

# Industry Supply Chains Summary Report

A summary of select operating metrics for 19 industries,  
comprising 2300+ companies and \$27T+ in revenue.

Version 2021-1.2

26 April 2021



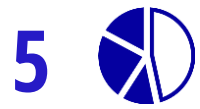
# Version

VERSION	NOTES
2021-1	Initial version, dated 02.19.21
2021-1.1	Fixed minor edits. Eliminated two companies for lack of data.
2021-1.2	Dated 04.26.21. Updated with the latest financials. Reduced number of companies (mostly due to exchange rate issues). Added CAPEX report. Added market cap multiple distribution charts. Added chart showing the impact of the pandemic on operating results.

# Introduction

- This report is intended to provide information and insights into the operating characteristics of industries that make, move and store things (i.e., are part of the global goods-producing economy and associated global supply chains).
- The report includes 19 industries, comprising 2300+ companies from across the globe. In aggregate these companies represent approximately \$27 trillion in revenue. It profiles the following metrics for each of the industries: gross margin, operating margin, EBITDA, SG&A, inventory turns, physical asset intensity, CAPEX, ROIC, and market cap multiple. It provides this information for the latest financial results on a trailing twelve months basis (as of the date on the cover of this report), and for the past ten years.
- The report provides aggregate information for each industry, which is useful for understanding industry operating and structural characteristics.
- The data set is large enough that the analysis and insights here should be a proxy for the operating characteristics of individual industries and by extension the overall goods-producing economy.

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# Industry Supply Chains

## Data set

*This data set is a reasonable proxy for global goods-producing industries and thus, global supply chains.*

INDUSTRY	#	REVENUE (\$M)	COGS (\$M)	GROSS PROFIT (\$M)	INVENTORIES (\$M)	INV TURNS	GDP (\$M)
Aerospace and Defense	56	\$548,540	\$452,044	\$96,497	\$187,110	2.42	\$322,518
Automotive	132	\$2,631,477	\$2,206,683	\$424,795	\$366,578	6.02	\$1,528,136
Chemicals	127	\$775,793	\$552,961	\$222,832	\$125,138	4.42	\$499,312
Construction	82	\$780,609	\$583,184	\$197,425	\$168,945	3.45	\$489,017
Consumer Goods	143	\$821,020	\$405,235	\$415,785	\$160,011	2.53	\$618,403
Energy / Utilities	142	\$1,419,044	\$939,484	\$479,559	\$95,815	9.81	\$949,301
Food and Beverage	160	\$1,586,540	\$1,014,063	\$572,476	\$218,119	4.65	\$1,079,508
Hitech Electronics	146	\$1,591,305	\$1,152,550	\$438,756	\$175,033	6.58	\$1,015,031
Hitech Semiconductors	90	\$496,593	\$262,316	\$234,278	\$77,504	3.38	\$365,435
Industrials	273	\$2,505,769	\$1,838,731	\$667,038	\$413,780	4.44	\$1,586,403
Materials / Mining	160	\$1,681,778	\$1,219,781	\$461,996	\$273,358	4.46	\$1,071,887
Medical Equipment	104	\$474,076	\$222,959	\$251,117	\$69,865	3.19	\$362,596
Oil and Gas	156	\$3,269,918	\$2,700,609	\$569,308	\$286,614	9.42	\$1,919,613
Pharmaceuticals	96	\$947,329	\$307,489	\$639,840	\$170,914	1.80	\$793,584
Restaurants	56	\$175,676	\$120,908	\$54,768	\$4,585	26.37	\$115,222
Retail	180	\$3,809,384	\$2,788,114	\$1,021,270	\$368,128	7.57	\$2,415,327
Telecommunications	78	\$1,380,137	\$584,714	\$795,423	\$27,642	21.15	\$1,087,780
Transportation	121	\$979,520	\$872,227	\$107,293	\$26,907	32.42	\$543,406
Wholesale Distribution	63	\$1,220,225	\$1,094,772	\$125,453	\$114,050	9.60	\$672,839
<b>Total</b>	<b>2365</b>	<b>\$27,094,731</b>	<b>\$19,318,822</b>	<b>\$7,775,909</b>	<b>\$3,330,097</b>	<b>5.80</b>	<b>\$17,435,320</b>

### Notes:

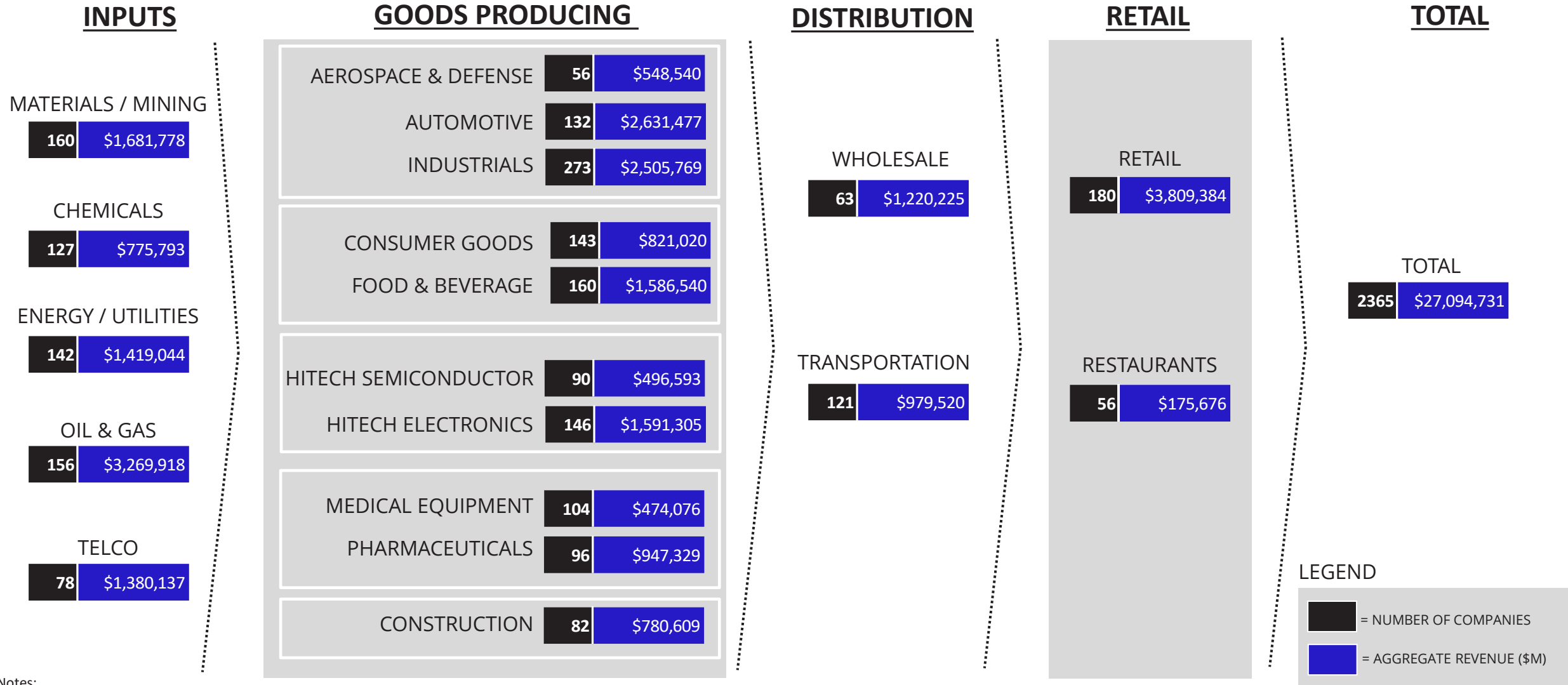
1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
2. Economic activity is roughly equivalent to contribution to gross domestic product (GDP). It is derived as a simple equation: gross profit plus one-half cost of goods sold. The reasoning is that gross profit represents the value-add pricing power of a company, and that some percentage of COGS includes transformation activity.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

## NOTES & INSIGHTS

- The data set is made up of >2300 companies from across the globe in 19 industries. Companies are limited to those that make, move, or store physical products. The revenue cutoff point in each industry is somewhere between \$200M and \$1.5B.
- Inventory turns shown here are aggregate inventory turns calculated as aggregate COGS divided by aggregate inventory within each industry and for all industries.
- Aggregate inventory turns for all companies are slightly less than six. This likely represents the inventory turns for the overall global economy.
- Source for all data is YCharts and Calcbench and Worldlocity analysis.
- All data in this report is aggregated for each industry. Aggregate data gives a better view of the operational characteristics of an industry than an average of percentages for each company.

# Industry Supply Chains

## Data set – a proxy for the global supply chain



### Notes:

1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report
2. Source of all data is Calcbench and YCharts and Worldlocity analysis.

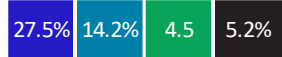
# Industry Supply Chains

## *A summary of four key metrics for each industry*

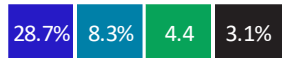


### INPUTS

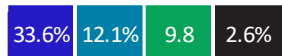
#### MATERIALS / MINING



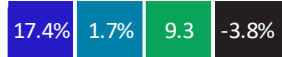
#### CHEMICALS



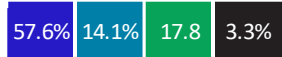
#### ENERGY / UTILITIES



#### OIL & GAS



#### TELCO



### GOODS PRODUCING

AEROSPACE & DEFENSE



AUTOMOTIVE



INDUSTRIALS



CONSUMER GOODS



FOOD & BEVERAGE



HITECH SEMICONDUCTOR



HITECH ELECTRONICS



MEDICAL EQUIPMENT



PHARMACEUTICALS

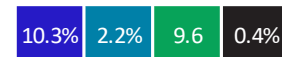


CONSTRUCTION

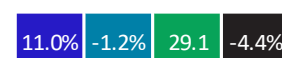


### DISTRIBUTION

#### WHOLESALE

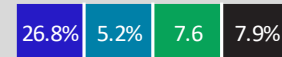


#### TRANSPORTATION

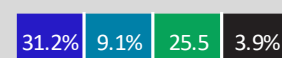


### RETAIL

#### RETAIL

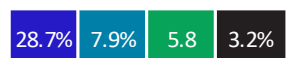


#### RESTAURANTS

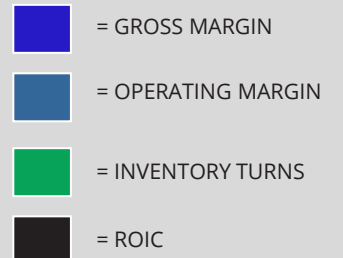


### TOTAL

#### TOTAL



### LEGEND



#### Notes:

1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
2. All numbers are aggregate for each industry, calculated by summing each variable within each industry (not an average of percentages for each company).
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

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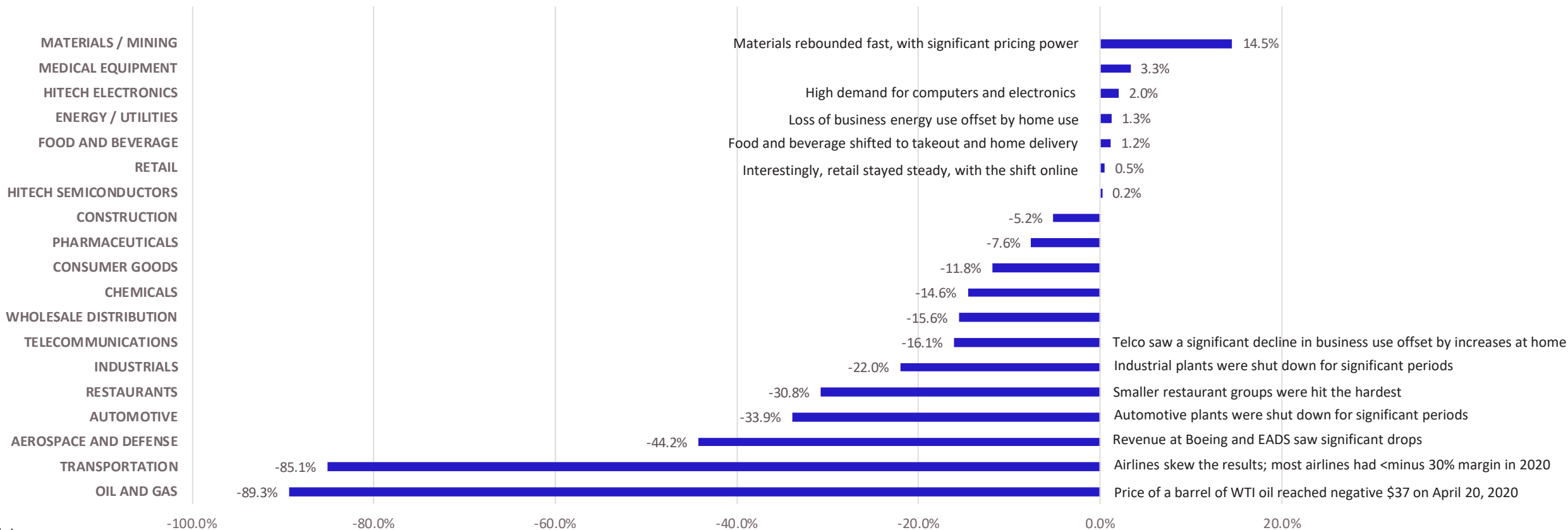


# Industry Supply Chains

## *Pandemic impact on operations*

*Trailing twelve-month results (TTM) must be considered in the context of the global pandemic and its impact.*

### %CHANGE IN AGGREGATE OPERATING MARGIN 2019-2020



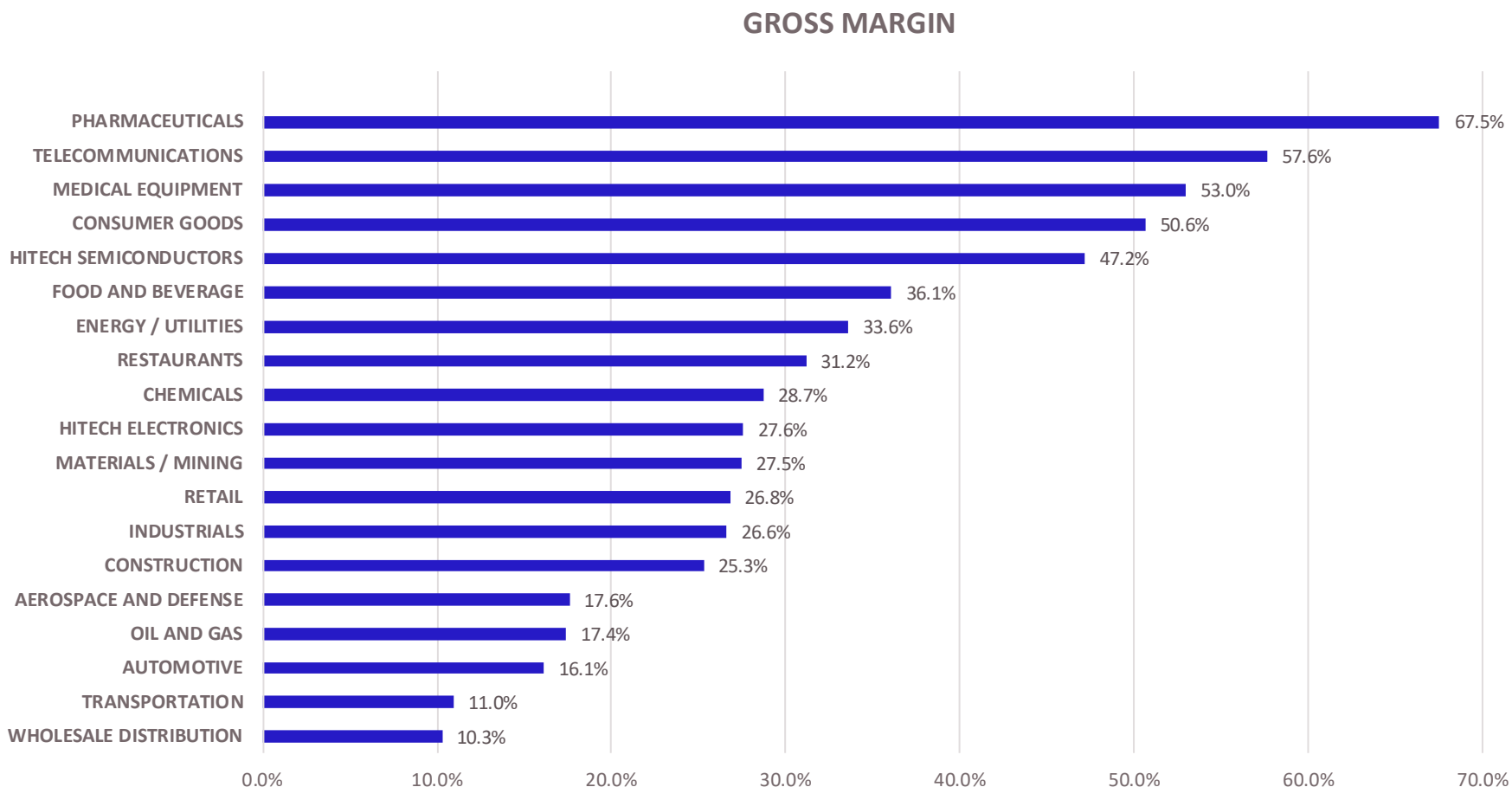
#### Notes:

1. % change in operating margin = (2020 operating margin minus 2019 operating margin) divided by 2019 operating margin.
2. All numbers are aggregate for each industry, calculated by summing each variable within each industry (not an average of percentages for each company).
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.



# Industry Supply Chains

## Gross margin



### NOTES & INSIGHTS

- High gross margin industries are generally characterized by high IP content and/or low relative material content and/or low conversion costs.
- Low gross margin industries typically have high procurement costs and/or significant bills of materials, or high fluctuating prices (e.g., oil and gas), which can lead to peaks and valleys in gross margin. They typically also have higher conversion costs.
- Some industries do not specifically break out COGS on their income statement. COGS here is defined as all costs required to deliver a product or service to a customer, except for sales and corporate general and administrative costs.

#### Notes:

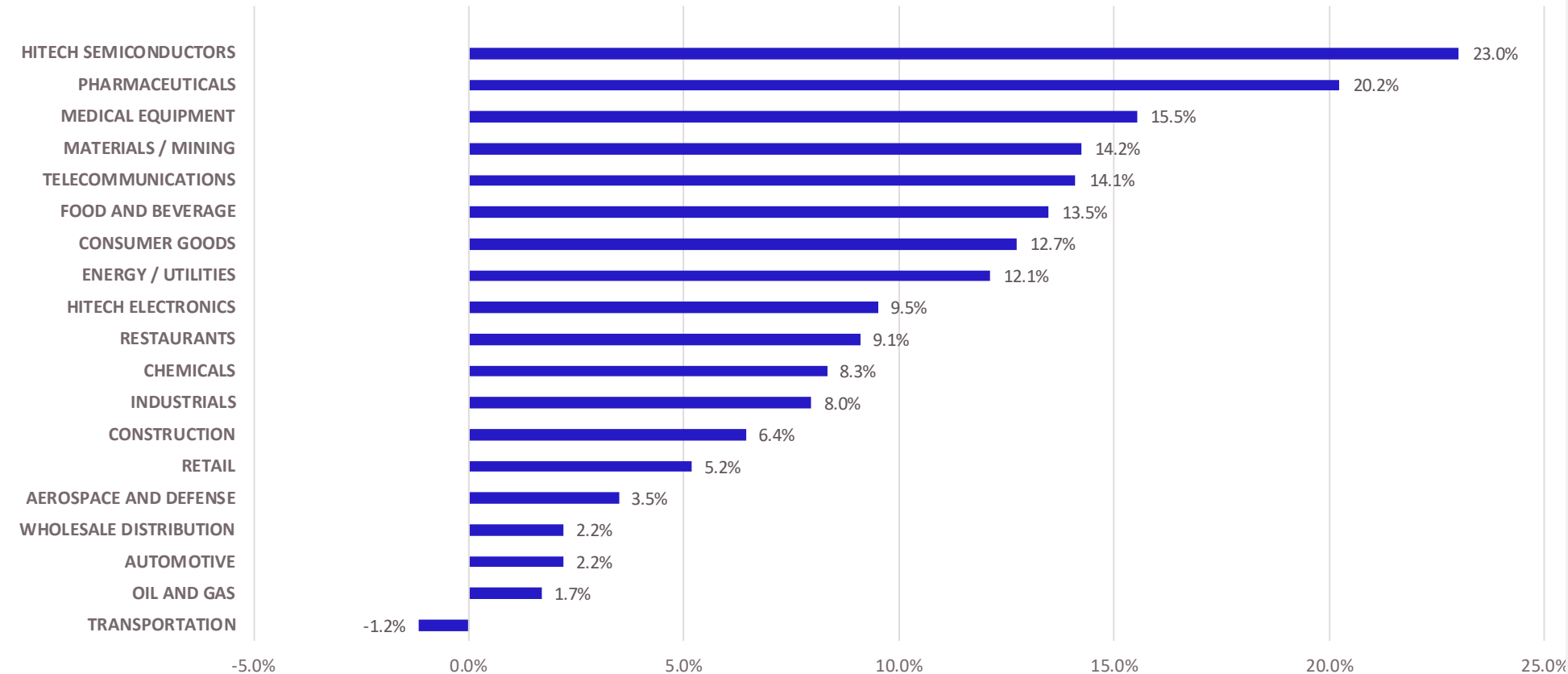
1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
2. This is an aggregate view: industry gross margin = (aggregate revenue minus aggregate COGS) divided by aggregate revenue for each industry.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## Operating margin



OPERATING INCOME% OF REVENUE



### NOTES & INSIGHTS

- Hitech semiconductor, pharmaceuticals, and medical equipment, all industries with high IP content, have the highest operating margins.
- Operating margins generally follow gross margins, but not always, since some industries must spend significantly more on SG&A and R&D.

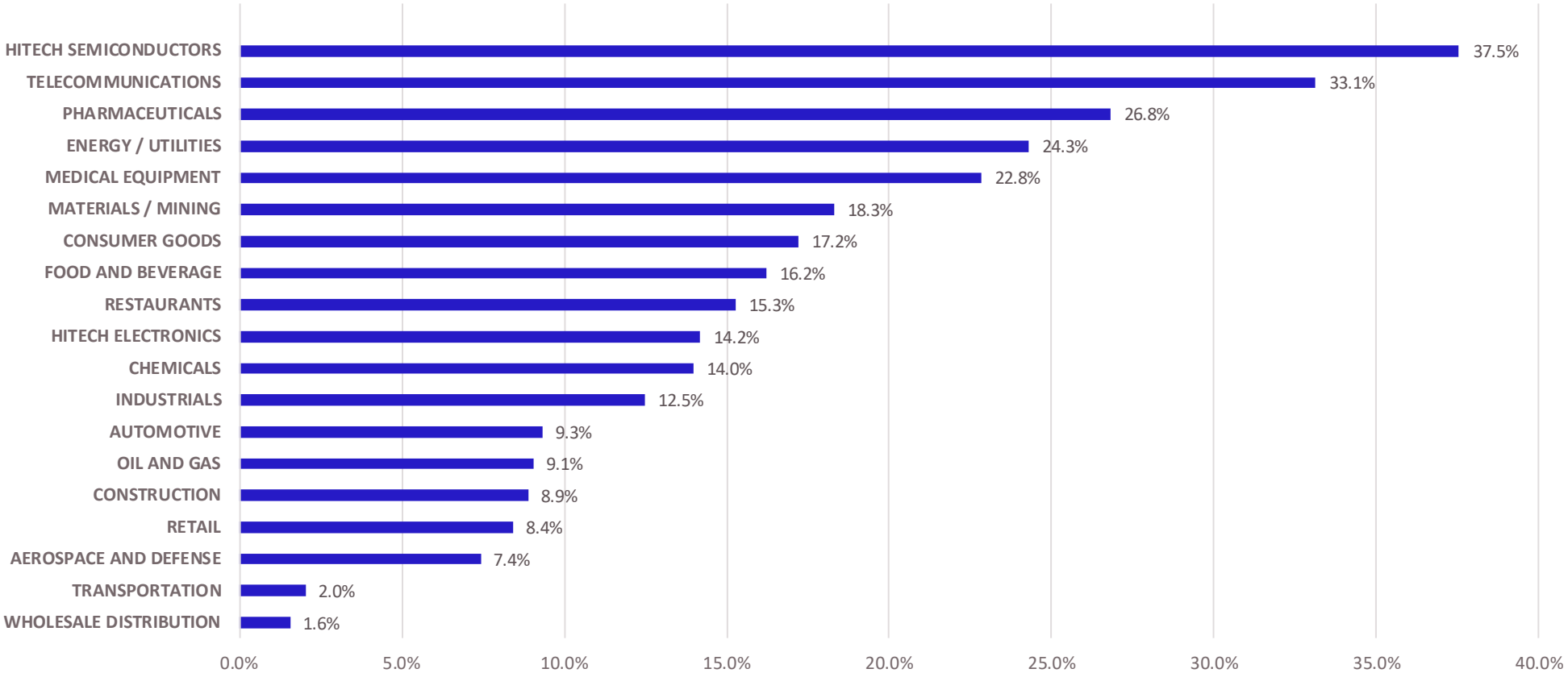
#### Notes:

1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
2. This is an aggregate view: industry operating margin = aggregate operating income divided by aggregate revenue for each industry.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## EBITDA margin

### EBITDA % OF REVENUE



### NOTES & INSIGHTS

- Hitech semiconductor, telco, pharmaceuticals, energy and utilities, and medical equipment all lead in EBITDA margin.
- Energy and utilities have high depreciation and amortization costs resulting from their large asset bases, so when these costs get added back, they drive high EBITDA.

#### Notes:

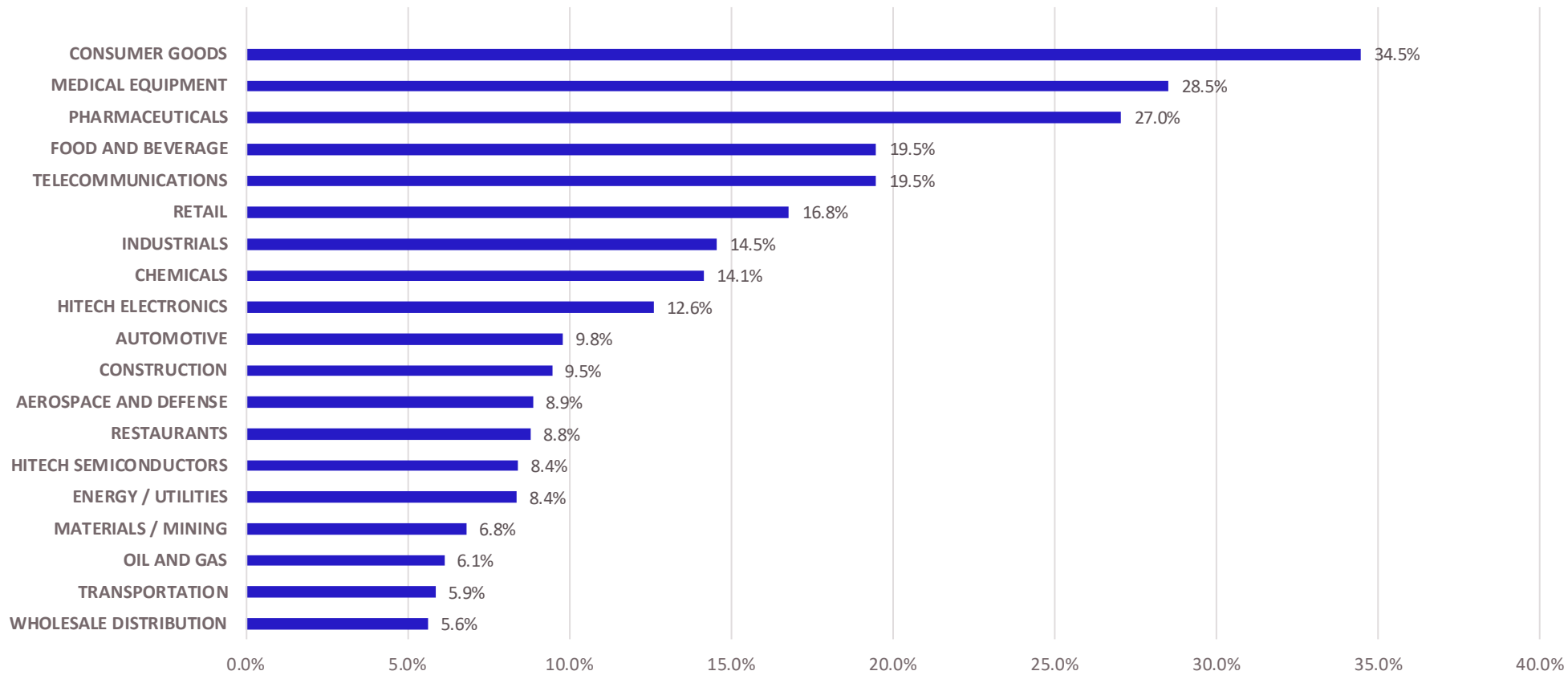
1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
2. This is an aggregate view: industry EBITDA margin = aggregate EBITDA divided by aggregate revenue for each industry.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## *Selling, general, and administrative (SG&A) costs*



SG&A % OF REVENUE



### NOTES & INSIGHTS

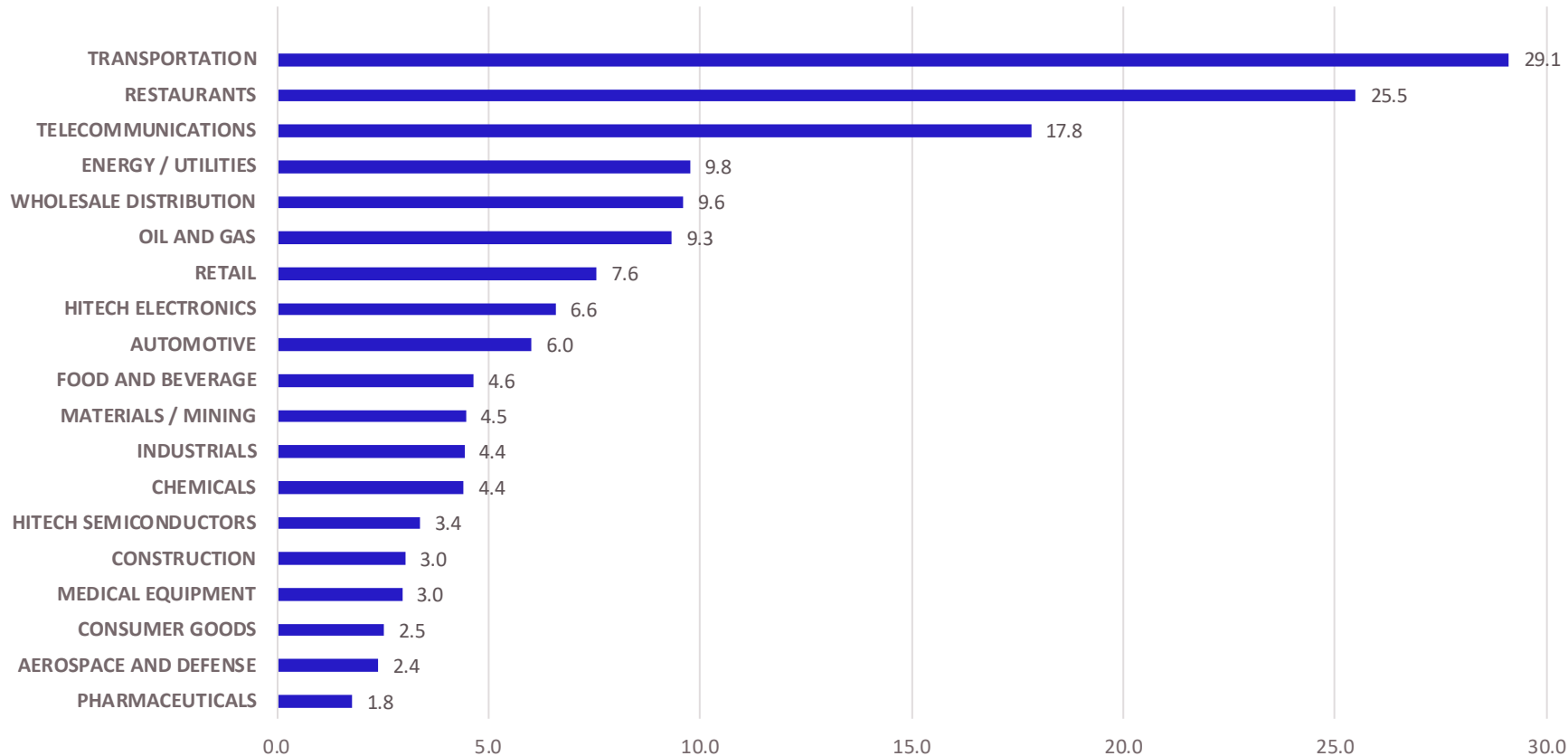
- Consumer goods, medical equipment, pharmaceuticals, telco, and food and beverage all have significant SG&A costs, typically with large sales/ account teams and high advertising and promotion budgets.
- How products are sold and promoted has significant implications for supply chains, with leading companies providing increasing synchronization between selling, promoting, and supply chain functions.
- Companies with low SG&A are typically B2B companies and/or have a service orientation driven by long-term contracts. Some, like automotive companies, have large dealer networks that provide the retail function separate from their financials.

**Notes:**  
1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.  
2. This is an aggregate view: industry SG&A % of revenue = aggregate SG&A divided by aggregate revenue for each industry.  
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## Inventory turns

### INVENTORY TURNS



### NOTES & INSIGHTS

- The top three inventory turn industries are more service-oriented industries, versus goods-producing, thus they carry low inventories. In the case of restaurants, their inventories are perishable and must be turned very quickly. Transportation companies typically do not own the inventory they move, so their inventories are typically spare parts, fuel, and other materials needed to support their fleets.
- Historically, there is a general inverse relationship between gross margin and inventory turns, with high gross margin products typically having fewer turns and vice versa. This is generally but not always true (as in the case of A&D).

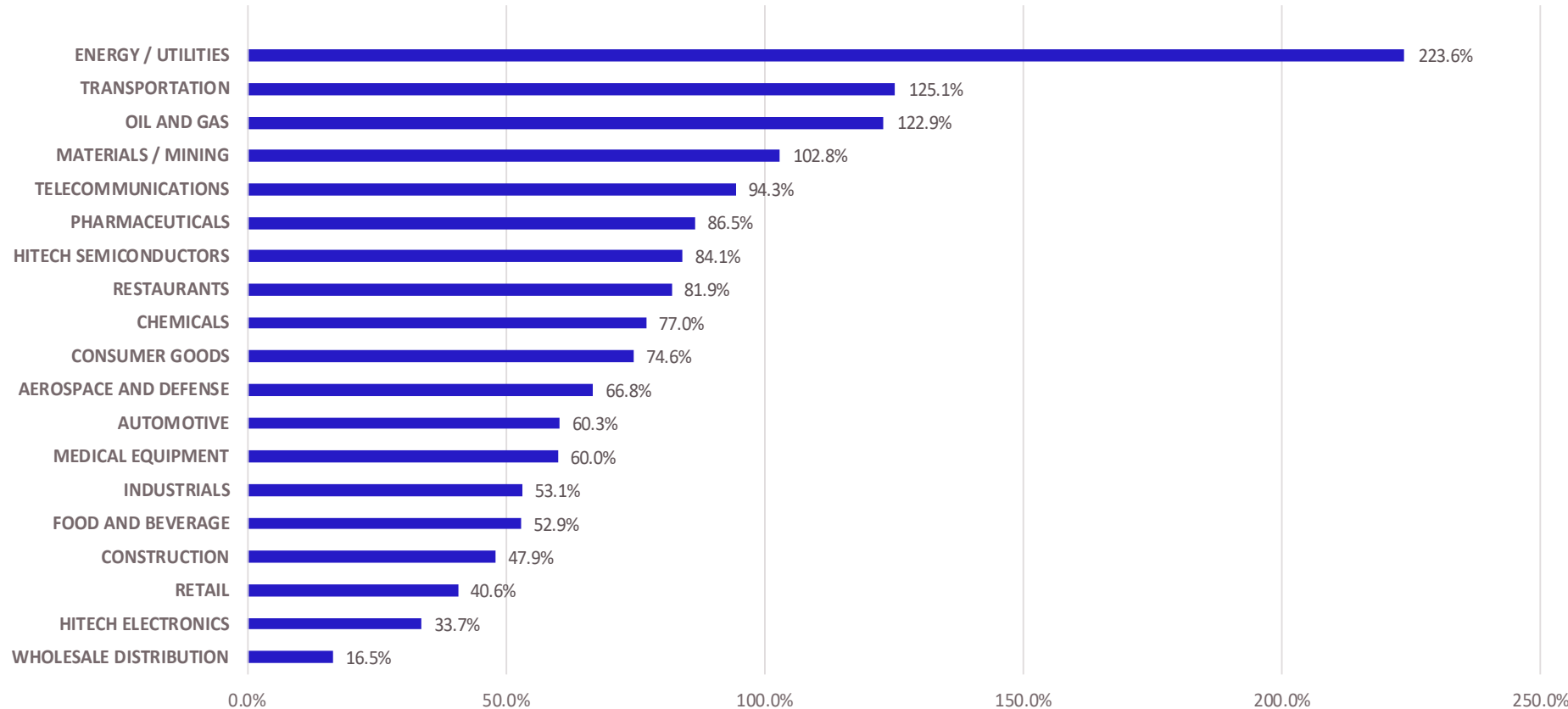
#### Notes:

1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
2. This is an aggregate view: industry inventory turns = aggregate COGS divided by aggregate inventory for each industry.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## *Asset intensity: physical assets / revenue*

PHYSICAL ASSETS (PP&E + INVENTORIES) % OF REVENUE



### NOTES & INSIGHTS

- Energy and utility companies are by far the most asset-intensive, requiring greater than \$2 of physical assets for each dollar of revenue.
- Transportation companies (trains, planes, trucks), oil and gas, and materials industries are also highly asset-intensive.
- Asset-intensive industries have a high focus on capacity management and asset utilization.
- Likewise, oil and gas, materials and mining, and telecommunication companies require a high level of physical assets as a percentage of revenue.
- Industries that are lower on the asset-intensity list have a higher focus on materials. They typically need to coordinate materials to a bill of materials, or to flow materials (SKUs) quickly across the asset base.
- Some industries such as automotive and A&D do require large amounts of physical assets but make highly priced products across the asset base.

#### Notes:

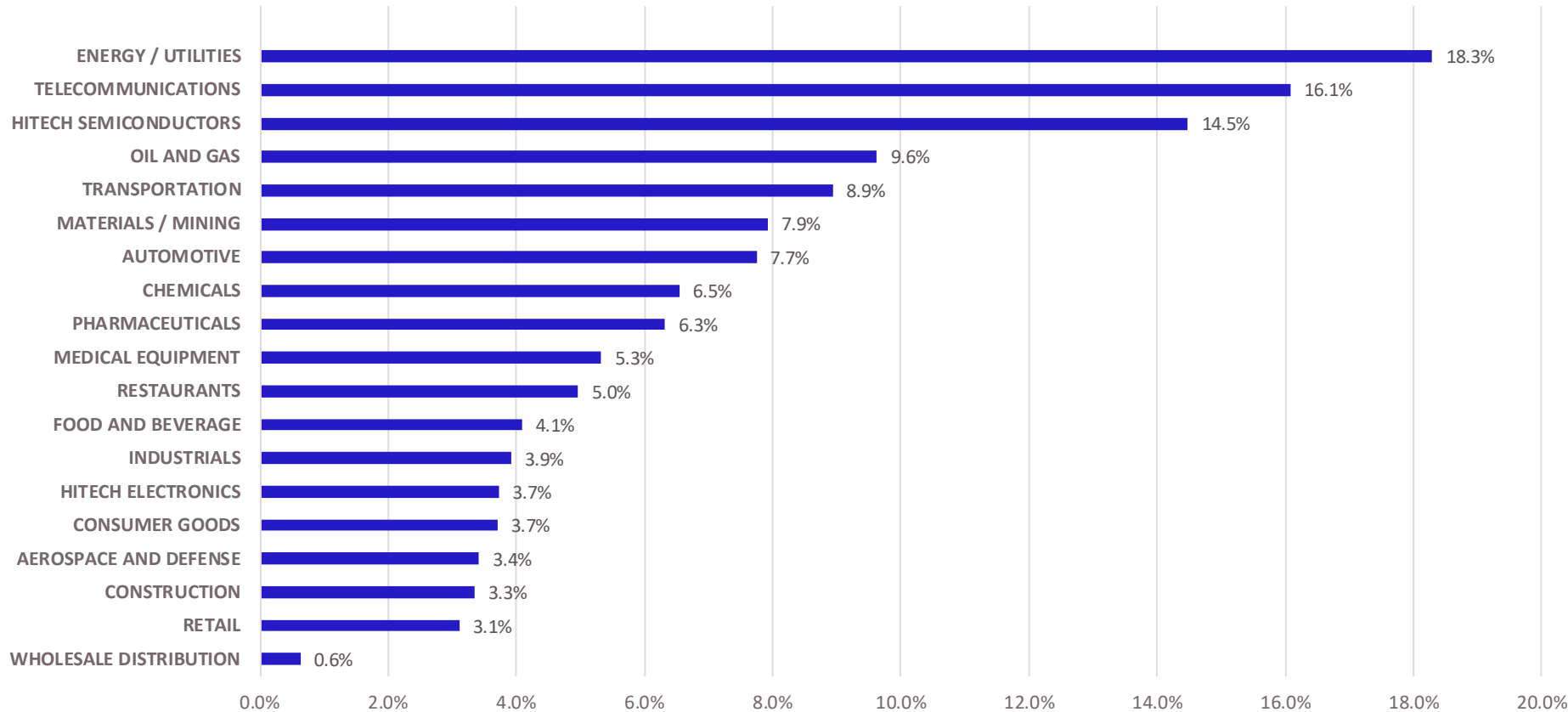
1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
2. This is an aggregate view: industry asset intensity = (aggregate PP&E + aggregate inventories) divided by aggregate revenue for each industry.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## Asset intensity: CAPEX / revenue



CAPEX % OF REVENUE



### NOTES & INSIGHTS

- Capital expenditures are another way of looking at asset intensity. Companies with large asset bases will require large CAPEX to maintain and grow the asset base.
- In this case, Energy, Telco, Hitech Semi, Oil and Gas, and Transportation are the top 5.
- Asset-intensive industries have a high focus on capacity management and asset utilization.
- Likewise, oil and gas, materials and mining, and telecommunication companies require a high level of physical assets as a percentage of revenue.
- Industries that are lower on the CAPEX list have a higher focus on materials. They typically need to coordinate materials to a bill of materials, or to flow materials (SKUs) quickly across the asset base.

#### Notes:

- All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
- This is an aggregate view: industry asset intensity = aggregate CAPEX divided by aggregate revenue for each industry.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.

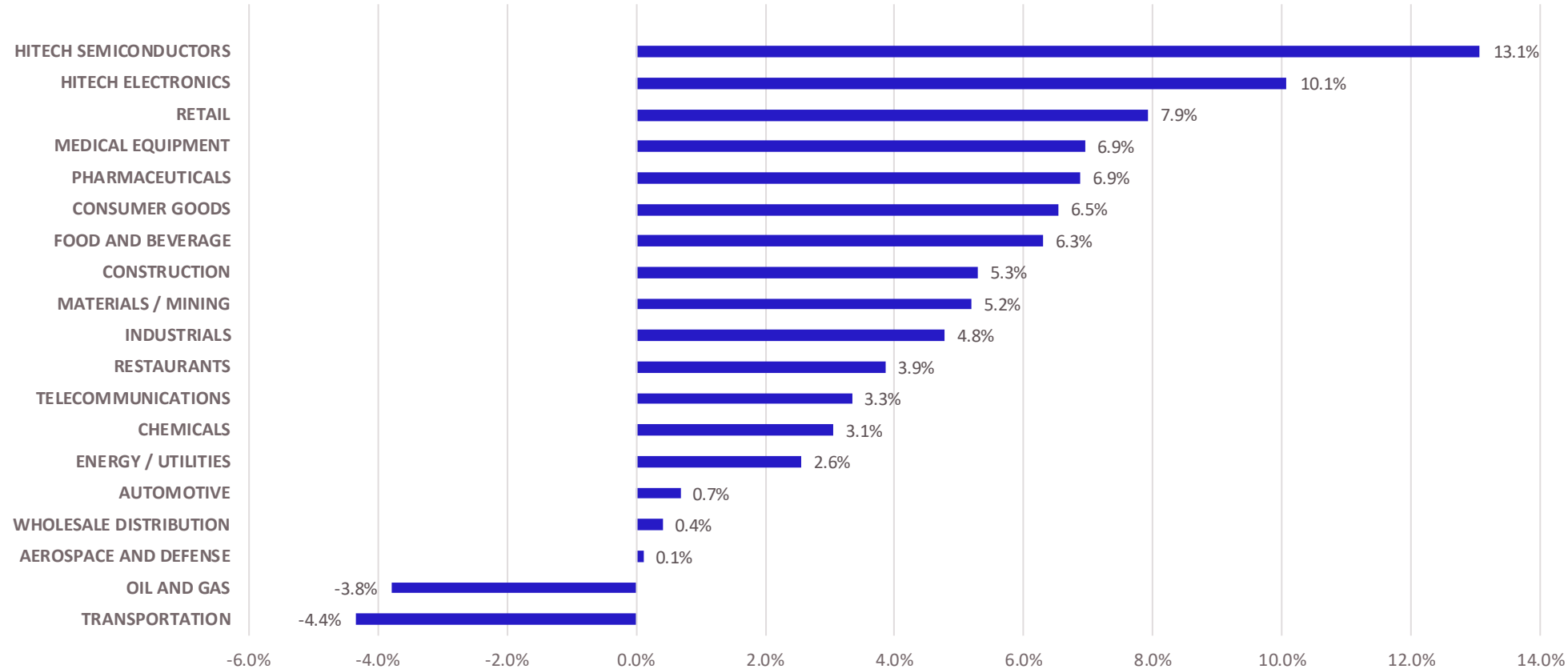


# Industry Supply Chains

## *Return on invested capital (ROIC)*



### RETURN ON INVESTED CAPITAL



### NOTES & INSIGHTS

- Return on invested capital is a measure of how well a company is delivering return on the debt and equity invested in a business. This chart shows aggregate numbers for each of the industries, calculated as aggregate net profit divided by (aggregate debt plus aggregate equity).
- A&D, transportation, and oil and gas all have negative returns because of recent secular challenges related to the pandemic and other factors.

#### Notes:

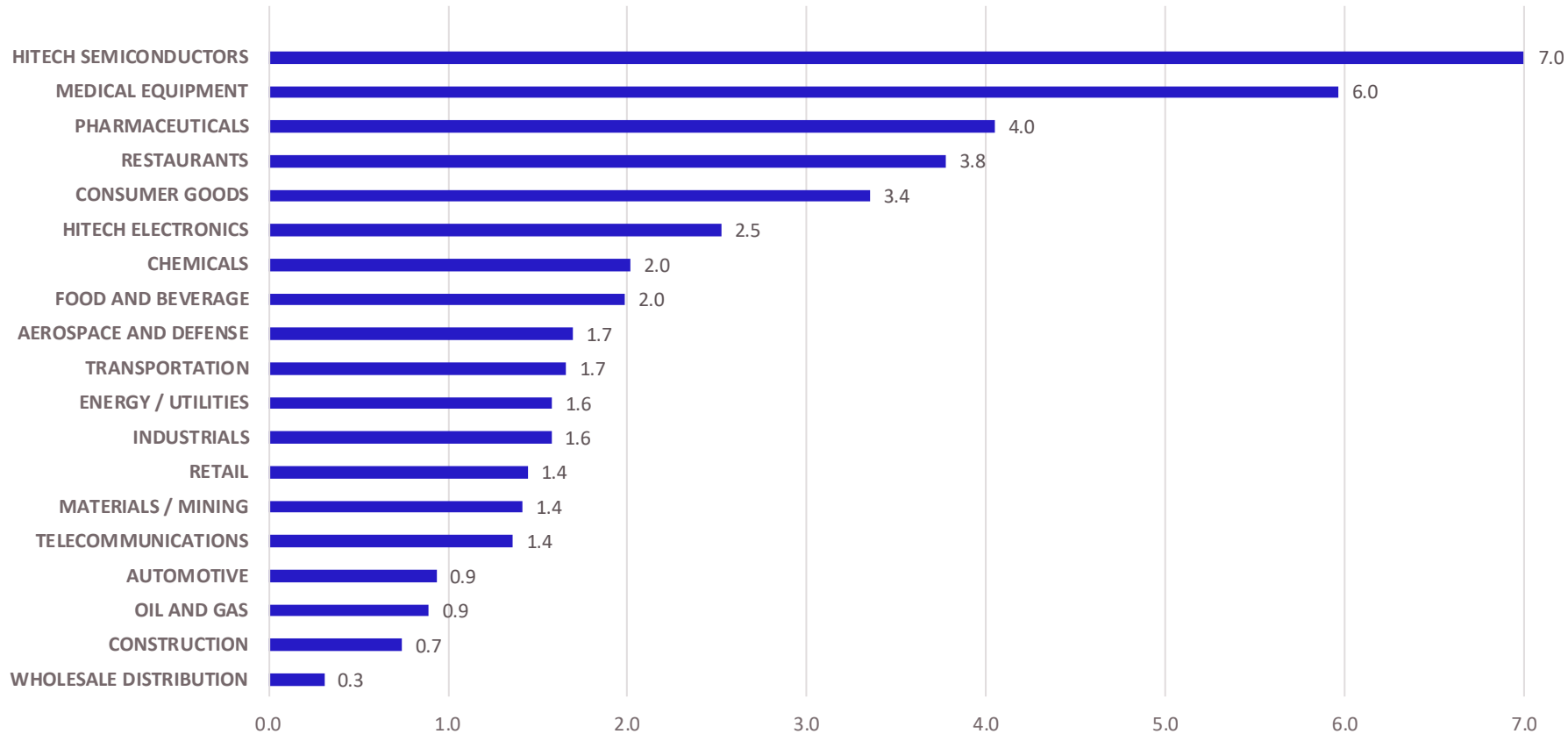
- All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
- This is an aggregate view: industry ROIC = aggregate net income divided by aggregate invested for each industry. Aggregate invested capital = aggregate debt plus aggregate equity for each industry.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## *Market cap / revenue*



### MARKET CAP / REVENUE



### NOTES & INSIGHTS

- Industries with significant intellectual property content enjoy significantly higher market cap multiples than others.
- Industrial-oriented industries have significantly lower multiples.
- Wholesale distribution, which has low gross and operating margins operates like a pass-through business and also has the lowest multiples.

#### Notes:

1. All numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report.
2. This is an aggregate view: industry market cap multiple = aggregate market cap for the industry divided by aggregate revenue for the industry.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## Gross margin – ten-year history



### NOTES & INSIGHTS

- At an aggregate level in all industries, gross margins have been remarkably consistent across the past decade, with some recent compression in some industries, possibly due to the impact of the pandemic.
- High gross margin industries tend to have products that have high IP content and/or low input costs, while low gross margin industries tend to have high input and conversion costs.

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	17.6%	17.8%	20.4%	21.6%	22.3%	21.2%	22.0%	22.5%	21.8%	22.0%	22.1%	21.1%	21.7%
AUTOMOTIVE	16.1%	16.3%	17.0%	17.8%	18.4%	18.8%	18.2%	17.9%	17.6%	16.8%	17.7%	18.0%	17.8%
CHEMICALS	28.7%	28.6%	28.4%	29.2%	29.8%	29.3%	27.6%	25.1%	24.8%	24.5%	25.3%	25.8%	27.0%
CONSTRUCTION	25.3%	24.7%	25.8%	26.2%	25.8%	24.9%	24.8%	26.2%	26.3%	26.8%	27.1%	22.5%	25.6%
CONSUMER GOODS	50.6%	51.0%	51.7%	51.5%	51.1%	50.6%	50.4%	50.3%	50.1%	49.4%	49.7%	50.0%	50.5%
ENERGY / UTILITIES	33.6%	31.8%	33.3%	32.0%	33.3%	34.4%	32.1%	29.0%	28.8%	28.6%	30.9%	33.2%	31.6%
FOOD AND BEVERAGE	36.1%	35.9%	36.5%	36.4%	36.5%	36.2%	35.6%	35.0%	35.1%	35.6%	35.6%	35.0%	35.8%
HITECH ELECTRONICS	27.6%	27.6%	27.2%	27.3%	27.5%	27.5%	27.5%	27.2%	26.6%	27.0%	26.8%	27.1%	27.2%
HITECH SEMICONDUCTORS	47.2%	47.0%	47.4%	50.6%	48.9%	46.1%	47.1%	47.2%	44.9%	43.8%	45.1%	46.7%	46.8%
INDUSTRIALS	26.6%	25.7%	26.8%	27.7%	27.8%	28.1%	27.6%	26.4%	26.0%	26.9%	27.6%	28.4%	27.3%
MATERIALS / MINING	27.5%	26.4%	24.5%	25.4%	25.0%	23.2%	19.6%	23.5%	23.6%	24.8%	29.8%	28.0%	24.7%
MEDICAL EQUIPMENT	53.0%	53.0%	53.7%	53.5%	53.7%	53.4%	52.8%	52.6%	52.7%	52.5%	52.4%	53.4%	53.1%
OIL AND GAS	17.4%	15.6%	21.6%	22.8%	21.6%	20.9%	19.9%	20.3%	21.2%	21.8%	24.2%	24.3%	21.9%
PHARMACEUTICALS	67.5%	67.5%	68.2%	68.0%	68.7%	69.1%	68.6%	68.2%	67.9%	68.6%	68.9%	69.7%	68.6%
RESTAURANTS	31.2%	30.5%	33.1%	33.4%	33.0%	32.3%	31.4%	30.7%	28.6%	27.8%	29.8%	42.9%	32.3%
RETAIL	26.8%	26.8%	27.1%	27.2%	27.3%	26.9%	26.5%	26.1%	26.2%	26.2%	26.3%	26.1%	26.6%
TELECOMMUNICATIONS	57.6%	57.3%	57.3%	55.9%	53.5%	54.0%	54.7%	55.1%	56.5%	56.6%	57.1%	56.5%	55.7%
TRANSPORTATION	11.0%	13.7%	21.7%	21.6%	22.4%	23.1%	22.9%	20.7%	21.1%	19.8%	21.2%	35.4%	23.0%
WHOLESALE DISTRIBUTION	10.3%	10.4%	10.9%	11.1%	11.0%	11.2%	11.5%	11.9%	11.6%	11.6%	11.3%	11.1%	11.3%
<b>AVERAGE</b>	<b>32.2%</b>	<b>32.0%</b>	<b>33.3%</b>	<b>33.6%</b>	<b>33.6%</b>	<b>33.2%</b>	<b>32.7%</b>	<b>32.4%</b>	<b>32.2%</b>	<b>32.2%</b>	<b>33.1%</b>	<b>34.5%</b>	<b>33.1%</b>

#### Notes:

- This is an aggregate view: industry-level aggregate gross margin = aggregate gross profit for the industry divided by aggregate revenue for the industry. Aggregate gross profit = aggregate revenue minus aggregate COGS.
- Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## Operating margin – ten-year history

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	3.5%	4.0%	7.2%	9.3%	9.9%	8.3%	9.4%	9.6%	8.5%	8.5%	8.0%	8.3%	8.7%
AUTOMOTIVE	2.2%	2.7%	4.0%	5.0%	5.6%	5.6%	5.2%	5.3%	5.4%	4.5%	6.0%	5.6%	5.2%
CHEMICALS	8.3%	8.4%	9.8%	11.8%	11.7%	11.2%	10.5%	9.0%	8.8%	8.6%	9.7%	9.3%	10.0%
CONSTRUCTION	6.4%	6.3%	6.7%	7.3%	6.8%	5.9%	5.7%	5.6%	5.3%	4.9%	5.2%	4.6%	5.8%
CONSUMER GOODS	12.7%	13.1%	14.9%	14.8%	14.8%	14.6%	14.3%	14.8%	14.8%	14.5%	14.8%	14.9%	14.7%
ENERGY / UTILITIES	12.1%	13.2%	13.0%	12.4%	13.5%	13.6%	12.5%	10.9%	10.2%	10.3%	12.2%	15.4%	12.4%
FOOD AND BEVERAGE	13.5%	13.6%	13.4%	13.6%	13.6%	13.1%	12.6%	12.4%	12.8%	12.5%	13.0%	12.3%	12.9%
HITECH ELECTRONICS	9.5%	9.4%	9.2%	9.5%	9.6%	9.7%	10.7%	10.1%	9.2%	9.3%	8.8%	8.3%	9.5%
HITECH SEMICONDUCTORS	23.0%	22.4%	22.3%	27.2%	23.5%	18.8%	20.3%	20.9%	16.8%	15.3%	19.8%	21.6%	20.7%
INDUSTRIALS	8.0%	7.2%	9.3%	9.4%	8.8%	9.1%	9.3%	8.7%	8.2%	10.3%	11.4%	11.3%	9.6%
MATERIALS / MINING	14.2%	14.0%	12.2%	13.3%	12.2%	8.2%	6.1%	11.0%	10.5%	11.3%	17.5%	16.5%	11.9%
MEDICAL EQUIPMENT	15.5%	15.3%	14.8%	14.9%	14.5%	15.5%	14.8%	14.3%	14.9%	14.9%	15.2%	17.1%	15.1%
OIL AND GAS	1.7%	0.9%	8.6%	10.0%	7.3%	4.3%	5.0%	8.6%	9.9%	10.7%	13.0%	12.4%	9.0%
PHARMACEUTICALS	20.2%	20.5%	22.2%	20.5%	22.6%	23.7%	22.4%	21.9%	21.9%	22.8%	23.3%	22.6%	22.4%
RESTAURANTS	9.1%	9.6%	13.9%	14.0%	14.6%	13.8%	13.2%	12.8%	12.9%	13.1%	12.9%	13.4%	13.5%
RETAIL	5.2%	5.3%	5.3%	5.4%	5.5%	5.7%	5.6%	5.6%	5.8%	5.8%	6.0%	6.1%	5.7%
TELECOMMUNICATIONS	14.1%	13.8%	16.4%	15.1%	14.7%	14.3%	14.7%	14.1%	17.6%	15.7%	16.2%	17.6%	15.6%
TRANSPORTATION	-1.2%	1.4%	9.2%	9.3%	10.5%	10.9%	11.0%	9.0%	8.9%	7.6%	8.1%	9.9%	9.4%
WHOLESALE DISTRIBUTION	2.2%	2.2%	2.6%	2.5%	2.6%	2.6%	2.6%	2.7%	2.8%	2.9%	3.1%	3.0%	2.8%
<b>AVERAGE</b>	<b>9.5%</b>	<b>9.6%</b>	<b>11.3%</b>	<b>11.9%</b>	<b>11.7%</b>	<b>11.0%</b>	<b>10.8%</b>	<b>10.9%</b>	<b>10.8%</b>	<b>10.7%</b>	<b>11.8%</b>	<b>12.1%</b>	<b>11.3%</b>

### NOTES & INSIGHTS

- At an aggregate level in all industries, operating margin has been remarkably consistent across the past decade. Some industries have seen significant compression on a trailing twelve months basis, due to the impact of the pandemic. This is particularly true for transportation, which includes air travel companies.
- Consistency of operating margin indicates that most industries have operating models driven by structural constraints.
- This also indicates that improvements that companies have put in place have largely accrued to their customers.
- Investments in the past ten years have been about maintaining or growing market share while preserving existing operating models.

#### Notes:

- This is an aggregate view: industry-level operating margin = aggregate operating profit divided by aggregate revenue.
- Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## *EBITDA margin – ten-year history*



### NOTES & INSIGHTS

- At an aggregate level in all industries, EBITDA margin has been remarkably consistent across the past decade. Some industries have seen significant compression on a trailing twelve months basis, due to the impact of the pandemic. This is particularly true for transportation, which includes air travel companies.
- Consistency of EBITDA margin indicates that most industries have operating models driven by structural constraints.
- This also indicates that improvements that companies have put in place have largely accrued to their customers.
- Investments in the past ten years have been about maintaining or growing market share while preserving existing operating models.

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	7.4%	7.9%	11.5%	12.9%	15.6%	10.5%	11.4%	12.0%	12.4%	12.2%	12.0%	11.4%	12.2%
AUTOMOTIVE	9.3%	10.7%	11.9%	12.8%	13.4%	13.1%	12.3%	12.4%	12.4%	12.1%	12.8%	11.6%	12.5%
CHEMICALS	14.0%	14.5%	15.3%	17.9%	17.2%	16.6%	15.9%	13.9%	13.9%	12.8%	14.7%	15.6%	15.4%
CONSTRUCTION	8.9%	9.0%	9.8%	9.7%	10.4%	9.1%	8.6%	8.8%	8.2%	7.2%	8.4%	7.5%	8.8%
CONSUMER GOODS	17.2%	18.0%	18.2%	17.8%	18.0%	18.0%	17.5%	18.7%	17.8%	17.3%	17.8%	18.4%	17.9%
ENERGY / UTILITIES	24.3%	26.2%	26.3%	24.3%	25.6%	26.1%	23.5%	21.4%	20.6%	19.4%	21.5%	26.6%	23.5%
FOOD AND BEVERAGE	16.2%	16.3%	17.3%	16.5%	19.2%	17.9%	16.5%	15.8%	16.6%	16.6%	16.4%	16.8%	17.0%
HITECH ELECTRONICS	14.2%	14.3%	14.7%	14.6%	14.0%	14.7%	15.5%	15.1%	13.8%	13.1%	13.3%	13.0%	14.2%
HITECH SEMICONDUCTORS	37.5%	37.9%	36.9%	40.0%	37.4%	30.7%	33.0%	32.3%	29.4%	26.2%	30.5%	33.4%	33.0%
INDUSTRIALS	12.5%	12.4%	13.8%	13.5%	14.0%	13.1%	13.1%	12.8%	12.8%	13.3%	14.4%	14.2%	13.5%
MATERIALS / MINING	18.3%	18.6%	17.6%	19.3%	19.3%	15.0%	8.5%	15.4%	12.2%	14.2%	21.3%	23.0%	16.6%
MEDICAL EQUIPMENT	22.8%	23.4%	22.4%	21.6%	21.4%	21.9%	19.4%	19.5%	19.8%	17.9%	19.7%	21.6%	20.5%
OIL AND GAS	9.1%	7.7%	17.4%	18.1%	16.8%	14.6%	12.0%	15.1%	17.0%	17.4%	18.6%	20.0%	16.7%
PHARMACEUTICALS	26.8%	27.3%	30.0%	28.9%	28.0%	29.6%	31.1%	31.0%	29.7%	28.9%	29.9%	29.0%	29.6%
RESTAURANTS	15.3%	15.4%	19.5%	19.8%	19.5%	18.3%	17.2%	16.8%	15.3%	17.1%	17.3%	17.3%	17.8%
RETAIL	8.4%	9.1%	8.2%	8.2%	8.1%	8.2%	8.0%	7.9%	8.0%	8.0%	7.9%	7.6%	8.0%
TELECOMMUNICATIONS	33.1%	31.9%	32.9%	32.0%	31.0%	30.8%	30.9%	29.8%	32.0%	30.6%	31.6%	35.2%	31.7%
TRANSPORTATION	2.0%	7.2%	17.1%	16.2%	17.2%	16.9%	17.2%	14.8%	14.8%	13.9%	14.8%	16.7%	15.9%
WHOLESALE DISTRIBUTION	1.6%	1.7%	3.1%	3.0%	3.8%	3.6%	3.3%	3.6%	3.5%	3.6%	3.7%	3.5%	3.5%
<b>AVERAGE</b>	<b>15.7%</b>	<b>16.3%</b>	<b>18.1%</b>	<b>18.3%</b>	<b>18.4%</b>	<b>17.3%</b>	<b>16.6%</b>	<b>16.7%</b>	<b>16.3%</b>	<b>15.9%</b>	<b>17.2%</b>	<b>18.0%</b>	<b>17.3%</b>

#### Notes:

- This is an aggregate view: industry-level EBITDA margin = aggregate EBITDA divided by aggregate revenue.
- Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## SG&A % revenue – ten-year history



### NOTES & INSIGHTS

- At an aggregate level in all industries, SG&A expense has been remarkably consistent across the past decade. Consumer goods, medical equipment, pharmaceuticals, telco, and food and beverage are the perennial leaders in SG&A. These industries have large advertising and promotions budgets, along with large sales/account teams.
- SG&A has a significant impact on supply chain operations, with leading companies increasingly synchronizing their sales activities with their supply chains.
- Commodity and service-oriented supply chains such as transportation, wholesale, oil and gas, and materials must keep their selling and administrative costs low due to their low gross margins.

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	8.9%	8.9%	8.2%	6.8%	7.3%	7.3%	7.2%	7.3%	7.6%	7.6%	7.9%	7.1%	7.4%
AUTOMOTIVE	9.8%	9.7%	9.0%	9.1%	9.3%	9.6%	9.3%	9.3%	9.1%	9.2%	9.1%	9.5%	9.3%
CHEMICALS	14.1%	14.2%	13.7%	13.0%	13.5%	12.9%	12.6%	11.4%	11.2%	11.2%	10.9%	12.1%	12.2%
CONSTRUCTION	9.5%	9.7%	10.2%	10.4%	12.5%	9.8%	9.7%	10.6%	11.5%	11.8%	11.7%	8.1%	10.6%
CONSUMER GOODS	34.5%	34.5%	33.7%	33.5%	34.1%	33.7%	33.9%	33.0%	32.7%	32.5%	33.0%	32.6%	33.3%
ENERGY / UTILITIES	8.4%	7.8%	7.9%	8.1%	8.1%	7.6%	7.1%	7.1%	7.4%	7.4%	7.4%	7.7%	7.6%
FOOD AND BEVERAGE	19.5%	19.2%	19.8%	19.8%	20.0%	20.3%	19.8%	19.1%	18.8%	19.5%	18.9%	19.0%	19.5%
HITECH ELECTRONICS	12.6%	12.5%	12.8%	12.6%	12.9%	12.8%	12.5%	12.7%	12.9%	13.1%	12.6%	13.9%	12.9%
HITECH SEMICONDUCTORS	8.4%	8.5%	9.0%	8.5%	9.4%	10.2%	10.2%	10.2%	11.4%	12.0%	11.1%	11.0%	10.3%
INDUSTRIALS	14.5%	14.3%	13.8%	14.1%	15.2%	15.1%	14.6%	14.3%	14.3%	13.8%	12.2%	14.0%	14.2%
MATERIALS / MINING	6.8%	6.8%	6.7%	6.8%	7.0%	7.7%	7.2%	6.6%	6.4%	6.4%	6.1%	6.6%	6.7%
MEDICAL EQUIPMENT	28.5%	28.8%	30.0%	29.7%	30.1%	29.3%	29.7%	30.2%	29.7%	29.2%	28.8%	28.2%	29.5%
OIL AND GAS	6.1%	6.3%	4.7%	4.5%	5.1%	5.9%	5.3%	4.0%	3.9%	3.9%	3.8%	5.4%	4.7%
PHARMACEUTICALS	27.0%	26.8%	27.8%	28.4%	27.9%	27.6%	28.6%	28.7%	28.4%	28.4%	28.2%	29.2%	28.3%
RESTAURANTS	8.8%	8.6%	7.4%	7.3%	6.7%	6.9%	6.9%	6.5%	6.4%	6.5%	7.3%	12.5%	7.4%
RETAIL	16.8%	17.0%	16.9%	17.0%	17.5%	16.9%	16.7%	16.3%	15.8%	15.9%	16.2%	17.1%	16.6%
TELECOMMUNICATIONS	19.5%	19.5%	19.6%	19.3%	20.3%	20.7%	21.4%	22.1%	21.7%	23.9%	23.8%	22.5%	21.5%
TRANSPORTATION	5.9%	5.8%	6.0%	6.0%	6.1%	6.2%	6.1%	5.8%	6.5%	6.4%	6.8%	10.9%	6.7%
WHOLESALE DISTRIBUTION	5.6%	5.7%	5.8%	6.1%	6.1%	5.8%	6.3%	6.3%	6.0%	5.9%	5.6%	6.5%	6.0%
<b>AVERAGE</b>	<b>14.0%</b>	<b>13.9%</b>	<b>13.8%</b>	<b>13.7%</b>	<b>14.2%</b>	<b>14.0%</b>	<b>13.9%</b>	<b>13.8%</b>	<b>13.8%</b>	<b>13.9%</b>	<b>13.8%</b>	<b>14.4%</b>	<b>13.9%</b>

#### Notes:

- This is an aggregate view: industry-level SG&A = aggregate SG&A divided by aggregate revenue.
- Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.



# Industry Supply Chains

## *Inventory turns – ten-year history*



### NOTES & INSIGHTS

- At an aggregate level in all industries, inventory turns have been remarkably consistent across the past decade, with a slight drop in most industries.
- This indicates that most industries have operating models driven by structural constraints.
- This also indicates that improvements that companies have put in place have largely accrued to their customers.
- Investments in the past ten years have been about maintaining or growing market share while preserving existing operating models.

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	2.4	2.3	2.5	2.7	2.6	3.1	2.8	2.9	2.9	3.0	3.3	3.3	2.9
AUTOMOTIVE	6.0	6.3	6.7	6.7	6.6	7.1	7.4	7.7	7.6	7.4	7.4	7.6	7.2
CHEMICALS	4.4	4.5	4.7	4.7	4.1	4.9	5.3	5.7	5.6	5.6	5.7	5.6	5.2
CONSTRUCTION	3.0	3.1	3.2	3.3	3.0	3.1	3.1	3.4	3.6	3.7	3.8	4.1	3.4
CONSUMER GOODS	2.5	2.6	2.8	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.3	3.4	3.0
ENERGY / UTILITIES	9.8	11.1	10.0	10.4	9.9	11.4	11.7	12.7	12.3	12.1	12.1	11.6	11.4
FOOD AND BEVERAGE	4.6	4.6	5.0	5.1	5.1	5.1	5.4	5.4	5.3	5.0	5.1	5.5	5.2
HITECH ELECTRONICS	6.6	6.9	7.5	7.3	7.4	8.1	8.2	7.8	8.8	7.8	7.4	7.7	7.8
HITECH SEMICONDUCTORS	3.4	3.3	3.5	3.6	3.7	3.9	3.8	4.0	3.9	4.0	4.3	4.1	3.9
INDUSTRIALS	4.4	4.7	4.9	4.7	4.5	4.6	4.4	4.4	4.6	4.5	4.6	4.5	4.6
MATERIALS / MINING	4.5	4.5	5.0	4.9	4.9	4.9	5.6	5.3	5.3	5.1	5.0	4.8	5.1
MEDICAL EQUIPMENT	3.0	3.0	3.2	3.2	3.3	3.4	3.2	3.4	3.2	3.3	3.4	3.5	3.3
OIL AND GAS	9.3	9.9	11.0	11.9	10.1	9.2	11.7	13.6	11.5	11.4	11.5	10.9	11.3
PHARMACEUTICALS	1.8	1.9	2.0	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.4	2.4	2.2
RESTAURANTS	25.5	25.8	28.2	27.4	27.4	29.0	29.5	27.8	29.3	26.5	29.5	27.7	28.2
RETAIL	7.6	7.6	7.2	7.2	7.0	6.9	7.1	7.1	7.4	7.5	7.5	7.6	7.2
TELECOMMUNICATIONS	17.8	18.7	17.8	18.4	21.1	20.9	20.9	22.0	23.4	23.4	23.7	24.4	21.6
TRANSPORTATION	29.1	29.7	32.2	34.4	32.5	33.2	35.7	35.4	33.7	33.8	32.6	26.4	33.0
WHOLESALE DISTRIBUTION	9.6	9.9	9.9	9.7	9.7	9.8	9.8	9.6	10.0	10.1	10.2	10.4	9.9
<b>AVERAGE</b>	<b>8.2</b>	<b>8.4</b>	<b>8.8</b>	<b>9.0</b>	<b>8.8</b>	<b>9.1</b>	<b>9.5</b>	<b>9.7</b>	<b>9.7</b>	<b>9.4</b>	<b>9.6</b>	<b>9.2</b>	<b>9.3</b>

#### Notes:

1. This is an aggregate view: industry-level industry turns = aggregate COGS divided by aggregate inventory.
2. Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.



# Industry Supply Chains

## *Asset intensity: physical assets / revenue – ten-year history*



### NOTES & INSIGHTS

- There has been a general slight uptick in physical asset intensity in the past two years, which seems counter to the thesis that companies are moving to asset-light models or that digitization is replacing physical assets.
- In some industries, recent upticks can probably be explained by a significant drop-off in revenue due to the pandemic and other factors. This is particularly true for oil and gas, restaurants, transportation, automotive, and A&D.
- Capital expenditures have been very consistent across all industries for the past ten years, so something else must be at play here. This requires further investigation.

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	66.8%	67.5%	61.5%	57.5%	58.6%	50.0%	54.0%	51.5%	52.3%	50.2%	47.2%	47.2%	53.0%
AUTOMOTIVE	60.3%	58.9%	52.6%	50.4%	51.8%	49.3%	45.9%	43.1%	43.3%	42.9%	41.6%	41.5%	46.2%
CHEMICALS	77.0%	75.8%	69.5%	64.6%	73.2%	67.2%	60.7%	54.3%	53.8%	53.2%	52.4%	56.2%	60.5%
CONSTRUCTION	47.9%	45.8%	44.5%	42.7%	46.5%	45.3%	45.2%	42.3%	42.6%	42.8%	42.7%	39.9%	43.4%
CONSUMER GOODS	74.6%	72.7%	63.3%	55.6%	56.3%	55.5%	52.8%	53.0%	54.5%	51.7%	49.8%	48.9%	54.1%
ENERGY / UTILITIES	223.6%	237.6%	211.9%	195.6%	202.4%	193.5%	175.8%	154.8%	157.0%	156.4%	149.7%	151.8%	174.9%
FOOD AND BEVERAGE	52.9%	51.8%	50.2%	47.9%	49.1%	47.5%	44.9%	44.3%	45.1%	46.6%	46.1%	44.8%	46.7%
HITECH ELECTRONICS	33.7%	32.7%	30.6%	31.0%	31.1%	29.3%	28.0%	30.0%	28.3%	31.4%	32.4%	32.1%	30.4%
HITECH SEMICONDUCTORS	84.1%	86.4%	84.3%	74.2%	74.2%	72.6%	69.5%	67.9%	73.3%	72.3%	64.7%	66.5%	71.9%
INDUSTRIALS	53.1%	50.6%	45.7%	45.8%	49.4%	49.5%	49.2%	47.9%	47.2%	47.4%	46.8%	49.5%	47.8%
MATERIALS / MINING	102.8%	101.9%	94.1%	91.2%	102.9%	113.1%	103.9%	100.4%	99.7%	94.9%	86.2%	91.9%	97.8%
MEDICAL EQUIPMENT	60.0%	59.3%	55.9%	52.5%	51.8%	49.8%	53.0%	49.6%	53.4%	52.2%	51.2%	49.4%	51.9%
OIL AND GAS	122.9%	119.2%	94.6%	84.8%	104.5%	121.1%	99.6%	75.0%	74.5%	70.5%	63.9%	70.1%	85.9%
PHARMACEUTICALS	86.5%	81.7%	79.9%	76.2%	76.6%	74.5%	72.8%	70.6%	73.2%	73.2%	68.4%	71.0%	73.6%
RESTAURANTS	81.9%	79.9%	59.2%	43.2%	42.4%	41.4%	44.4%	48.4%	47.5%	47.2%	48.5%	51.5%	47.4%
RETAIL	40.6%	41.7%	36.7%	34.7%	35.4%	35.4%	34.6%	35.1%	34.9%	35.0%	35.1%	35.9%	35.3%
TELECOMMUNICATIONS	94.3%	92.6%	88.2%	75.8%	76.1%	76.6%	72.9%	73.9%	73.8%	74.8%	72.9%	75.6%	76.1%
TRANSPORTATION	125.1%	118.7%	91.9%	86.7%	87.8%	88.6%	82.4%	79.2%	81.0%	82.9%	83.6%	89.3%	85.3%
WHOLESALE DISTRIBUTION	16.5%	16.2%	15.8%	15.4%	15.5%	15.1%	15.0%	15.6%	14.4%	14.0%	13.7%	13.4%	14.8%
<b>AVERAGE</b>	<b>79.2%</b>	<b>78.5%</b>	<b>70.0%</b>	<b>64.5%</b>	<b>67.7%</b>	<b>67.1%</b>	<b>63.4%</b>	<b>59.9%</b>	<b>60.5%</b>	<b>60.0%</b>	<b>57.7%</b>	<b>59.3%</b>	<b>63.0%</b>

#### Notes:

- This is an aggregate view: industry-level asset intensity = aggregate physical assets divided by aggregate revenue. Aggregate physical assets = aggregate PP&E plus aggregate inventory.
- Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## Asset intensity: CAPEX – ten-year history



### NOTES & INSIGHTS

- CAPEX is another way of looking at the asset intensity of industry. The thinking is that the higher the CAPEX, the higher the asset intensity.
- Average CAPEX across all industries currently stands at 7.0%, which is consistent with the average for the past ten years.
- CAPEX as a percentage of revenue has been largely unaffected by the pandemic. However, revenue in a number of industries has come down substantially; thus, CAPEX on an absolute basis has come down in lock step with revenue.

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	3.4%	3.3%	3.8%	3.9%	4.0%	4.1%	4.3%	4.3%	4.4%	4.2%	3.5%	3.0%	4.0%
AUTOMOTIVE	7.7%	7.6%	7.7%	7.5%	7.9%	8.0%	7.9%	7.2%	7.2%	6.7%	6.2%	5.4%	7.2%
CHEMICALS	6.5%	6.5%	6.7%	6.0%	6.0%	6.3%	6.2%	6.0%	5.8%	5.3%	4.9%	4.7%	5.8%
CONSTRUCTION	3.3%	3.4%	2.9%	2.8%	2.8%	2.7%	3.1%	3.1%	3.3%	3.9%	4.4%	4.0%	3.3%
CONSUMER GOODS	3.7%	3.7%	4.3%	4.4%	4.3%	4.6%	4.5%	4.6%	4.3%	4.1%	4.2%	3.6%	4.3%
ENERGY / UTILITIES	18.3%	18.4%	17.8%	16.3%	16.1%	16.6%	15.5%	13.7%	13.5%	13.6%	13.5%	14.1%	15.1%
FOOD AND BEVERAGE	4.1%	3.8%	4.5%	4.5%	4.4%	4.4%	5.0%	4.5%	4.5%	4.4%	4.4%	4.1%	4.5%
HITECH ELECTRONICS	3.7%	3.4%	4.4%	4.7%	4.7%	4.7%	4.4%	4.2%	4.3%	5.0%	5.1%	4.5%	4.6%
HITECH SEMICONDUCTORS	14.5%	14.5%	16.8%	15.3%	13.7%	13.8%	12.7%	13.3%	13.5%	15.3%	14.5%	12.5%	14.1%
INDUSTRIALS	3.9%	3.8%	4.1%	4.2%	4.2%	4.5%	4.6%	4.4%	4.7%	4.9%	4.4%	4.1%	4.4%
MATERIALS / MINING	7.9%	7.8%	7.7%	7.0%	6.5%	7.6%	9.4%	9.9%	12.5%	12.5%	9.9%	8.8%	9.2%
MEDICAL EQUIPMENT	5.3%	5.3%	5.4%	5.1%	4.9%	4.6%	4.7%	4.6%	4.6%	4.7%	4.7%	4.1%	4.7%
OIL AND GAS	9.6%	8.0%	9.8%	9.0%	9.6%	11.4%	13.5%	12.0%	12.1%	11.2%	10.5%	12.1%	11.1%
PHARMACEUTICALS	6.3%	6.5%	5.8%	6.3%	5.9%	5.9%	6.2%	5.9%	5.7%	5.2%	4.4%	4.5%	5.6%
RESTAURANTS	5.0%	4.9%	5.8%	7.3%	5.8%	6.0%	6.0%	6.4%	6.5%	6.4%	5.6%	5.2%	6.1%
RETAIL	3.1%	3.3%	3.0%	2.9%	2.9%	2.8%	2.9%	2.9%	2.9%	3.1%	2.8%	2.7%	2.9%
TELECOMMUNICATIONS	16.1%	15.5%	16.2%	15.9%	16.7%	17.1%	18.5%	17.6%	17.2%	16.4%	16.0%	15.3%	16.7%
TRANSPORTATION	8.9%	8.1%	9.0%	9.9%	9.7%	10.0%	9.9%	9.1%	8.8%	9.0%	9.1%	8.2%	9.3%
WHOLESALE DISTRIBUTION	0.6%	0.6%	0.7%	0.8%	0.8%	0.8%	0.8%	0.9%	0.8%	0.9%	0.8%	0.7%	0.8%
<b>AVERAGE</b>	<b>7.0%</b>	<b>6.8%</b>	<b>7.2%</b>	<b>7.0%</b>	<b>6.9%</b>	<b>7.2%</b>	<b>7.4%</b>	<b>7.1%</b>	<b>7.2%</b>	<b>7.2%</b>	<b>6.8%</b>	<b>6.4%</b>	<b>7.0%</b>

#### Notes:

- This is an aggregate view: industry-level asset intensity = aggregate CAPEX divided by aggregate revenue.
- Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
- Source of all data is Calcbench and YCharts and WorldLocity analysis.

# Industry Supply Chains

## ROIC – ten-year history



### NOTES & INSIGHTS

- For the ten years through 2019, ROIC has been reasonably consistent across all industries. The past year (TTM) has seen significant recession in ROIC in a number of industries, very likely the result of the impact of the pandemic. This includes distribution, transportation, restaurants, oil and gas, A&D, and automotive.
- Restaurants and the Hitech industries are the historical leaders in ROIC.

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	0.1%	0.6%	7.0%	11.8%	14.4%	9.9%	10.2%	11.4%	10.7%	11.3%	10.6%	11.2%	10.8%
AUTOMOTIVE	0.7%	1.6%	3.9%	5.7%	5.4%	5.6%	5.8%	6.3%	6.1%	6.5%	8.4%	4.8%	5.8%
CHEMICALS	3.1%	3.3%	6.3%	9.0%	8.0%	8.2%	8.2%	8.0%	8.3%	6.9%	8.9%	9.6%	8.1%
CONSTRUCTION	5.3%	5.3%	6.6%	6.4%	7.4%	3.7%	5.2%	5.7%	4.2%	3.8%	4.9%	4.5%	5.2%
CONSUMER GOODS	6.5%	6.9%	8.9%	11.1%	13.4%	12.5%	11.7%	14.3%	12.3%	12.4%	12.8%	14.2%	12.4%
ENERGY / UTILITIES	2.6%	2.7%	3.8%	3.6%	4.0%	2.7%	2.7%	3.4%	2.0%	2.0%	3.1%	4.8%	3.2%
FOOD AND BEVERAGE	6.3%	6.3%	7.0%	7.2%	9.9%	8.0%	8.7%	9.7%	10.2%	9.3%	9.3%	12.6%	9.2%
HITECH ELECTRONICS	10.1%	10.3%	10.5%	9.4%	7.8%	9.6%	12.0%	11.4%	8.2%	2.9%	8.4%	8.8%	8.9%
HITECH SEMICONDUCTORS	13.1%	12.8%	12.5%	18.2%	12.2%	9.2%	12.2%	13.3%	10.1%	8.7%	13.7%	14.8%	12.5%
INDUSTRIALS	4.8%	5.1%	6.3%	6.4%	4.9%	5.1%	5.0%	5.7%	5.4%	5.1%	6.0%	5.2%	5.5%
MATERIALS / MINING	5.2%	5.2%	5.5%	7.1%	7.2%	1.8%	-2.4%	2.9%	0.8%	3.9%	10.4%	9.9%	4.7%
MEDICAL EQUIPMENT	6.9%	6.8%	7.0%	5.9%	5.7%	7.3%	6.5%	8.0%	8.4%	7.8%	9.1%	9.6%	7.5%
OIL AND GAS	-3.8%	-4.8%	4.8%	6.8%	4.1%	0.6%	-0.3%	5.9%	9.0%	9.8%	12.5%	11.4%	6.5%
PHARMACEUTICALS	6.9%	7.1%	10.1%	10.4%	7.5%	9.2%	11.7%	11.5%	11.7%	11.0%	11.8%	10.6%	10.5%
RESTAURANTS	3.9%	4.3%	14.3%	15.8%	13.8%	14.1%	12.3%	10.6%	10.8%	13.0%	14.6%	12.9%	13.2%
RETAIL	7.9%	8.8%	8.5%	9.3%	8.8%	10.2%	9.1%	9.3%	10.2%	9.6%	10.2%	9.1%	9.4%
TELECOMMUNICATIONS	3.3%	2.4%	4.1%	5.6%	6.9%	4.4%	5.6%	10.8%	5.9%	5.0%	5.3%	8.6%	6.2%
TRANSPORTATION	-4.4%	-3.1%	6.1%	7.2%	8.9%	7.1%	8.6%	6.5%	6.7%	4.8%	6.1%	6.6%	6.9%
WHOLESALE DISTRIBUTION	0.4%	0.4%	6.1%	6.8%	8.3%	8.6%	5.8%	7.0%	7.5%	9.3%	10.1%	9.7%	7.9%
<b>AVERAGE</b>	<b>4.1%</b>	<b>4.3%</b>	<b>7.3%</b>	<b>8.6%</b>	<b>8.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>8.5%</b>	<b>7.8%</b>	<b>7.5%</b>	<b>9.3%</b>	<b>9.4%</b>	<b>8.1%</b>

#### Notes:

- This is an aggregate view: industry ROIC = aggregate net income divided by aggregate invested capital for each industry. Aggregate invested capital = aggregate debt plus aggregate equity for each industry.
- Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Industry Supply Chains

## *Market cap / revenue – ten-year history*

### NOTES & INSIGHTS

- Market cap multiples have risen in most industries in the past couple of years. This is particularly true in consumer goods, hitech, retail, and medical equipment. They currently sit significantly above their ten-year average across all industries. They have been relatively flat in construction, food and beverage, oil and gas, and wholesale distribution.

INDUSTRY	TTM	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Average
AEROSPACE AND DEFENSE	1.7	1.7	1.5	1.7	1.4	1.5	1.1	1.0	1.0	1.1	0.8	0.7	1.2
AUTOMOTIVE	0.9	0.8	0.8	0.5	0.4	0.7	0.6	0.6	0.6	0.7	0.5	0.5	0.6
CHEMICALS	2.0	1.8	1.7	1.5	1.5	2.0	1.3	1.0	1.1	1.2	0.9	0.9	1.3
CONSTRUCTION	0.7	0.6	0.6	0.6	0.6	0.9	0.7	0.6	0.5	0.7	0.5	0.5	0.6
CONSUMER GOODS	3.4	3.4	2.7	2.2	2.8	2.4	2.3	2.4	2.7	2.2	1.7	1.9	2.3
ENERGY / UTILITIES	1.6	1.7	1.6	1.5	1.3	1.3	1.1	0.9	1.0	0.9	0.8	0.9	1.1
FOOD AND BEVERAGE	2.0	2.0	1.9	1.9	1.7	2.3	2.0	1.8	1.7	1.8	1.7	1.7	1.9
HITECH ELECTRONICS	2.5	2.6	1.8	1.3	1.8	1.4	1.2	1.4	1.1	1.0	0.9	1.2	1.3
HITECH SEMICONDUCTORS	7.0	6.3	6.8	4.3	3.5	5.2	3.8	3.0	3.6	3.2	2.4	2.6	3.8
INDUSTRIALS	1.6	1.4	1.3	1.2	1.0	1.5	1.2	1.0	1.0	1.1	1.0	0.9	1.1
MATERIALS / MINING	1.4	1.3	1.2	1.0	0.9	1.5	1.0	0.6	0.9	1.1	1.1	1.2	1.0
MEDICAL EQUIPMENT	6.0	5.5	5.8	4.8	4.2	4.2	3.4	3.5	3.0	2.6	2.1	1.8	3.5
OIL AND GAS	0.9	0.8	0.5	0.8	0.9	1.2	1.0	0.5	0.6	0.8	0.8	0.9	0.8
PHARMACEUTICALS	4.0	4.0	4.3	4.4	3.9	4.1	3.6	4.1	4.1	3.7	2.9	2.7	3.8
RESTAURANTS	3.8	3.4	3.0	2.6	2.3	2.5	2.1	2.3	2.1	2.0	1.8	2.0	2.3
RETAIL	1.4	1.5	1.5	1.2	1.0	1.1	0.9	0.9	0.9	0.8	0.7	0.6	1.0
TELECOMMUNICATIONS	1.4	1.3	1.3	1.3	1.3	1.5	1.4	1.3	1.3	1.4	1.2	1.3	1.3
TRANSPORTATION	1.7	1.5	1.1	1.1	1.0	1.4	1.1	0.9	1.2	1.0	0.8	0.8	1.0
WHOLESALE DISTRIBUTION	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
<b>AVERAGE</b>	<b>2.3</b>	<b>2.2</b>	<b>2.1</b>	<b>1.8</b>	<b>1.7</b>	<b>1.9</b>	<b>1.6</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.2</b>	<b>1.2</b>	<b>1.6</b>

#### Notes:

- This is an aggregate view: industry-level asset market cap / revenue = aggregate market capitalization divided by aggregate revenue for each industry. Market cap is as of the last day of each year. TTM market cap is as of the day on the cover of this report.
- Average = average of the averages. TTM = trailing twelve months as of the date on the cover of this report.
- Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Appendix

## Industry segments

<b>Aerospace and Defense</b>
Aerospace and Defense
<b>Automotive</b>
Auto Manufacturers
Auto Parts
Recreational Vehicles
<b>Chemicals</b>
Chemicals
Specialty Chemicals
<b>Construction</b>
Engineering & Construction
Residential Construction
<b>Consumer Goods</b>
Apparel Manufacturing
Footwear & Accessories
Furnishings, Fixtures & Appliances
Household & Personal Products
Luxury Goods
<b>Energy / Utilities</b>
Utilities - Diversified
Utilities - Independent Power Producers
Utilities - Regulated Electric
Utilities - Regulated Gas
Utilities - Regulated Water
Utilities - Renewable
<b>Food and Beverage</b>
Beverages - Brewers
Beverages - Non-Alcoholic
Beverages - Wineries & Distilleries
Confectioners
Farm Products
Packaged Foods
Tobacco

<b>Hitech Electronics</b>
Communication Equipment
Computer Hardware
Consumer Electronics
Electronic Components
Scientific & Technical Instruments
Solar
<b>Hitech Semiconductors</b>
Semiconductor Equipment & Materials
Semiconductors
<b>Industrials</b>
Building Products & Equipment
Business Equipment & Supplies
Conglomerates
Electrical Equipment & Parts
Farm & Heavy Construction Machinery
Metal Fabrication
Packaging & Containers
Pollution & Treatment Controls
Specialty Industrial Machinery
Tools & Accessories
Waste Management
<b>Materials / Mining</b>
Agricultural Inputs
Aluminum
Building Materials
Coking Coal
Copper
Gold
Lumber & Wood Production
Other Industrial Metals & Mining
Other Precious Metals & Mining
Paper & Paper Products
Silver
Steel
<b>Medical Equipment</b>
Diagnostics & Research
Medical Devices
Medical Instruments & Supplies

<b>Oil and Gas</b>
Oil & Gas Drilling
Oil & Gas E&P
Oil & Gas Equipment & Services
Oil & Gas Integrated
Oil & Gas Midstream
Oil & Gas Refining & Marketing
Thermal Coal
Uranium
<b>Pharmaceuticals</b>
Biotechnology
Drug Manufacturers - General
Drug Manufacturers - Specialty & Generic
<b>Restaurants</b>
Restaurants
<b>Retail</b>
Apparel Retail
Auto & Truck Dealerships
Department Stores
Discount Stores
Grocery Stores
Home Improvement Retail
Internet Retail
Pharmaceutical Retailers
Specialty Retail
<b>Telecommunications</b>
Telecom Services
<b>Transportation</b>
Airlines
Integrated Freight & Logistics
Marine Shipping
Railroads
Trucking
<b>Wholesale Distribution</b>
Electronics & Computer Distribution
Food Distribution
Industrial Distribution
Medical Distribution





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