

# Transportation Industry Operating Benchmarks

Operational and market capitalization data for 191  
transportation companies

1-Jan-2022







# Version



| VERSION  | NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021-1.1 | Initial version, dated 04.20.21                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2021-2.1 | Updated financial and market cap data for 06.25.21. Removed companies that merged or were taken private.                                                                                                                                                                                                                                                                                                                                       |
| 2021-2.2 | Updated to correct for incorrect COGS data for a certain subset of companies for the year 2010. Certain transportation companies, particularly airlines do not explicitly list COGS on their income statements. This requires data services to calculate COGS from multiple other income statement cost elements. In 2010, this was not done correctly for a subset of companies. This subset was removed from the analysis for the year 2010. |
| 2021-3.1 | Updated financial and market cap data for 11.30.21. Removed companies that merged or were taken private.                                                                                                                                                                                                                                                                                                                                       |
| 2022-1.1 | Updated financial and market cap data for 01.01.22. Added companies and removed those that merged or were taken private.                                                                                                                                                                                                                                                                                                                       |

**Versioning convention:** This document is versioned as follows: **YYYY.N.n**, where **YYYY** is the year, **N** is the major release number, and **n** is the minor release number. A major release includes one or more of the following: the number of companies changes; reports and analyses change; financial and market cap information are updated, and a new date is attached to the report. A minor fixes errors, including data errors, formatting errors, and inconsistencies.

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# 2022 Transportation Industry Report: Key Takeaways



- The Transportation industry 3-year CAGR is -0.3% (overall dollars growth). The average company 3-year CAGR is 3.3%.
- The average Transportation company has gross margins of 15.4% , invests 8.3% of revenue in selling, general, and administrative expense, 2.1% in research and development, and generates 1.5% operating margin, 11.1% EBITDA margin, -1.9% free cash flow, and -2.2% return on invested capital.
- The Transportation company average inventory turns is 98.9 . The median is 26.6 . The difference between the average and the median indicates a few outliers raise the average. The median is more in line with the industry operational structure.
- The average Transportation company has 167.4% PP&E, and 24.4% in goodwill, and intangibles, all as a percentage of revenue. Goodwill and intangibles are a proxy for mergers and acquisitions; based on this measure, Transportation is among the lowest industries in mergers and acquisitions. While many industries exhibit characteristics of the “intangibles economy,” Transportation is still among those that are asset intensive.
- **Transportation industry results have been severely negatively impacted by the impact of the pandemic. Airlines are among transportation companies; their negative results have skewed the overall results of the industry on a TTM basis.**
- As expected, Transportation companies that lead in operating profit, net profit, cash flow, and return on investment (ROA, ROIC, economic profit) are also leaders in market cap multiple.
- Transportation companies with higher inventory turns tend to have significantly lower market cap multiples than companies with lower inventory turns. This is an indication that inventory turns is a poor indicator of company market performance. (Note: controlling for gross margin yields the same conclusion).
- Transportation companies are largely service companies that use assets and labor to move things and people. As such, they do not typically own a lot of inventory; thus, their inventory turns tend to be much higher than goods-producing industries.
- Historical analysis (using aggregate data and ratios) indicates the operational structure is essentially the same as it was a decade ago. This includes similar gross margins, operating margins, asset intensity, inventory turns, and cash flows. This indicates the industry has a certain physical setpoint and that there are individual winners and losers around that setpoint, but that the overall industry is not operationally performing better than it was a decade ago.
- Individual operational measures are poor statistical predictors of market cap multiple. Quartile analysis was performed to contrast the operational characteristics of market cap multiple leaders with others.
- Market cap multiple leaders have cap multiples that are 14.0X average and 2.5X laggards. Leaders have significantly higher gross margins and generate significantly higher operating margins, cash flow, and return on investment (ROA, ROIC, and economic profit).
- From a supply chain management perspective, data in this report supports the thesis that market leaders run their supply chains with more of a profit center mentality than a cost center mentality, which has historically been the case. This further suggests supply chain management has evolved to a sophisticated multivariate decision science, rather than a unidimensional cost management function.

# Data Set

Information on the companies and the data set used in the analysis.



# Data Set



## COMPANIES

The data set includes 191 publicly-traded Transportation companies.



**191**



## REVENUE

Aggregate revenue for companies in the data set is \$1.3 trillion for the latest reporting fiscal year as of the date on the cover of this report.



**\$1.3T**



## MARKET CAPITALIZATION

Aggregate market cap for companies in the data set is \$1.9 trillion as of date on the cover of this report.



**\$1.9T**

### Notes:

1. Unless otherwise noted, all company financial data are based on trailing twelve months results as of the date on the cover of this report.
2. All market capitalizations are as of the date on the cover of this report.
3. M=million; B=billion; T=trillion.



# Data Set

## Companies included in this report



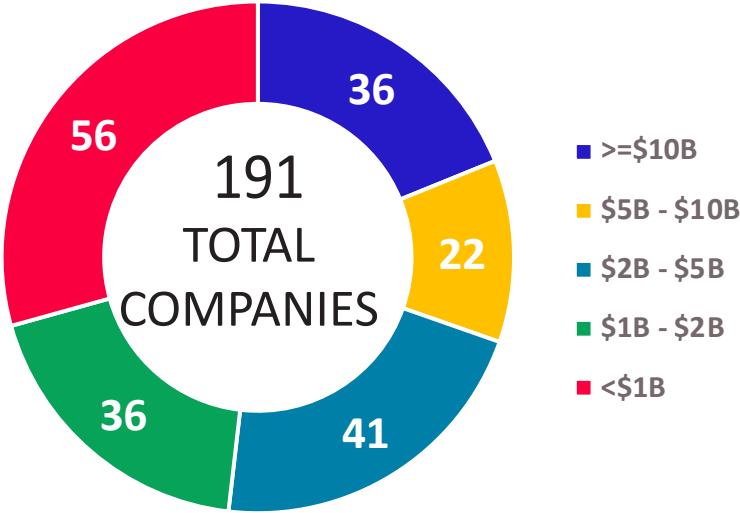
|                         |                         |                         |                         |                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| A. P. Moller Maersk A/S | Cargojet Inc            | Dampskibsselskabet NORD | Grupo Aeromexico SAB de | Kirby Corp              | NRC Group ASA           | Singapore Post Ltd      | USA Truck Inc           |
| Aegean Airlines SA      | Cathay Pacific Airways  | Danaos Corp             | Grupo Traxion SAB de CV | Knight-Swift Transporta | Odakyu Electric Railway | Sinotrans Ltd           | Viking Line Abp         |
| Air Canada              | Cebu Air Inc            | Daseke Inc              | Hafnia Ltd              | KNOT Offshore Partners  | Oesterreichische Post A | SITC International Hold | Vossloh AG              |
| Air China Ltd           | Central Japan Railway C | Delta Air Lines Inc     | Hamburger Hafen und Log | Kuehne + Nagel Internat | Old Dominion Freight Li | SkyWest Inc             | Werner Enterprises Inc  |
| Air France-KLM          | China Eastern Airlines  | Deutsche Lufthansa AG   | Hapag-Lloyd AG          | L.B. Foster Co          | Orient Overseas (Intern | Southwest Airlines Co   | West Japan Railway Co   |
| Air New Zealand Ltd     | China Merchants Port Ho | Deutsche Post AG        | Harbor Diversified Inc  | Landstar System Inc     | P.A.M. Transportation S | Spirit Airlines Inc     | Western Bulk Chartering |
| Air Transport Services  | China Railway Signal &  | DSV AS                  | Hargreaves Services PLC | LATAM Airlines Group SA | Pacific Basin Shipping  | Stadler Rail AG         | Westinghouse Air Brake  |
| AirAsia Group Bhd       | China Southern Airlines | Eagle Bulk Shipping Inc | Hawaiian Holdings Inc   | Liaoning Port Co Ltd    | Pacific Basin Shipping  | Stagecoach Group PLC    | Westshore Terminals Inv |
| Alaska Air Group Inc    | Clarkson PLC            | East Japan Railway Co   | Heartland Express Inc   | Logistec Corp           | Pangaea Logistics Solut | Star Bulk Carriers Corp | Wilh. Wilhelmsen Holdin |
| Algoma Central Corp     | Clipper Logistics PLC   | easyJet PLC             | Hub Group Inc           | Mainfreight Ltd         | Pitney Bowes Inc        | Stolt-Nielsen Ltd       | Wizz Air Holdings PLC   |
| Allegiant Travel Co     | ComfortDelGro Corp Ltd  | El AL Israel Airlines L | Hutchison Port Holdings | Marten Transport Ltd    | Port of Tauranga Ltd    | Sun Country Airlines Ho | XPO Logistics Inc       |
| Alstom SA               | Compania de Distribucio | Exchange Income Corp    | Iino Kaiun Kaisha Ltd   | Matson Inc              | PostNL NV               | TFI International Inc   | Yamato Holdings Co Ltd  |
| American Airlines Group | Controladora Vuela Comp | Expeditors Internationa | Imperial Logistics Ltd  | Mesa Air Group Inc      | Precious Shipping PCL   | Thai Airways Internatio | Yellow Corp             |
| ANA Holdings Inc        | Copa Holdings SA        | FedEx Corp              | International Consolida | Mitsui O.S.K. Lines Ltd | Qantas Airways Ltd      | Tianjin Port Developmen | Zhuzhou CRRC Times Elec |
| ArcBest Corp            | Cosco Shipping Developm | FirstGroup PLC          | International Container | MPC Container Ships ASA | Qingdao Port Internatio | Titanium Transportation | ZIM Integrated Shipping |
| Aurizon Holdings Ltd    | COSCO SHIPPING Energy T | Forward Air Corp        | Irish Continental Group | MTR Corp Ltd            | Radiant Logistics Inc   | Tobu Railway Co Ltd     | ZTO Express (Cayman) In |
| Azul SA                 | COSCO SHIPPING Holdings | Frontier Group Holdings | Japan Airlines Co Ltd   | Mullen Group Ltd        | Royal Mail PLC          | Tokyu Corp              |                         |
| Bangkok Expressway and  | COSCO SHIPPING Internat | Genco Shipping & Tradin | JB Hunt Transport Servi | Nagoya Railroad Co Ltd  | Ryanair Holdings PLC    | Trinity Industries Inc  |                         |
| BEST Inc                | COSCO SHIPPING Ports Lt | Getlink SE              | JD Logistics Inc        | National Express Group  | Safe Bulkers Inc        | Turk Hava Yollari AO    |                         |
| Bpost SA de Droit Publi | Costamare Inc           | Global Ship Lease Inc   | JetBlue Airways Corp    | Navios Maritime Holding | Saia Inc                | U.S. Xpress Enterprises |                         |
| BTS Group Holdings PLC  | Covenant Logistics Grou | Go-Ahead Group (The) PL | Kamigumi Co Ltd         | Navios Maritime Partner | SAS AB                  | Union Pacific Corp      |                         |
| BW LPG Ltd              | CRRC Corp Ltd           | Gol Intelligent Airline | Kawasaki Kisen Kaisha L | Nippon Express Co Ltd   | Schneider National Inc  | Unique Logistics Intern |                         |
| C.H. Robinson Worldwide | CryoPort Inc            | Golden Ocean Group Ltd  | Keikyu Corp             | Nippon Yusen Kabushiki  | Seino Holdings Co Ltd   | United Airlines Holding |                         |
| Canadian National Railw | CSX Corp                | Greenbrier Companies In | Keio Corp               | Norfolk Southern Corp   | SFL Corp Ltd            | United Parcel Service I |                         |
| Canadian Pacific Railwa | CTT-Correios de Portuga | Grindrod Shipping Holdi | Keisei Electric Railway | Norwegian Air Shuttle A | Singapore Airlines Ltd  | Universal Logistics Hol |                         |

# Data Set

## Company distribution

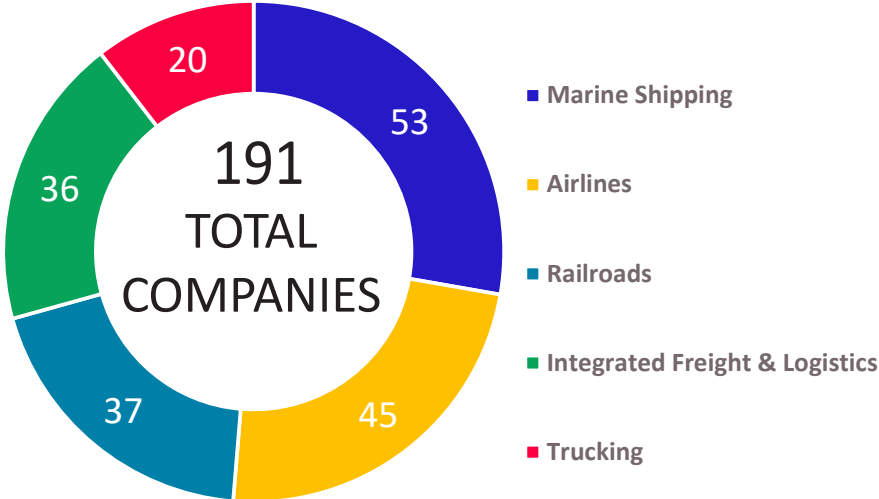


BY ANNUAL REVENUE

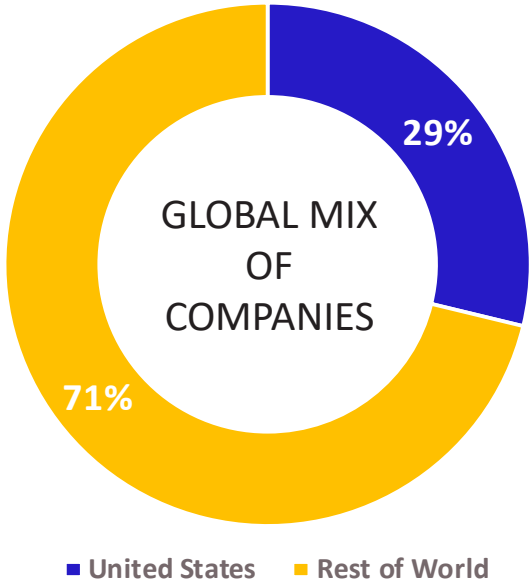


MEDIAN REVENUE = **\$2,148M**

BY SUB-INDUSTRY



GEOGRAPHIC REGION



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# Data Set

## *Index of key variables included in this report*

*This report provides analysis of the following variables (and derivatives) for trailing twelve months (TTM) results and for the ten-year historical period.*

|                             |                                            |                            |
|-----------------------------|--------------------------------------------|----------------------------|
| REVENUE                     | CASH                                       | INVENTORY                  |
| GROWTH RATE                 | DEBT                                       | DAYS IN PAYABLES           |
| GROSS MARGIN                | NET CASH                                   | DAYS IN RECEIVABLES        |
| SELLING, GENERAL, AND ADMIN | EBITDA                                     | CASH-TO-CASH CYCLE         |
| RESEARCH & DEVELOPMENT      | EQUITY                                     | CAPITALIZATION TO REVENUE  |
| REVENUE PER EMPLOYEE        | CAPITAL EXPENDITURES (CAPEX)               | CAPITALIZATION TO EBITDA   |
| OPERATING PROFIT            | PROPERTY, PLANT, AND EQUIPMENT (PP&E, NET) | RETURN ON INVESTED CAPITAL |
| NET PROFIT                  | GOODWILL                                   | RETURN ON ASSETS           |
| FREE CASH FLOW              | DEFERRED REVENUE                           | RETURN ON PHYSICAL ASSETS  |
| STOCK COMPENSATION          | REMAINING PERFORMANCE OBLIGATIONS (RPOS)   | ECONOMIC PROFIT            |

# Data Set

## Three different analysis approaches in this analysis



| APPROACH                   | DESCRIPTION                                                                                                                                                                                                                                                                                     | EXAMPLE                                                                                                                                                                                                                                                               | GOOD FOR                                                     |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 1. Aggregate averages      | Averages are computed by adding up all numbers from all companies. For example, the gross margin for the industry would be the sum of all revenue for all companies minus the sum of all COGS for all companies (divided by the sum of all revenue for all companies).                          | Average Gross Margin % =<br>$\frac{(\text{sum of all revenues minus sum of all COGS})}{\text{sum of all revenues}}$                                                                                                                                                   | Overall industry structure and operations; smooths outliers. |
| 2. Averages of percentages | Averages are computed by taking the averages of all percentages for all the companies. For example, the average gross margin % is the sum of all gross margin %s for all companies divided by the number of companies.                                                                          | Average Gross Margin % =<br>$\frac{(\text{sum of all gross margin \%s})}{(\text{number of companies})}$                                                                                                                                                               | Comparison across companies.                                 |
| 3. Quartile analysis       | The market cap multiples of all companies are divided into quartiles. The operating characteristics of the top quartile companies are compared to the others. Likewise, measures for each company are divided into quartiles and the average market cap multiple within each quartile is shown. | <ol style="list-style-type: none"><li>1) Isolate each quartile of market cap multiples; compare gross margin of leaders to others.</li><li>2) Isolate each quartile of gross margin; display average market cap multiple within each gross margin quartile.</li></ol> | Understanding characteristics of leaders.                    |

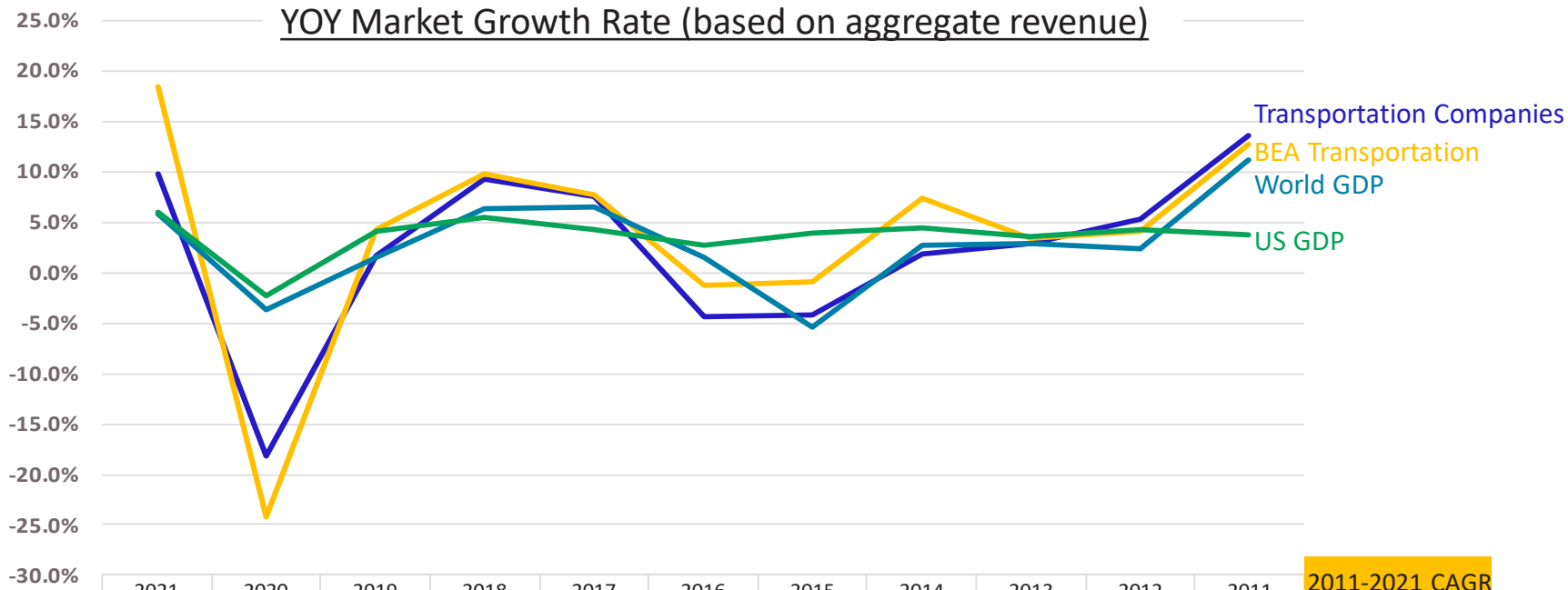
# Overall Market

Summary of the market using the companies in this report as a proxy for the overall Transportation market. Charts in this section use the “aggregate averages” approach.



# Overall Market

## YOY growth rates, 2011-2021



### NOTES & INSIGHTS

- Transportation market CAGR for the past decade was 2.3%, which is consistent with the global current dollar GDP growth rate (2.8%).
- Growth rates in the early part of the decade were higher, probably due to the rebound from the great recession of 2009-2010.
- 2020 growth numbers reflect the severe impact of the pandemic, particularly for airlines, which are included in the data set of transportation companies.

#### Notes:

1. "Transportation Companies" represents all companies in the data set for which there are year-over-year revenue numbers. The number of companies varies from year-to-year based on companies going public and some companies merging or being taken private as the decade progresses.
2. "BEA Transportation Output" growth is calculated from the US Bureau of Economic Analysis (<https://apps.bea.gov/iTable/iTable.cfm?reqid=150&step=2&isuri=1&categories=gdpkind>), GDP by Industry. Transportation output as defined here is based on output of the following sub-industries: Air transportation; Rail transportation; Water transportation; Truck transportation; Transit and ground passenger transportation. BEA updates its past numbers periodically, so past reports may not reflect the same past BEA numbers.
3. World GDP and US GDP numbers are sourced from The World Bank ([data.worldbank.org](http://data.worldbank.org))
4. World GDP and US GDP growth rates are based on *current* dollars. This means they have not been adjusted for inflation. *Current* numbers are used to ensure apples-to-apples comparisons with Transportation market growth rates. Note that GDP growth rates are typically reported in constant dollars pegged to a certain year in order to account for the effect of price inflation. Thus, GDP growth rates commonly reported in media are typically lower than those shown here.

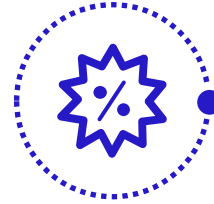
# Analysis Summary

Operational ratios based on aggregate data, TTM<sup>1</sup>



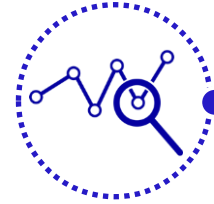
3-YEAR CAGR<sup>2</sup>

0.2%



GROSS MARGIN

17.1%



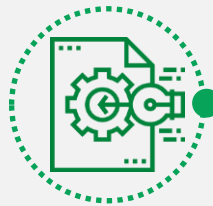
MARKET CAP<sup>3</sup>

1.5X



NET PROFIT

3.2%



R&D

2.1%



SG&A

5.7%



INVENTORY TURNS

21.3



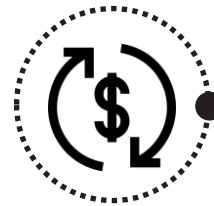
C2C (DAYS)

8.0



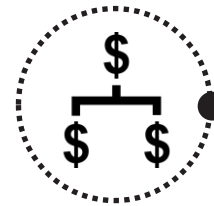
PP&E

103.3%



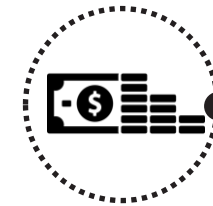
CAPEX

8.0%



FREE CASH FLOW

1.9%



ROIC

2.5%

## Notes:

1. All revenue and cost numbers are aggregate values for all companies for the trailing twelve months (TTM) as of the date on the cover of this report.
2. Growth rate is based on total dollars growth of the industry over the past four years.
3. Market capitalization ratio is aggregate market capitalization for all companies as of the date on the cover of this report divided by total revenue for all companies on TTM basis.



# Overall Market

## Historical key metrics based on aggregate data, 2011-Current



|                    | METRIC                                | TTM    | 2021   | 2020   | 2019  | 2018  | 2017  | 2016  | 2015  | 2014  | 2013  | 2012  | 2011  | AVG11-21 |      |
|--------------------|---------------------------------------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|------|
| OPERATIONS         | Growth Rate (3YRCAGR)                 | 0.2%   | -0.3%  | -0.6%  | 3.4%  | 2.0%  | 0.1%  | -1.0% | 1.4%  | 5.5%  | 2.9%  | 5.2%  | 13.7% | 2.9%     |      |
|                    | Gross Margin                          | 17.1%  | 16.4%  | 14.5%  | 21.6% | 21.3% | 22.0% | 22.6% | 22.4% | 20.4% | 20.7% | 19.7% | 21.4% | 20.3%    |      |
|                    | SG&A % of Revenue                     | 5.7%   | 5.6%   | 6.3%   | 6.2%  | 6.3%  | 6.2%  | 6.5%  | 6.4%  | 6.2%  | 6.7%  | 6.7%  | 6.9%  | 6.4%     |      |
|                    | R&D % of Revenue                      | 2.1%   | 2.0%   | 2.2%   | 2.1%  | 2.0%  | 3.0%  | 2.3%  | 2.4%  | 2.4%  | 1.5%  | 2.5%  | 2.8%  | 3.0%     | 2.4% |
|                    | Inventory Turns (COGS/Inv)            | 21.3   | 21.4   | 23.0   | 25.6  | 26.9  | 25.2  | 25.7  | 26.3  | 26.3  | 23.5  | 26.6  | 25.6  | 24.1     | 24.9 |
|                    | Days in Inventory                     | 17.2   | 17.0   | 15.9   | 14.3  | 13.6  | 14.5  | 14.2  | 13.9  | 13.9  | 15.5  | 13.7  | 14.3  | 15.1     | 14.7 |
| PROFIT & CASH FLOW | Operating Income                      | 5.4%   | 4.7%   | 2.2%   | 9.5%  | 9.4%  | 9.9%  | 10.3% | 10.4% | 8.5%  | 8.4%  | 7.0%  | 7.8%  | 8.0%     |      |
|                    | Net Profit                            | 3.2%   | 1.9%   | -3.9%  | 5.8%  | 6.3%  | 7.4%  | 5.9%  | 6.5%  | 4.9%  | 4.8%  | 3.3%  | 4.5%  | 4.3%     |      |
|                    | EBITDA                                | 11.3%  | 11.5%  | 8.3%   | 16.9% | 15.7% | 16.4% | 16.1% | 16.4% | 14.3% | 14.1% | 13.3% | 14.3% | 14.3%    |      |
|                    | Operating Cash Flow                   | 9.9%   | 10.2%  | 8.9%   | 14.2% | 13.1% | 12.1% | 13.1% | 13.7% | 11.2% | 11.0% | 9.5%  | 10.3% | 11.6%    |      |
|                    | FCF % of Revenue                      | 1.9%   | 2.0%   | -0.1%  | 4.9%  | 3.1%  | 2.4%  | 3.2%  | 3.6%  | 2.1%  | 2.0%  | 0.3%  | 0.7%  | 2.2%     |      |
|                    | CAPEX % of Revenue                    | 8.0%   | 8.2%   | 9.0%   | 9.3%  | 10.0% | 9.6%  | 9.9%  | 10.0% | 9.1%  | 9.0%  | 9.2%  | 9.5%  | 9.3%     |      |
|                    | Stock Compensation                    | 0.4%   | 0.5%   | 0.4%   | 0.5%  | 0.4%  | 0.4%  | 0.4%  | 0.5%  | 0.4%  | 0.3%  | 0.4%  | 0.3%  | 0.4%     |      |
|                    | Days in Receivables                   | 46.6   | 47.1   | 43.0   | 35.9  | 36.4  | 39.8  | 37.8  | 34.3  | 35.3  | 34.1  | 34.7  | 34.3  | 37.5     |      |
|                    | Days in Payables                      | 55.8   | 56.3   | 50.8   | 45.4  | 44.4  | 48.1  | 46.2  | 41.8  | 42.4  | 39.7  | 39.9  | 48.0  | 45.7     |      |
|                    | Cash-to-Cash Cycle (Days)             | 8.0    | 7.8    | 8.0    | 4.8   | 5.5   | 6.2   | 5.8   | 6.4   | 8.5   | 8.2   | 9.1   | 1.4   | 6.5      |      |
| ASSETS             | Property, Plant, Equipment %          | 103.3% | 105.5% | 113.8% | 90.0% | 84.0% | 85.0% | 85.9% | 79.2% | 76.8% | 78.0% | 80.7% | 81.2% | 87.3%    |      |
|                    | Cash % of Revenue                     | 25.2%  | 25.4%  | 21.5%  | 13.0% | 12.5% | 14.2% | 14.4% | 13.5% | 13.3% | 14.1% | 12.9% | 13.9% | 15.3%    |      |
|                    | Debt % of Revenue                     | 75.9%  | 77.0%  | 81.6%  | 56.2% | 50.1% | 48.0% | 46.5% | 42.0% | 40.6% | 42.5% | 43.2% | 43.0% | 51.9%    |      |
|                    | Goodwill and Intangibles % of Revenue | 15.9%  | 16.3%  | 16.9%  | 13.6% | 12.3% | 13.6% | 13.0% | 11.4% | 11.2% | 11.5% | 11.1% | 10.8% | 12.9%    |      |
| ROI                | ROA                                   | 1.7%   | 1.0%   | -2.0%  | 3.8%  | 4.4%  | 5.0%  | 4.1%  | 4.8%  | 3.7%  | 3.6%  | 2.5%  | 3.3%  | 3.1%     |      |
|                    | ROIC                                  | 2.5%   | 1.5%   | -2.9%  | 5.7%  | 6.6%  | 7.7%  | 6.4%  | 7.6%  | 6.0%  | 5.8%  | 4.1%  | 5.4%  | 4.9%     |      |
|                    | Return on Physical Assets             | 5.0%   | 4.3%   | 1.9%   | 10.2% | 10.8% | 11.3% | 11.6% | 12.7% | 10.7% | 10.4% | 8.4%  | 9.2%  | 9.2%     |      |
|                    | Economic Profit % of Revenue          | -2.1%  | -2.7%  | -5.4%  | 1.5%  | 2.0%  | 3.2%  | 2.1%  | 3.3%  | 2.3%  | 2.5%  | -0.3% | 0.5%  | 0.8%     |      |
| CAP                | Market Cap / Revenue                  | 1.5    | 1.5    | 1.6    | 1.1   | 1.0   | 1.0   | 1.3   | 1.0   | 0.9   | 1.1   | 1.0   | 0.8   | 1.1      |      |
|                    | Market Cap / EBITDA                   | 13.0   | 13.0   | 19.8   | 6.3   | 5.9   | 5.5   | 6.3   | 4.7   | 5.0   | 5.9   | 5.3   | 3.6   | 7.4      |      |

### HISTORY

|                                       | 2010  | 2000  |
|---------------------------------------|-------|-------|
| Growth Rate (3YRCAGR)                 |       |       |
| Gross Margin                          | 32.8% | 43.9% |
| SG&A % of Revenue                     | 10.7% | 26.4% |
| R&D % of Revenue                      | 2.4%  | 3.1%  |
| Inventory Turns (COGS/Inv)            | 21.3  | 10.7  |
| Days in Inventory                     | 17.1  | 34.2  |
| Operating Income                      | 9.2%  | 3.3%  |
| Net Profit                            | 5.1%  | 4.2%  |
| EBITDA                                | 15.8% | 8.9%  |
| Operating Cash Flow                   | 10.9% | 10.3% |
| FCF % of Revenue                      | 2.0%  | 1.4%  |
| CAPEX % of Revenue                    | 8.9%  | 8.9%  |
| Stock Compensation                    | 0.4%  |       |
| Days in Receivables                   | 36.1  | 41.3  |
| Days in Payables                      | 57.8  | 93.2  |
| Cash-to-Cash Cycle (Days)             | -4.5  | -17.7 |
| Property, Plant, Equipment %          | 84.8% | 93.3% |
| Cash % of Revenue                     | 15.6% | 9.8%  |
| Debt % of Revenue                     | 44.2% | 50.3% |
| Goodwill and Intangibles % of Revenue | 10.8% | 10.0% |
| ROA                                   | 3.6%  | 2.4%  |
| ROIC                                  | 5.9%  | 4.9%  |
| Return on Physical Assets             | 10.4% | 3.7%  |
| Economic Profit % of Revenue          | 1.1%  | -7.2% |
| Market Cap / Revenue                  | 0.8   | 1.8   |
| Market Cap / EBITDA                   | 3.3   | 13.7  |

### NOTES & INSIGHTS

- This chart shows the operational structure of the industry today and for the past decade. The results for TTM and 2020 reflect the impact of the pandemic, particularly among the airlines, which are skewing the overall industry results.
- These data indicate that the operational structure of the industry has remained relatively constant for the past decade. Historical numbers beyond ten years are from a smaller data set and have to be analyzed in detail for apples-to-apples comparisons.
- This indicates that industry operates around a certain “setpoint” driven by physics and physical characteristics.
- That said, individual companies deviate significantly from the overall structural setpoint, resulting in significantly different company-level operational results (next section).
- The final three years of CAGR are one-year growth rates (due to lack of data).
- Historical numbers beyond ten years have fewer companies and need further analysis for apples-to-apples comparisons.

# Analysis Summary

Charts that summarize key variables in the report. Charts in this section use the “averages of percentages” approach. In other words, it shows the averages of all percentages for all companies. (These numbers will differ from industry structural numbers in the previous section)





# Analysis Summary

## Average and median for different variables, TTM



The table below contains the average and median values for the 191 companies investigated. This shows that the average Transportation company operates with a gross margin of **15.4%**, spends **8.3%** of revenue on SG&A, **2.1%** on R&D, and has inventory turns of **98.9**, operating income of **1.5%**, net income of **-5.7%**, free cash flow of **-1.9%**, and return on invested capital of **-2.2%**.

|         | REVENUE (TTM)        |             | OPERATIONS   |      |      |                 | PROFIT AND CASH  |            |                | ROIC  |
|---------|----------------------|-------------|--------------|------|------|-----------------|------------------|------------|----------------|-------|
|         | Annual Revenue (\$M) | 3-Year CAGR | Gross Margin | SG&A | R&D  | Inventory Turns | Operating Income | Net Income | Free Cash Flow |       |
| Average | \$6,717              | 3.3%        | 15.4%        | 8.3% | 2.1% | 98.9            | 1.5%             | -5.7%      | -1.9%          | -2.2% |
| Median  | \$2,148              | 1.2%        | 17.7%        | 5.2% | 0.8% | 26.6            | 6.1%             | 3.7%       | 4.4%           | 4.8%  |

These results reflect the negative impact of airlines on the overall transportation industry. During the pandemic, airlines have been operating with significant negative gross margins, operating margins, and cash flows.

#### Notes:

1. TTM = trailing twelve months. All revenue and cost numbers are based on trailing twelve months results as of the date on the cover of this report. This report provides the averages of the percentages of all companies, including outliers.
2. Growth rate is based on the past four years of financial results
3. All percentage numbers are a percentage of revenue. Average is the average of all the percentages for each of the companies.

# Analysis Summary

## Average values by revenue quartile, TTM<sup>1</sup>

Market cap multiples for smaller companies are larger than larger companies. Gross margins, particularly for large companies have been severely negatively impacted by the pandemic (largely because airlines are dominant in the top revenue quartile).

All numbers are averages within each quartile

|            |    | REVENUE (TTM) |             | MKT CAP          | OPERATIONS   |      |      |                 | PROFIT AND CASH  |            |                |        |
|------------|----|---------------|-------------|------------------|--------------|------|------|-----------------|------------------|------------|----------------|--------|
|            | #  | Revenue(\$M)  | 3-Year CAGR | Mkt Cap/ Revenue | Gross Margin | SG&A | R&D  | Inventory Turns | Operating Income | Net Income | Free Cash Flow | ROIC   |
| Quartile 4 | 48 | \$20,928      | -3.9%       | 1.7              | 15.3%        | 5.8% | 1.8% | 97.2            | 4.6%             | 3.5%       | 1.4%           | 11.4%  |
| Quartile 3 | 48 | \$3,900       | -4.7%       | 1.5              | 15.7%        | 8.3% | 2.6% | 113.9           | -1.6%            | -4.7%      | -10.8%         | 0.0%   |
| Quartile 2 | 47 | \$1,451       | -2.9%       | 1.7              | 18.6%        | 9.0% | 0.4% | 125.2           | 5.7%             | -1.5%      | 4.0%           | 1.0%   |
| Quartile 1 | 48 | \$481         | 25.9%       | 2.2              | 12.0%        | 9.5% | 7.7% | 62.6            | -2.6%            | -20.0%     | -2.7%          | -20.6% |

### REVENUE QUANTILES (\$M)

Quartile 4 >= \$6,126  
 Quartile 3 >= \$2,148 , < \$6,126  
 Quartile 2 >= \$877 , < \$2,148  
 Quartile 1 < \$877

### Notes:

1. TTM = trailing twelve months. All revenue and cost numbers are based on trailing twelve months results as of the date on the cover of this report. This report provides the averages of the percentages of all companies, including outliers.
2. Growth rate is based on the past four years of financial results
3. All percentage numbers are a percentage of revenue. Average is the average of all the percentages for each of the companies.

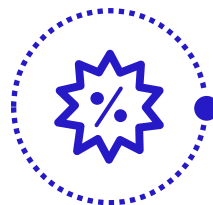
# Analysis Summary

Average numbers for the entire data set, TTM<sup>1</sup>



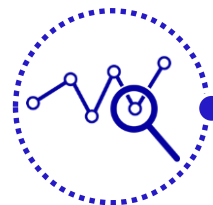
3-YEAR CAGR

**3.3%**



GROSS MARGIN

**15.4%**



MARKET CAP

**1.8X**



NET PROFIT

**-5.7%**



R&D

**2.1%**



SG&A

**8.3%**



INVENTORY TURNS

**98.9**



C2C (DAYS)

**11.0**



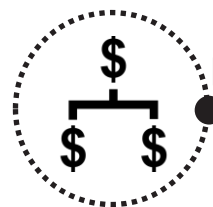
PP&E

**167.4%**



CAPEX

**13.2%**



FREE CASH FLOW

**-1.9%**



ROIC

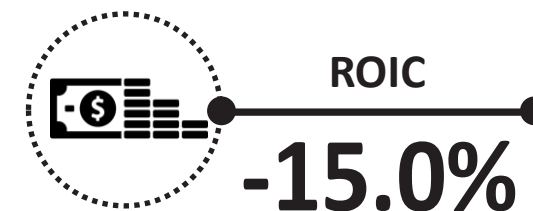
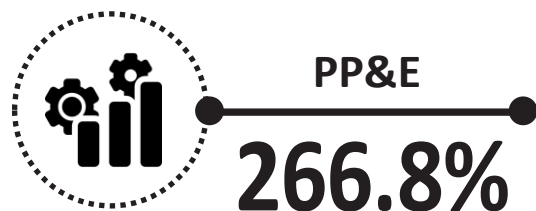
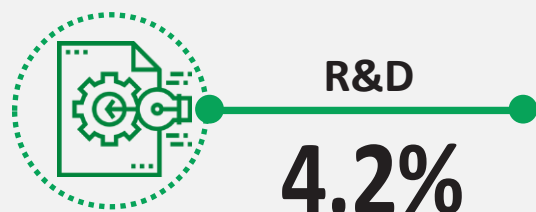
**-2.2%**

## Notes:

1. All revenue and cost numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report for all companies in the data set.
2. All ratios shown here are averages of the ratios of each company.

# Analysis Summary

Average numbers for the top-quartile market cap<sup>1</sup> multiple leaders



## Notes:

1. All revenue and cost numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report for all companies in the top quartile of market cap multiple performance.
2. All ratios shown here are averages of the ratios of each company.

# Analysis Summary

## Key metric benchmarks and relationship to market cap multiple

Average metric value within the quartile and corresponding average market cap within the quartile

|            | n=191<br>METRIC              | INDUSTRY BENCHMARKS |        |        | MARKET CAP MULTIPLE |        |                                                                                                                    |
|------------|------------------------------|---------------------|--------|--------|---------------------|--------|--------------------------------------------------------------------------------------------------------------------|
|            |                              | Q4 AVG              | MEDIAN | Q1 AVG | Q4 AVG              | Q1 AVG |                                                                                                                    |
| OPERATIONS | 3-Year CAGR                  | 39.5%               | 1.2%   | -25.8% | 1.9                 | 1.3    | ← Gross margin is important to market performance, indicating product superiority and pricing power are paramount. |
|            | Gross Margin                 | 50.2%               | 17.7%  | -24.0% | 3.4                 | 1.3    |                                                                                                                    |
|            | SG&A                         | 20.9%               | 5.2%   | 1.3%   | 2.4                 | 1.2    |                                                                                                                    |
|            | R&D                          | 6.2%                | 6.1%   | 0.1%   | 3.2                 | 0.8    |                                                                                                                    |
| PROFIT     | Operating Margin             | 32.4%               | 6.1%   | -39.5% | 3.5                 | 1.7    | ← All forms of profitability have the highest correlation with market performance.                                 |
|            | EBITDA Margin                | 52.4%               | 10.9%  | -33.3% | 3.2                 | 1.7    |                                                                                                                    |
|            | Net Profit Margin            | 30.0%               | 3.7%   | -60.0% | 3.0                 | 1.9    |                                                                                                                    |
| CASH       | Free Cash Flow               | 24.9%               | 4.4%   | -39.4% | 2.9                 | 1.9    |                                                                                                                    |
|            | CAPEX % of Revenue           | 35.3%               | 7.5%   | 1.5%   | 2.4                 | 1.0    |                                                                                                                    |
|            | PP&E (net) % of Revenue      | 406.1%              | 116.2% | 20.0%  | 3.0                 | 1.4    |                                                                                                                    |
| ROI        | ROIC % of Revenue            | 29.1%               | 4.8%   | -47.4% | 2.0                 | 1.6    | ← All forms of ROI are strong indicators of market performance, at about the same level as profitability.          |
|            | ROA % of Revenue             | 15.6%               | 2.9%   | -11.0% | 2.2                 | 1.6    |                                                                                                                    |
|            | ROPA % of Revenue            | 32.1%               | 8.1%   | -15.9% | 2.0                 | 1.6    |                                                                                                                    |
|            | Economic Profit % of Revenue | 18.4%               | 0.3%   | -55.0% | 2.9                 | 2.3    |                                                                                                                    |
| C2C        | Inventory Turns              | 325.7               | 26.6   | 7.6    | 1.8                 | 1.8    | ← Inventory turns and cash-to-cash (days) correlate little or negatively with market performance                   |
|            | Payables (days)              | 71.5                | 13.7   | 2.4    | 1.8                 | 1.8    |                                                                                                                    |
|            | Receivables (days)           | 182.3               | 42.6   | 16.0   | 1.5                 | 1.9    |                                                                                                                    |
|            | Cash-to-Cash (days)          | 134.1               | 13.5   | -100.7 | 1.2                 | 1.8    |                                                                                                                    |

**Notes:**

1. All metric numbers are based on trailing twelve months (TTM) results as of the date on the cover of this report. Market capitalization numbers are as of the date on the cover of this report.
2. This chart uses the averages and medians of the percentages of each company within a quartile and across the entire data set. Q4=top quartile; Q1=bottom quartile.
3. Source of all data is Calcbench and YCharts and Worldlocity analysis.

# Analysis Summary

## Market cap multiple quartile comparison

This chart compares the operating characteristics of each market cap multiple quartile in order to glean insights into what cap leaders do differently. It summarizes the difference between the top and bottom quartiles in order to draw contrasts.

| VARIABLE                  | DATA SET | QUARTILE (AVGS WITHIN EACH CAP QUARTILE) |        |        |             | DIFFERENCE  |
|---------------------------|----------|------------------------------------------|--------|--------|-------------|-------------|
|                           | AVG      | TOP (Q4)                                 | Q3     | Q2     | BOTTOM (Q1) | TOP-BOTTOM  |
| Market Cap Multiple       | 1.8      | 4.5                                      | 1.4    | 0.8    | 0.3         | 14.0X       |
| 1-Year Growth             | 3.3%     | 2.8%                                     | -2.7%  | -3.2%  | 16.1%       | -13.4 pps   |
| Gross Margin              | 15.4%    | 21.1%                                    | 17.1%  | 15.7%  | 7.7%        | 13.4 pps    |
| SG&A                      | 8.3%     | 10.6%                                    | 7.9%   | 7.4%   | 7.4%        | 3.2 pps     |
| R&D                       | 2.1%     | 4.2%                                     | 0.9%   | 1.7%   | 1.6%        | 2.6 pps     |
| Operating Profit          | 1.5%     | 6.1%                                     | 1.3%   | 3.4%   | -4.6%       | 10.7 pps    |
| Net Profit                | -5.7%    | -2.8%                                    | -8.0%  | 2.8%   | -14.6%      | 11.8 pps    |
| Inventory Turns           | 98.9     | 74.4                                     | 60.3   | 123.0  | 138.0       | -63.7 Turns |
| C2C Cycle (days)          | 11.0     | 22.5                                     | 17.0   | 9.7    | -5.4        | 27.9 Days   |
| Net Cash                  | -94.2%   | -161.4%                                  | -80.4% | -56.6% | -77.6%      | -83.8 pps   |
| CAPEX                     | 13.2%    | 21.5%                                    | 12.5%  | 10.1%  | 8.6%        | 12.9 pps    |
| Free Cash Flow            | -1.9%    | -6.0%                                    | -0.8%  | 2.9%   | -3.7%       | -2.3 pps    |
| ROIC                      | -2.2%    | -15.0%                                   | 2.9%   | 10.1%  | -6.7%       | -8.3 pps    |
| Return on Physical Assets | 7.9%     | 11.6%                                    | 1.6%   | 9.7%   | 8.6%        | 3.0 pps     |
| Economic Profit           | -10.1%   | -19.1%                                   | -11.8% | -1.6%  | -7.8%       | -11.4 pps   |

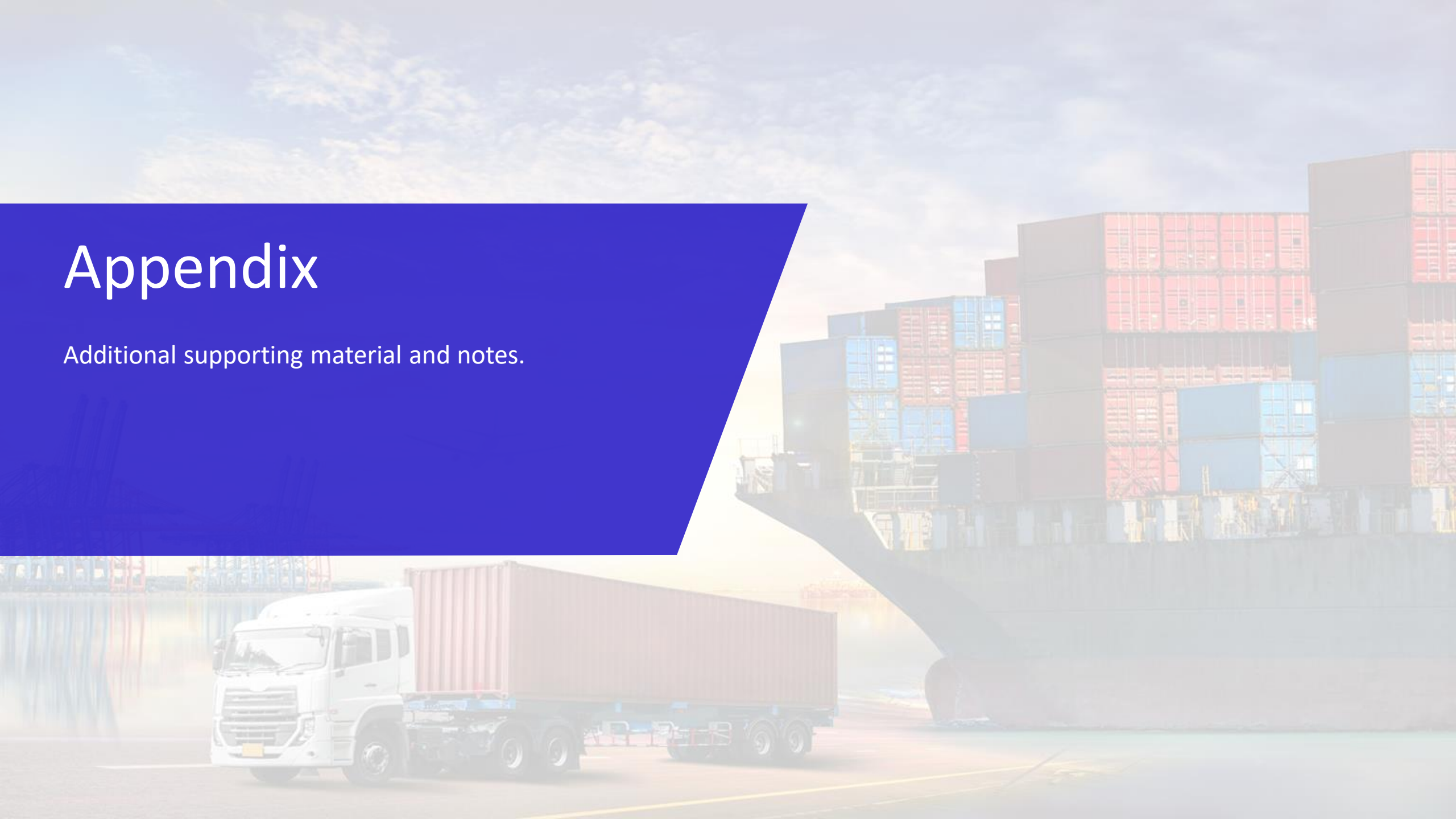
### NOTES & INSIGHTS

- Leaders have market cap multiples that are 2.5X average, and 14.0X laggards.
- Leaders have significantly higher gross margins, operating margins, and ROIC.
- Average results shown here are significantly negatively impacted by the pandemic, particularly among the airlines, which are included in this industry. Nonetheless, general conclusions from a relative standpoint remain the same.
- Paradoxically, cap leaders do not lead in inventory turns. Cap laggards are more likely to lead in inventory turns than cap leaders. This is likely because cap leaders are managing their supply chains as profit centers and cap laggards are solely focused on cost.
- All financial numbers are for the trailing twelve months as of the date on the cover of this report. All market cap numbers are as of the date on the cover of this report.



# Appendix

Additional supporting material and notes.





# Notes and Definitions

1. Primary data sources for the analysis are YCharts and Calcbench.
2. Companies included in this analysis are filtered based on available financial, operational, and market cap data. Some significant companies such as Samsung and LG have been excluded because of lack of market capitalization data from the primary data sources.
3. Free cash flow = operating cash flow minus CAPEX.
4. ROA = return on assets = net income divided by total assets.
5. ROIC = return on invested capital = net income divided by (total debt plus equity).
  1. Note: the formal definition of ROIC uses NOPAT in the numerator. Furthermore, some companies may employ their own specific definition. The results here will be close to the formal definition, but generally slightly less.
6. ROCE = return on capital employed = EBIT divided by capital employed. Capital employed = total assets minus total current liabilities.
7. ROPA = return on physical assets = operating profit divided by (PP&E (net) plus inventory).
8. Economic profit = net operating profit after taxes (NOPAT) minus weighted average cost of capital (WACC) times capital invested. Capital invested = Equity plus the non-current portion of debt. WACC is industry-specific, as publicly reported by Aswath Damodaran, NYU Stern Business School.
9. Inventory turns = COGS (end of period) divided by inventory (end of period).
10. C2C = cash-to-cash in days = days in receivables plus days in inventory minus days in payables.
11. Unless otherwise noted, all data are based on the most recent fiscal year (MRY) for each company, as reported in the SEC EDGAR database as of the date on the cover of this report.
12. Historical data is for fiscal years 2010-2020 for all companies. The number of companies grows for each year in the historical analysis, as more companies became public across the decade.
13. In the case of companies formed from mergers, the oldest company is used to designate the resultant company founding year.
14. 3-Year CAGR is based on the past four years of annual financial data.
15. Market capitalization is based on the stock prices as of the date on the cover of this report for each company. Market cap to revenue ratios are market capitalization divided by trailing twelve months (TTM) revenue through the most recently reported fiscal quarter as of the date on the cover of this report.
16. EBITDA is calculated as operating income plus depreciation and amortization.
17. Adjusted EBITDA = EBITDA minus stock compensation
18. Cash = cash, cash equivalents, and marketable securities.
19. Total debt includes short-term debt, the current portion of long-term debt, long-term debt, borrowings under credit facility, capital lease obligations, convertible notes, and deferred rent.
20. CAPEX = gross CAPEX, in other words it does not net out the sale of assets.
21. Enterprise value (EV) = market cap plus total debt minus cash.
22. Most companies allocate depreciation and amortization costs to individual cost buckets, including cost of revenue, SG&A, and R&D. Some subset of companies explicitly show depreciation and amortization costs on the income statement after the other cost buckets. No attempt was made to reallocate these costs for this subset of companies. This has the effect of understating COGS, SG&A, and R&D for those companies.
23. Individual company YOY numbers may be distorted due to mergers and acquisitions. No attempt has been made to normalize for mergers, acquisitions, and divestitures.

# Notes and Definitions

24. Aggregate inventory turns is calculated as follows: sum of all COGS for all companies in an industry divided by sum of all inventories for all companies in an industry. In a certain small number of cases, companies do not have an inventory entry on their balance sheets. In this case, to maintain consistency across calculations, inventory is assumed to be zero for those companies. This is most prevalent in service-oriented industries such as transportation and wholesale distribution, where certain companies own zero inventory. This may have the effect of slightly overstating aggregate inventory turns versus if the calculation were only done for those companies that carry inventory. (Note: in goods-producing industries, companies without COGS or without inventories have been filtered out of the analysis).



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