Upside (Downside)	22.0%

We estimate a WACC of 6.47% for Quanta Services. We used the 10 years treasury for the risk-free rate and by adding Quanta Services debt rating implied corporate spread to the risk-free rate, we arrive at the cost of debt. The cost of equity is calculated with the CAPM formula, reflecting Engineering equity risk premium according to Damoradan, the risk-free rate and beta of 1.35.We expect the terminal growth rate to stabilize at 2.5% after 2026.

5. Investment Recommendation

We recommend a **buy for Quanta Services** with an **expected price of \$143 / share** and a market cap of **\$20.4 billion** which represents a **22% increase** over the price (\$117) and market cap as of December 7th. On November 29th, the stock was trading at \$121.68 / share before fears of the Omicron variant caused a market-wide correction that caused Quanta's stock price to fall 8%. Our target share price is 18% above Quanta's pre-Omicron drop. We do not think that this variant will materially impact Quanta's value proposition.

Where we likely differ from the market is in our projections of topline growth for the Power Solutions sector. Management has provided minimal guidance on the impact of federal legislation to topline growth. Therefore, the market is probably projecting a lower CAGR than we are for the Power Solutions segment. Indeed, a **revenue CAGR of 10%** for the Power Solutions segment **returns an upside of only 5%.** Although we recognize that it is difficult to precisely predict the impact of federal legislation and the energy transition on Quanta's total addressable market, we believe that comparing the Power Solutions segment to Fluor Corp during the mid-2000s provides justification for the elevated growth figures which are only 2% above the 10-year CAGR. The analyst consensus on Bloomberg is that the market is also undervaluing this stock, with an average price target of 133 although the most recent valuations are in line with our estimates.



outperform

overweight

outperform

60.13%

60.13%

60.13%

11/11/21

11/11/21

11/10/21

Exhibit 27 – Analyst Recommendations

₹ KeyBanc Capital Ma., Sean D Eastman

Bernstein

Andrew J Wittmann

Chad Dillard

Important Disclaimer

Please read this document before reading this report.

This report has been written by MBA students at Yale's School of Management in partial fulfillment of their course requirements. The report is a student and not a professional report. It is intended solely to serve as an example of student work at Yale's School of Management. It is not intended as investment advice. It is based on publicly available information and may not be complete analyses of all relevant data.

If you use this report for any purpose, you do so at your own risk. YALE UNIVERSITY, YALE SCHOOL OF MANAGEMENT, AND YALE UNIVERSITY'S OFFICERS, FELLOWS, FACULTY, STAFF, AND STUDENTS MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, ABOUT THE ACCURACY OR SUITABILITY FOR ANY USE OF THESE REPORTS, AND EXPRESSLY DISCLAIM RESPONSIBILITY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, CAUSED BY USE OF OR RELIANCE ON THESE REPORTS.