



# IRONVINE

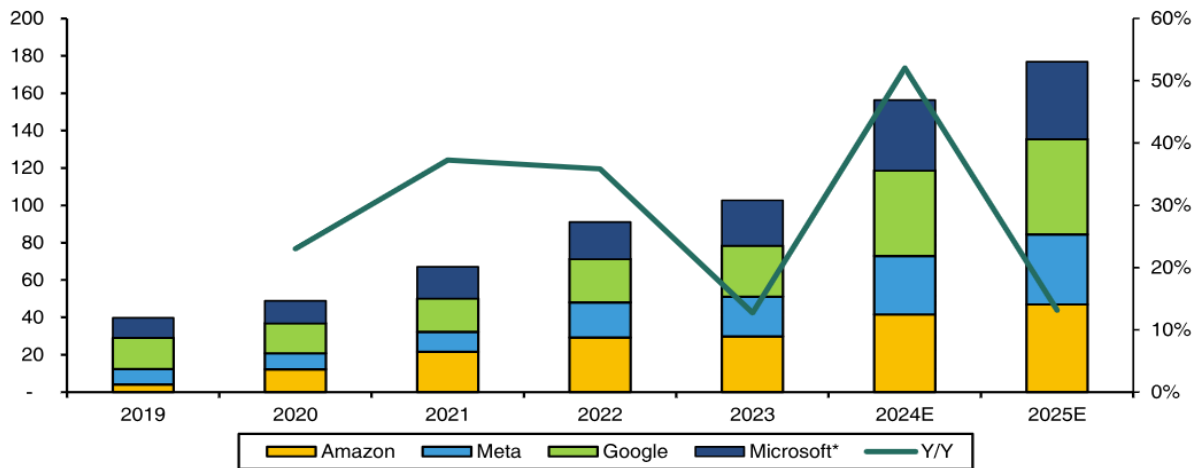
CAPITAL PARTNERS, LLC

## Investors & Friends of Ironvine-

Computing cycles have historically had a rhythm—infrastructure → platforms → applications. In the 1990s and early 2000s, long-haul fiber and related network components provided the infrastructure necessary to power the platform of the modern internet. Search, social media, and streaming video/music are among the more transformative resulting applications. Decades of wireless infrastructure investment resulted in the emergence of the smartphone platform in 2007, with Google’s Play Store and Apple’s App Store birthing the modern “app” ecosystem—“there’s an app for that!” We currently find ourselves amidst the infrastructure buildout for low-cost centralized computing. Artificial intelligence (AI), long incubating in the R&D labs of Google’s DeepMind and OpenAI, burst onto the scene in the fall of 2022 as perhaps the next game-changing platform. We need not tell you of AI’s potential to reshape, well, everything. At this point, the clear winners are those building the infrastructure layer of AI. What form AI platforms take and who holds the keys is the flash point of a human and financial arms race that is unfolding in real time. There will undoubtedly be many valuable applications of the technology—revenue generating and/or productivity enhancing—though the size and scope of the economic opportunity remains largely unknown today.

Ironvine holdings Amazon, Microsoft, and Alphabet are among those investing heavily to provide the capacity necessary to both train and run the data and energy intensive models that power AI. This spending comes in addition to the already large outlays being made to support transitions of on-premise computing to large scale data centers (cloud migrations). As the chart below illustrates, infrastructure capex across the “Big Four” hyperscalers has quadrupled over the past five years.<sup>1</sup> Spending is expected to jump from roughly \$100 billion in 2023 to \$160 billion this year and reach as much as \$200 billion by 2026 or 2027. Somewhat troubling is that markets appear more focused on the *trajectory* of this spending than the sum total of it, and what that means for an eventual *return* on it.

**Big 4 Technical Infrastructure Capex (\$B)**



<sup>1</sup> Bernstein Societe Generale Group, May 2024

In 2016, Marathon Asset Management published a collection of astute observations on the topic of capital cycles.<sup>2</sup> Two arguably timeless points from their writing are: 1) investors devote more time thinking about demand than supply and 2) when large sums of incremental capital enter a market (i.e. supply), returns on capital diminish. It strikes us that both are likely applicable now. As investors in what we deem highly durable businesses, our bias is always toward inactivity. Unnecessarily interrupting compounding is a mistake we try to avoid at all costs. However, in some instances, the specter of lower returns on a materially larger capital base *together with* very high investor expectations concerns us. We elected to sell some of our investment in Microsoft toward the end of the second quarter at ~\$450/share. Like any sale of Microsoft stock over the past twelve years, this too may prove foolhardy. Nonetheless, we believe the probability of outsized share price performance from today's valuation is lower than in years past.<sup>3</sup> And the growing bifurcation in equity returns between companies with significant exposure to AI and those without is beginning to present some interesting opportunities.

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We believe one such opportunity exists in Deere & Co. The company's roots date back to 1837 when John Deere, an enterprising blacksmith, developed a first-of-its-kind plow that was particularly well suited for the Midwest soil. Over the coming decades Deere sold thousands of these revolutionary plows, which enabled its purchase of the Waterloo Gasoline Engine Company in 1918. That deal, valued at \$2.25 million, marked Deere's entrance into the tractor and engine business. It wasn't until 1963 when Deere became the global leader in agricultural equipment and it hasn't looked back since.

The opportunity we see in Deere boils down to a handful of points:

- Global population is growing (more people)
- Protein consumption per-capita is growing (people are eating more meat)
- As a result, capital spending on agriculture and infrastructure equipment will increase over time
- Deere is the global leader in various niches of the equipment market with significant barriers to entry and brand loyalty
- Deere's equipment and business model are evolving in a way that provides upside optionality

The company operates in three equipment segments that drive the vast majority of the business' economics, along with an in-house finance operation that facilitates sales. These operations include:

- **Production and Precision Ag (44% of 2023 consolidated revenue):** high horsepower tractors, planters, sprayers, and combines found on farms, along with replacement parts
- **Small Agriculture and Turf (23%):** mid and utility-sized tractors, mowers, gators, etc.
- **Construction & Forestry (24%):** road building equipment, backhoes, loaders, dozers, graders, skid-steers, and forestry equipment

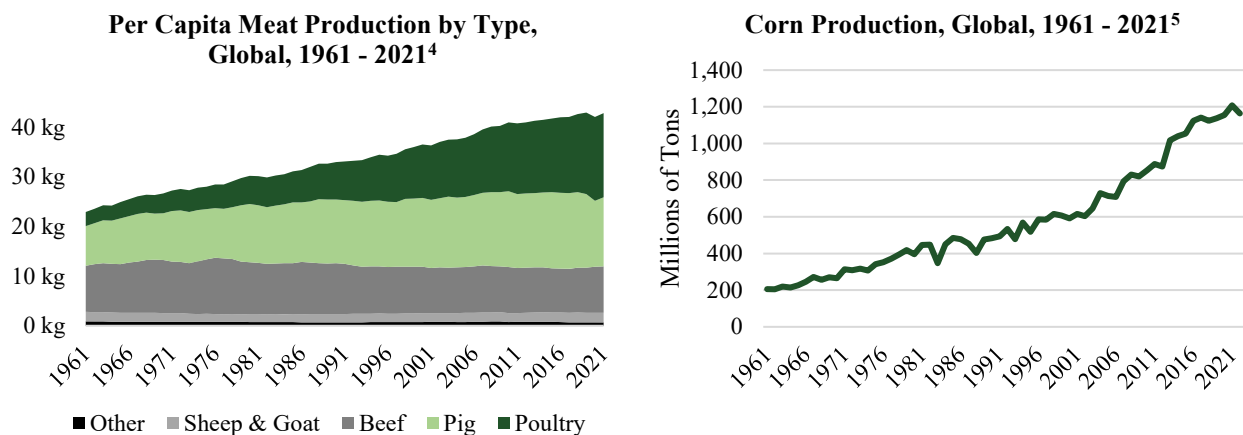
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<sup>2</sup> Edward Chancellor, *Capital Returns: Investing Through the Capital Cycle* (Springer, 2015)

<sup>3</sup> Microsoft's current market cap of \$3.3 trillion values it at 45x free cash flow vs. \$2.1 trillion and 37x, respectively, at 3/31/23

## Attractive Secular Tailwind for Equipment Demand

A consistent thread at Ironvine is our desire to own businesses we expect to benefit from big picture secular trends. While it doesn't predestine success, our experience is progress comes easier with the wind at our backs. In that vein, we expect growth in the global middle class to provide an ongoing boost for Deere. As the world's population increases in affluence, the amount of meat consumed grows with it. The left chart below illustrates this trend over the last 60 years. To produce more meat, more grain is required (chart at right) to grow the animals. With relatively fixed acreage of productive arable land, increasing yield per acre becomes vital. Deere's agriculture equipment is a critical enabler in unlocking those efficiencies.



Deere's other equipment operations are driven by broader infrastructure spending including roads, highways, and other commercial and industrial construction. The backdrop here is also favorable and Deere has a strong market position behind Caterpillar. Federal, state, and municipal infrastructure funding are each at all-time highs in the United States driven largely by the Infrastructure Investment & Jobs Act passed in 2021.<sup>6</sup> These commitments are expected to generate significant growth in capital investment over the next several years.

## Deere is the Global Leader in Advanced Equipment Design and Manufacturing

Deere sells its equipment through a dealer network of roughly 2,050 stores across the US and Canada. Outside North America, the company partners with distributors and dealers in more than 100 countries. The density of Deere's dealer footprint creates a practical advantage over competitors, particularly when it comes to essential machinery—high horsepower tractors, planters, sprayers, and harvesting equipment. Optimal planting and harvesting windows are limited. If a farm is required to stop or slow operations during peak agronomic conditions, the impact on yields and therefore profits can be significant. In a corn crop, each day past the optimal planting window can reduce yields up to 1%.<sup>7</sup> Or worse—consider the cost of missing a few days of fall harvest due to equipment (or technology) failure, followed by an early snowstorm that wipes out hundreds of acres of crop that could have been picked.

As a result, minimizing downtime is imperative, and quick access to replacement parts and repair know-how is a key variable for growers when choosing an equipment partner. If a machine needs repair, the

<sup>4</sup> Source: United Nations. Ritchie, Rosado and Roser "Meat and Dairy Production" <https://ourworldindata.org/meat-production>

<sup>5</sup> Source: United Nations Food & Agriculture Organization <https://ourworldindata.org/agricultural-production>

<sup>6</sup> J. Thomas Hill, CEO of Vulcan Materials, speaking to the investment community in May 2023

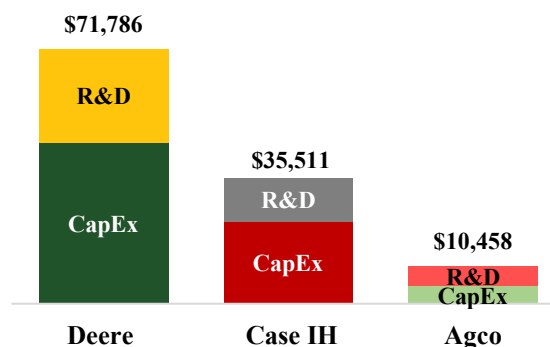
<sup>7</sup> Source: Goldman Sachs 5/26/22 Report: [Analyst day: What's the path to fully autonomous farming by 2030?](#)



average North American farm is dozens (or more) miles closer to a Deere dealership than Case IH or Agco, the two primary alternatives. Deere dealers are invested in knowing the ins-and-outs of the local geography, weather, soil types, etc., which create opportunities to build relationships as an essential extension of the corporate entity. If you've spent much time in farm country, you recognize the loyalty most operators have with their equipment provider. The green and red equipment-filled barns are embedded into the fabric of the family like a religion or favorite sports team. Different brands of equipment and implements can be mixed, but doing so requires additional monitors in the cab, training of operators, and ultimately increases the risk of error and downtime. We asked a large Illinois farmer about mixing equipment brands and he responded with the following: *"The integration between brands appears to be intentionally difficult... on paper it might look like we'll save money, but in the end it's just not worth it."*

Over nearly two centuries, Deere's innovative equipment and significant customer loyalty have enabled it to establish the largest installed base in the industry. The company's ag business generates 30% more revenue than its two closest competitors combined, enabling investments in research and development and manufacturing capabilities at a greater scale. As the chart at right shows, Deere has invested twice as much as Case International and nearly seven times more than Agco over the last two decades.<sup>8</sup> These efforts have allowed Deere to consistently improve its equipment and drive efficiencies in chemical, fuel, and seed usage, as well as labor productivity. Deere's aim is not to offer the lowest priced equipment on the market, but rather to provide the most cost-effective solution over the life of the equipment on a per acre basis.

**20 Year Total R&D and CapEx Spend**  
Deere, Case IH, Agco (USD in MM\$)



### Deere's Business Model is Improving

Historically Deere's operating earnings have been deeply cyclical and highly correlated to grain prices. We believe a series of improvements across the business will reduce (but certainly not eliminate) the duration and amplitude of cyclicity moving forward. Deere's profits through the current cycle set new high-water marks, and we think subsequent cycles will follow suit.

Former CEO Robert Lane laid the groundwork for these improvements near the end of his tenure in 2009. At that point, North America large ag drove effectively all of the company's profits. Lane observed that Deere was a great partner to most of its stakeholders, with the key exception being shareholders. In response, he spearheaded a new compensation system to incentivize management on a set of measurable return metrics, marking a turning point for the business.

For starters, management set out to increase the impact of its international business. In Brazil, Deere went from less than 10% market share of tractors in 2005 (vs. Agco at roughly 65%), to more than 20% by 2013, to the country's leading brand in 2018. Pricing discipline resulted in margins in line with the North American large ag operations, with strong prospects for the company's most advanced (and highest margin) technology given longer growing seasons and shorter payback periods.<sup>9</sup>

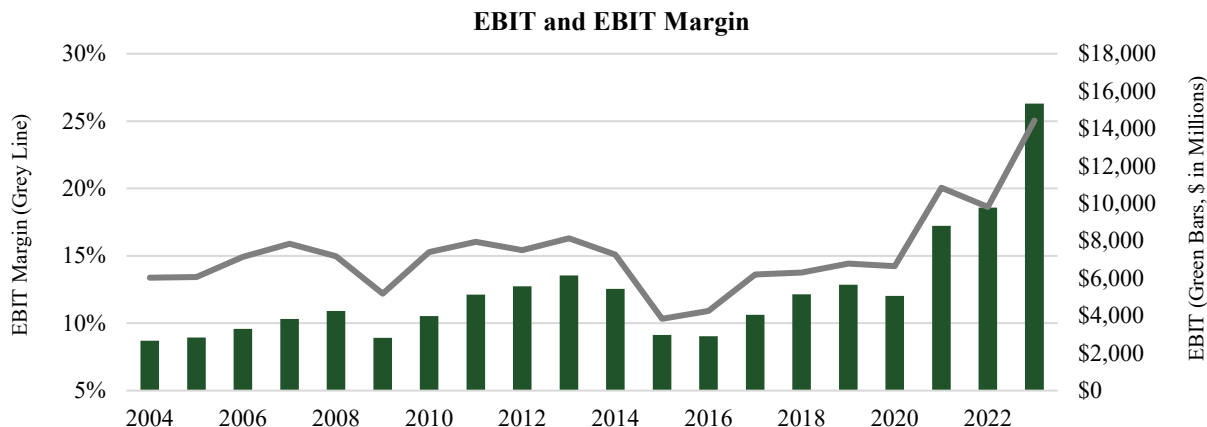
<sup>8</sup> Source: Company filings; FactSet

<sup>9</sup> For example, Deere's See and Spray technology which reduces fertilizer usage by up to 70% is more valuable in Brazil where a farmer may spray a field many more times than in the US given the length of the growing season

Similarly, the construction business has grown operating margins from low single digits to mid-to-high teens. In 2017 Deere acquired Wirtgen, a German road paving business that has developed into the leading equipment provider in its niche. Under Deere’s ownership Wirtgen has expanded its product line and manufacturing capabilities and now generates margins that exceed its ag equipment business. In heavy equipment the company exited multiple markets with sub-par returns and dissolved a low margin JV with Hitachi in exchange for more flexibility to design and build its own equipment.

The pandemic provided an impetus to reduce bureaucracy at the corporate level via a restructuring that reduced salaried employees by a third. And the current market softness has created room for workforce reductions at several facilities as the company manages production and inventory levels. Historically Deere’s model was to produce machines in line with manufacturing capacity, regardless of inventory levels across the market. Since shifting to a return-based approach the team has become much more disciplined with inventory management. For example, in the second half of 2024 the company is underproducing large tractor demand in North America to reduce supply.

In aggregate these operational changes have led to significant improvements in Deere’s financial results. The chart below provides additional context on the multi-year evolution. The past three years coincided with strong commodity markets and represent a cyclical peak, but also prove the business is capable of generating margins nearly 10 percentage points higher than the prior peak. Cyclicity is a given, but we expect margins will be higher on average in the coming decade than in the past one.



Price increases tied to the adoption of Deere’s tech-enabled solutions have also benefited the company’s margin profile. Take ExactEmerge as an example. Released in 2014, ExactEmerge provided breakthroughs in precision seed placement and spacing without sacrificing planting speed. As the product’s value has been proven more growers have come to rely on the technology. Planting data from ExactEmerge integrates into the John Deere Operations Center to mark exactly where each seed is planted, creating a digital map of the field for the sprayer and combine to access throughout the season. This allows an operator to be proficient with far less training. Having a farm’s data in Deere’s cloud ecosystem allows an operator to integrate hundreds of third-party apps. This allows a farmer to benchmark against industry standards and analyze his business across key performance metrics in real time. At this point Deere only earns \$100 - \$200 million annually in software revenue, but it’s not hard to imagine a scenario where this figure could be 10x-20x those amounts in a handful of years.

To be clear, this emerging technology is expensive, and farmers are a notoriously frugal bunch. Continued adoption will be gradual and dependent on products demonstrating additional value. Progress looks

promising, but we view the tension of how, and how much, to charge for new solutions as one of the bigger challenges and risks to monitor over time. Recently, Deere has come under fire on social media for an agenda pushing “Diversity, Equity, and Inclusion” over historical merit-based policies. While this may sound like nothing more than corporate politics, one need look no further than Anheuser Busch and Boeing to witness the lasting damage these policies have inflicted on brand reputation and quality, respectively, at these stalwarts of American enterprise. At a minimum, these actions raise questions as to whether management has taken the loyalty of its customers—a decidedly conservative crowd—for granted.

Deere is a cyclical grower. After earning more than \$10 billion in 2023, we expect it to make closer to \$6 - \$7 billion annually over the next three years. Our purchases represent a multiple of roughly 16x *mid-cycle* earnings which we expect to grow over time. We find this price point particularly attractive for a mission-critical business that has earned returns on capital in the low twenty percent range over the last decade.<sup>10</sup> We also see upside optionality in a scenario where software subscription revenue begins to move the needle by the end of the decade. That would not only provide a high-margin, recurring revenue stream but could also attract more attention to an “old-fashioned” equipment manufacturing company. We’re not underwriting it, but many of our best investments have been in businesses where we’ve benefitted from earnings growth *and* multiple expansion. Both seem plausible over our investment horizon.

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As we close, we’d like to note a few housekeeping items:

**Please mark your calendars for our Investor Day which will take place on October 15, 2024 from 4:00 – 6:00 PM at Happy Hollow Club in Omaha. More details to follow.**

In February Eric Ruden had the opportunity to discuss aerospace aftermarket parts manufacturer HEICO on the Business Breakdowns podcast. Eric’s interview is an excellent overview of the company and why this investment embodies the types of businesses we concentrate our capital in. We’ve attached a transcript of the interview to this letter. For those who would prefer to listen, be sure to check out this [link](#) for a replay and show notes.

Paul Penke, who heads up our operations and client service functions, recently completed the Certified Financial Planner exam and is now officially a CFP! Paul has been with us for roughly three and half years and is a crucial member of our team.

Finally, we’re excited to welcome Finn Lucas to Ironvine. Finn graduated from the University of Nebraska-Lincoln with a degree in Finance and has hit the ground running, largely supporting operational functions. We look forward to introducing Finn to many of you.

Thank you for your continued trust and confidence.

The Ironvine Team  
July 18, 2024

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<sup>10</sup> Average Return on Tangible Capital (excl. goodwill, intangibles, and excess cash) of Equipment business from 2014 - 2023



	YTD 06/30/24	Annualized Returns as of 06/30/24				Cumulative	
		1 Year	3 Year	5 Year	10 Year	Inception 04/01/12	Inception 04/01/12
Ironvine Concentrated (net)	5.54%	11.00%	2.46%	11.85%	9.47%	11.21%	267.38%
S&P 500	15.29%	24.56%	10.01%	15.05%	12.86%	13.85%	389.87%
Equities	1.21%	8.98%	1.69%	10.05%	8.05%	9.99%	221.06%
Bonds	(1.58%)	0.33%	(4.52%)	(1.26%)	1.00%	1.19%	15.65%
Cash	2.68%	5.50%	3.11%	2.17%	1.50%	1.23%	16.16%

Performance reflects the results of the Ironvine Concentrated Equity Composite. Index returns are shown on a total return basis which assumes the reinvestment of dividends and interest income. Equities represent the total return of the S&P 1500 equal-weighted index. Bonds represent the returns of the Bloomberg US Treasury index with 7-10 years to maturity. Cash represents the returns of the Bloomberg 1-3 month Treasury Bill index. Indices are unmanaged, do not incur fees or other expenses, and are generally not available for investment. See the Important Disclaimers at the end of this document for additional pertinent information.

### Concentrated Equity Second Quarter Highlights

- Returned 0.20% net of fees in the second quarter of 2024
- Initiated new investment in Deere & Co. (\$401)
- Added to investments in CoStar Group (\$73) and UnitedHealth Group (\$488)
- Trimmed investments in Microsoft (\$450), Berkshire Hathaway (\$423), Dollar Tree (\$116), Moody's (\$400), and Aon (\$320)

Top 10 Holdings as of 6/30/2024	
AMAZON.COM INC.	9.5%
MICROSOFT CORP.	8.1%
VISA INC.	7.7%
HEICO CORP.	7.0%
ANALOG DEVICES, INC.	6.8%
THERMO FISHER SCIENTIFIC INC.	6.7%
ALPHABET INC.	6.6%
COSTAR GROUP INC.	5.6%
S&P GLOBAL INC.	5.3%
MOODY'S CORP.	5.2%
<b>Top 10 as % of Assets</b>	<b>68.5%</b>

Company	Portfolio Contribution
<b>Top Contributors - LTM 6/30/2024</b>	
AMAZON.COM INC.	3.5%
MICROSOFT CORP.	3.0%
ALPHABET INC.	2.8%
HEICO CORP.	1.6%
MOODY'S CORP.	1.2%
<b>Top Detractors - LTM 6/30/2024</b>	
BOSTON OMAHA CORP.	(1.7%)
DOLLAR TREE, INC.	(1.5%)
COSTAR GROUP INC.	(0.8%)
AON PLC	(0.8%)
DOLLAR GENERAL CORP.	(0.4%)





	Annualized Returns as of 06/30/24				Cumulative	
	YTD 06/30/24	1 Year	3 Year	5 Year	Inception 01/01/16	Inception 01/01/16
Ironvine Core (net)	5.15%	12.45%	2.75%	12.26%	13.15%	185.75%
S&P 500	15.29%	24.56%	10.01%	15.05%	14.31%	211.57%
Equities	1.21%	8.98%	1.69%	10.05%	10.02%	125.16%
Bonds	(1.58%)	0.33%	(4.52%)	(1.26%)	0.57%	4.93%
Cash	2.68%	5.50%	3.11%	2.17%	1.76%	15.96%

Performance reflects the results of the Ironvine Core Equity Composite. Index returns are shown on a total return basis which assumes the reinvestment of dividends and interest income. Equities represent the total return of the S&P 1500 equal-weighted index. Bonds represent the returns of the Bloomberg US Treasury index with 7-10 years to maturity. Cash represents the returns of the Bloomberg 1-3 month Treasury Bill index. Indices are unmanaged, do not incur fees or other expenses, and are generally not available for investment. See the Important Disclaimers at the end of this document for additional pertinent information.

### Core Equity Second Quarter Highlights

- Returned (1.10%) net of fees in the second quarter of 2024
- Initiated new investment in Deere & Co. (\$405)
- Sold investment in Dollar General (\$126)
- Trimmed investments in Costco Wholesale (\$798) and Microsoft (\$450)
- Added to investments in Boston Omaha (\$14.70), Old Dominion Freight Line (\$179), CoStar Group (\$73), and O'Reilly Automotive (\$1,030)

Top 10 Holdings as of 6/30/2024	
AMAZON.COM INC.	6.1%
MICROSOFT CORP.	6.0%
HEICO CORP. - CL A	5.8%
THERMO FISHER SCIENTIFIC INC.	5.0%
BERKSHIRE HATHAWAY INC.	4.9%
ANALOG DEVICES, INC.	4.5%
MASTERCARD INC.	4.2%
VISA INC.	4.0%
COSTAR GROUP INC.	4.0%
ALPHABET INC.	3.9%
<b>Top 10 as % of Assets</b>	<b>48.4%</b>

Company	Portfolio Contribution
<b>Top Contributors - LTM 6/30/2024</b>	
AMAZON.COM INC.	2.2%
MICROSOFT CORP.	2.2%
COSTCO WHOLESALE CORP.	1.7%
ALPHABET INC.	1.7%
HEICO CORP. - CL A	1.3%
<b>Top Detractors - LTM 6/30/2024</b>	
DOLLAR TREE, INC.	(1.1%)
COSTAR GROUP INC.	(0.7%)
AON PLC	(0.6%)
DOLLAR GENERAL CORP.	(0.3%)
DEERE & CO.	(0.2%)





## Important Disclaimers

Reported performance figures represent an average, or composite, of our progress. Individual returns will vary based on the timing of your investment with us, fee differentials, or other account-specific circumstances. Client reporting, including positioning and performance, is sent under separate cover.

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Ironvine Capital Partners, LLC (Ironvine) is an independent registered investment adviser registered with the United States Securities and Exchange Commission. The firm definition includes all assets that are managed by Ironvine.

**The Ironvine Concentrated Equity Composite** includes all accounts over which Ironvine deems to have discretion and that follow the composite strategy. Ironvine Concentrated Equity seeks to earn above average returns by investing primarily in a concentrated portfolio of global issuers in all facets of capital structures, including and not limited to common and preferred stocks, debt instruments, convertibles etc.

The Ironvine Concentrated Equity Composite was created on December 1, 2013, with an inception date of April 1, 2012. The strategy does not seek to directly track or compare itself to any particular equity benchmark, but the composite is compared against the total return of the S&P 500. The benchmark includes 500 stocks representing all major industries of the economy. Ironvine Concentrated Equity employs a total return strategy and the S&P 500 is provided as it is the most widely recognized alternative to any actively managed mandate amongst global investors. Past performance is not indicative of future results. All results are calculated in US Dollars and include reinvestment of dividends and other earnings.

Performance presented prior December 1, 2013 occurred while the Portfolio Management Team was affiliated with a prior firm and the Portfolio Management Team members were the only individual(s) responsible for selecting the securities to buy and sell. A review of the performance record for compliance with the portability requirements of the GIPS standards was completed by an independent accounting firm. The verification and performance examination report are available upon request.

Prior to October 2017 the composite was named "The Ironvine Composite."

**The Ironvine Core Equity Composite** includes all accounts over which Ironvine deems to have discretion and that follow the composite strategy. Ironvine Core Equity seeks to earn above average long-term returns by investing primarily in a portfolio of common equity securities with a particular focus on companies that have the ability to generate high and sustainable returns on invested capital.

The Ironvine Core Equity Composite was created on 12/29/2017, with an inception date of January 1, 2016. The strategy does not seek to directly track or compare itself to any particular equity benchmark, but the composite is compared against the total return of the S&P 500. The benchmark includes 500 stocks representing all major industries of the economy. Ironvine Core Equity employs a total return strategy and the S&P 500 is provided as it is the most widely recognized alternative to any actively managed mandate amongst global investors. Past performance is not indicative of future results. All results are calculated in US Dollars and include reinvestment of dividends and other earnings.

Performance presented prior January 1, 2017 occurred while the Portfolio Manager, Richard L. Jarvis, was affiliated with a prior firm. Mr. Jarvis was the only individual responsible for selecting the securities to buy and sell at the predecessor firm and was a primary decision maker in that capacity at Ironvine until his retirement on 12/31/20. This performance record was incorporated into the Ironvine Core Equity Composite in compliance with the portability requirements of the GIPS standards. A copy of the Portability report is available upon request.

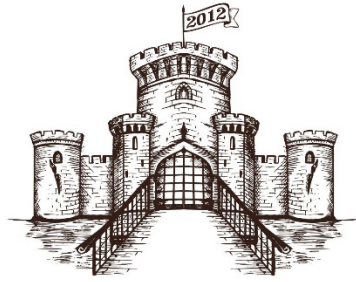
Ironvine Capital Partners ("Ironvine") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS® standards. Ironvine has been independently verified for the periods 12/1/13– 12/31/22. A firm that claims compliance with the GIPS® standards must establish policies and procedures for complying with all the applicable requirements of the GIPS® standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS® standards and have been implemented on a firm-wide basis. The Ironvine Concentrated Equity Composite has had a performance examination for the periods 12/1/13– 12/31/22. The Ironvine Core Equity Composite has had a performance examination for the periods 1/1/17– 12/31/22. The verification and performance examination reports are available upon request.

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Results are based on fully discretionary accounts under management, including those accounts no longer with the firm. To be included in the composite an account must have a minimum value of \$25,000 at the beginning of a month. The U.S. Dollar is the currency used to express performance. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request. Returns are presented net of management fees and commissions and include the reinvestment of all income. Net of fee and commission performance was calculated using actual management fees and commissions. The investment management fee schedule for the composite is tiered, at 1.0% for relationships less than \$10 million, 0.90% for relationships between \$10 million - \$25 million, 0.80% for relationships between \$25 million - \$50 million, 0.70% for relationships between \$50 million - \$100 million, and 0.60% for relationships above \$100 million (each tier indicated as an annual percentage charged quarterly). Actual investment advisory fees incurred by clients may vary. The collection of fees produces a compounding effect on the total return net of fees. For example, a portfolio that earned 8% annually for ten years would result in a cumulative return of 115.9% before investment management fees and 96.7% net of such fees, assuming a 1.00% fee per year.

The firm's list of composite descriptions is available upon request. Effective 1/1/2017 Ironvine merged with Saddle Road Partners, LLC (Saddle Road). The surviving entity is Ironvine Capital Partners, LLC. For more information about any of the above contact Paul Penke at 402.916.1702 or [ppenke@ironvinecapital.com](mailto:ppenke@ironvinecapital.com). No part of this article may be reproduced in any form, or referred to in any other publication, without express written permission.





**IRONVINE**  
CAPITAL PARTNERS, LLC

**HEICO: Parts for Planes, Eric Ruden**  
**February 21, 2024**

**Introduction**

**Matt: [00:00:52]** This is Matt Reustle and today, we are breaking down HEICO. On the surface, HEICO is an aerospace business. They most notably operate in the aircraft parts and repairs market. And HEICO is another case study of a very successful business in a nonobvious niche market.

To break down HEICO, I was joined by Eric Ruden, Analyst at Ironvine Capital. Eric does an incredible job of explaining the HEICO story with some simple analogies to other industries, and he brings numbers to frame the value proposition of exactly what HEICO is doing. We cover the fascinating story of the Mendelson family and how they've built HEICO into what it is today. And if you haven't listened to the 50X Podcast on TransDigm, it makes for an excellent pairing with this HEICO breakdown. So please enjoy this breakdown on HEICO.

**All About Aircraft Parts and Repairs**

**Matt: [00:01:46]** All right, Eric. Excited to have you here, excited to break down HEICO. I wanted to start very simple high level with an introduction to HEICO. So can you just give us your simplest explanation of what HEICO does?

**Eric: [00:02:00]** Thanks, Matt. It's an honor to be here. It's hard to encapsulate all that the business does within just a few sentences. But if I had to point you to just a few words that should pop out at you when you think about HEICO, that would be niche components and then most importantly, cost saving solutions and pretty much everything that the company does within the aerospace and defense supply chain, centers around 2, if not all 3 of those areas.

And to just highlight what its biggest business, the crown jewel asset does is it really tries to be a second low- cost source of supply of aircraft parts and repairs to airline customers that are trying to maintain their fleet of aircraft.

And the easiest way to think about how that actually works in practice is to think of generic drugs. So if you or I were to go to a pharmacy, typically, we would have 2 different options for prescription. You'd have the branded drug, which comes from the company that initially engineered that drug and held the patents on it.

And then over time, that patent expires, it's typically opened up that other companies can manufacture that exact same recipe but sell it to you at a lower cost because they didn't have the development costs and

they're not carrying the brand premium. That in a nutshell is really what HEICO brings to aircraft parts and repairs. So that's my high-level description of it.

But I think it's interesting to point out that I don't think if you ask Larry Mendelson, the Chairman and CEO of HEICO, to describe HEICO that he would say any of that. I think he would describe HEICO not as an aerospace or electronic technologies company, but as a "very strong, well-managed vehicle for generating cash flow." And I just bring that up to keep in the back of your mind as we talk through the underlying businesses today, there are really the means with which management is accomplishing that end goal.

**Matt: [00:03:49]** That's certainly a job that I like management to have in mind when they're managing any business. And I think that leads us to a nice discussion on management in the future. If we could stay a little bit in the aerospace market, maybe we could talk about aircrafts themselves, a little bit about this niche area of the market that they're operating in, however you think would be best to frame it.

Obviously, we have new aircrafts coming out of production into use with airlines in all different areas of the market. But how would you best describe what's going on in the market for aircrafts? What makes it unique and what gives HEICO this opportunity to sell into it?

**Eric: [00:04:26]** Absolutely. So thinking about the aerospace market, just at a high level, 3 things that stand out as attractive qualities. One, this is a market with extremely long product cycles. So I think average life of an aircraft is anywhere from 25 to 30 years. The average production run for an aircraft platform is 10 to 20 years. So that gives you 35 to 40, sometimes more, years, too, to be selling parts into maintaining those aircraft, which I think is something that people end up classing over.

When you think 30 years ago, I wasn't alive and we are still 13 years away from the first iPhone, but we are still flying 737, so a long duration cycle. And then the second most important thing to understand is this is an industry with very high regulatory capture, so the only way that you can sell a replacement part to an airline is if it is approved by the FAA.

And typically, the route is through getting certified on the initial aircraft through the original equipment manufacturer. And then lastly, I would say it's an industry with very consistent growth drivers that we can talk about later. So when you split it down the middle between the original equipment manufacturers, which is dominated by the global duopoly, that is Boeing and Airbus, manufacturing new airplanes delivering them to airlines.

And then on the other side, you have aftermarket parts and services, which you're selling into airlines to maintain that fleet. And typically, the way that you get into the aftermarket is through initially having an OEM part or components sold in to Boeing and Airbus. So underneath Boeing and Airbus is really 100 to over 1,000 different Tier 1, 2, 3 suppliers that are actually supplying the components for that aircraft. Boeing and Airbus typically don't actually design and manufacture much of the components.

So to just give you some round numbers of the industry in the 2 different sides, original equipment manufacturing is about \$100 billion industry per year, round numbers, it's a little bit more than that. Airlines annually spend the same amount on maintaining and repairing the fleet, so \$100 billion in maintenance. But when you split down the original equipment into growth aircraft versus replacement aircraft, it's roughly 60% of that is going to growing the fleet of airplanes. There's about 24,000 airplanes in the world right now.

So that leaves you with a \$40 billion market that's simply going into replacing aircraft, and that's the number that you could compare to the aftermarket spend of \$100 billion. So it gives you an idea of where really the value capture is or where the revenue lies in terms of maintaining and updating the fleet.

And something that I should point out when it comes to the aftermarket, when you think about 2/3 of the revenue is driven in the aftermarket, it's actually much, much more of the profits because most of the suppliers that sell to Boeing and Airbus don't actually make any money on that sale.

They recoup all of their return by maintaining those parts and selling to the airlines and the maintenance market over the life of the aircrafts. That's what presents a lot of opportunity for higher margins. It's not uncommon at all for a company to sell to Boeing at one price, turn around and sell it to an airline at 3 to 4x that price.

So the profit pool is much, much larger on the aftermarket side for these businesses. And because of that regulatory capture that we were talking before and then being designed into that aircraft, they typically are sole-sourced proprietary solutions that gives them even more pricing power when dealing with the airlines, and that's where HEICO comes in as being a second source of supply.

### **Pricing Power and Logistics**

**Matt: [00:08:06]** It's a really interesting market for a variety of reasons that you just described there, this long duration cycle with the actual airplanes themselves. You mentioned you have this long life, which results in a lot of maintenance spend, and that creates the market opportunity.

There obviously also means that there's specific parts that you can continue to sell. I think you can reference that aircraft, you know what the part has to look like. Can you just talk a little bit about that specifically? You have the OEM parts, the original manufacturer of the parts that are going into the airplane when it's first created.

If you're going to swap in a substitute, what does the process look like for that? What creates the opportunity? I wouldn't even think of replacing a part with something beyond what it was originally manufactured with. So just a little bit on that opportunity would be useful.

**Eric: [00:08:54]** So something to think about, too, off of that on the aftermarket side, as you were mentioning the recurring piece on why the aftermarket tends to be the higher-quality piece of the business is, yes, you do have much more visibility because revenues are driven by recurring maintenance spend within the fleet. You know parts are going to break on a repeatable cycle.

Certain parts have to be replaced just on a time and utilization basis regardless of if they break and then the margin piece makes it much more attractive. In terms of how does HEICO fit into this, what creates the opportunity to have a second source of supply.

This is really where you get into HEICO's PMA business, which stands for Parts Manufacturer Approval, and that's the generic drug analogy that I was talking about before. So what HEICO does is they will take an OEM part, reverse engineer it, so they don't have the same upfront design and development costs, it's much easier to make something once you know it's already been made.

And then they will go through a honestly more strenuous certification process with the FAA than even the original equipment manufacturer would have because when an original equipment part is certified, it's certified as part of the overall aircraft certification process.

When HEICO certifies a part with the FAA, the entire process is focused on that specific part, and HEICO is maniacal about quality in that process. And they tend to focus on less safety critical parts. Those tend to be an easier sell both to the FAA and to airlines.

And then that part then has to get approved by the airlines themselves again. So there are multiple levels of qualification process before this ends up getting into the fleet, and that creates a pretty significant barrier to entry because you can really only run so fast in terms of new part development.

**Matt: [00:10:47]** That makes a lot of sense. And yes, it's always interesting when there's these regulatory barriers to entry, but if you can find yourself inside of that on the other side of the approval process, then you could be sitting nice. Now you mentioned the disparity in terms of pricing between where these OEMs are selling to Boeing and Airbus for the initial release of the plane versus where they sell to the airlines.

I imagine that has something to do with industry dynamics and just who has the power in terms of the negotiations. When HEICO is selling a part and competing against an OEM part, what does that price disparity look like? What type of discount are you looking at when you're buying a HEICO part versus an OEM part?

**Eric: [00:11:26]** So the cost savings is a major, major piece of the value proposition here. When you think about the airlines spot in this ecosystem, they're caught between a rock and a hard place because when they try to go buy the plane initially, you only have 2 global suppliers. And then when you turn around, you try to maintain it, you're often just dealing with a bunch of mini monopolies.

So that's where a second lower-cost source solution opens up. And because HEICO doesn't have the same upfront development costs as the OEMs are typically selling those parts to the airlines anywhere from a 30% to 40% discount.

And what's interesting is their strategy over time when it comes to pricing beyond just that initial discount is often to pass on a lot of the incremental savings over time to their customers. Because of the industry structure and the monopoly structure we're talking about with OEMs, that leads itself to a lot of pricing power over time. So it's not uncommon for OEMs to be raising price at a mid-single-digit rate year after year.

So when HEICO initially comes in at a 30% to 40% discount, it grows over time because they don't pass on price to nearly the same extent that the OEMs do. So what could be a 30% discount could be sitting in 5 years at a 50% discount. And not only does that pass on more savings to customers, but just incentivizes longer-term relationships.

**Matt: [00:12:47]** And when you think about the demand for these parts from aircrafts, I think you mentioned, there are regulations in place, which require you after a certain set of miles or a certain set of time to replace certain parts. How much of this comes down to, oh, I have a plethora of options, and I'm going to choose based on price versus I need this part right now and whoever has inventory of the part, I'm going to choose it? Or the logistics in the supply chain, they really play a role here in terms of demand?

**Eric: [00:13:16]** So there's really 2 reasons why an airline ever buys a PMA part. There's the cost savings side, which I think becomes very obvious to people, and then there's the availability side. And that's, I think, a little less understood, especially when you get into times when you have supply chain crunches and parts are hard to come by, PMAs act as a second source, and that can be a catalyst for PMA adoption as well beyond price.

So HEICO tends to do well in rough industry environments because those are periods where airlines are looking to cut costs more and they're also struggling to get parts and the PMA business itself is actually, I think, a harder business than people originally think. And it's because that price discussion, you think of it as a no-brainer to take that discount.

But in reality, the incentives that are in place and the airlines and the people that are making these decisions are not always worried about price as the #1 driver. It's, can I get this part? And in reality, the OEMs always do default option.

So nobody's ever been fired for buying an OEM part, but when you go to start looking at PMA parts, a separate approval process at the airline, it adds friction to that sales process, and it just adds a bit more risk because if something were to go wrong with that part, then obviously, that's the situation nobody wants to be in.

**Matt: [00:14:36]** And from your sense, obviously, it's going to differ from part to part, is there a noticeable difference in terms of the quality of the parts.

**Eric: [00:14:43]** So I think on average, the quality of the parts end up being higher from HEICO than the OEM. Your base level is you'll never get a worse quality part from HEICO, and there's been a lot of misinformation campaigns over time because PMA is a relatively small piece of the industry. It takes an educated sales process at times, and the OEMs are very incentivized to tell airlines. There is actually a marketing campaign once by one of the OEMs, where they've put out a picture of Elvis impersonator and they said, it's just never the same as the original and that was against PMA parts.

But in reality, over time, when you think about the OEM part, typically, when you add in the fact that these are really long product cycles, those parts typically aren't improved all that much over that life cycle. But when you PMA the part 10 years later, sometimes it's used with better materials than were used in that original part and while it's the exact same form, fit and function, it will end up lasting longer.

And the best evidence of that when it comes to HEICO is that they've sold over 80 million parts over the company's life. They've had 0 service bulletins issued, 0 airworthiness directives and 0 in-flight shutdowns because of any of those parts, which I don't think is something that there's any OEM that could say that. So quality is absolutely critical to the reputation here.

### **The Family at the Heart of HEICO**

**Matt: [00:16:02]** Old marketing campaign. I do respect it in some ways in terms of going after that. I want to get into the history of HEICO. It's such an interesting niche that they operate in. I think we covered the industry and industry structure well. But how did HEICO come to be? What's the story behind this business?

I think there's an interesting family involved here that you can tell me more about but share a little bit about the back story here.

**Eric: [00:16:27]** So no discussion of HEICO is complete or really should even get started without talking about the Mendelson family who have been running the business for now coming on 34 years. So the family is Larry Mendelson, the Chairman and CEO; and then his 2 sons, Eric and Victor, Presidents of the 2 segments.

And unlike many family businesses and succession stories that you'll read about, this is a dynamic where the second generation Eric and Victor have actually been around since the beginning and actually were the ones that found HEICO originally.

So HEICO itself was founded in 1957, and it was originally called Heinicke Instrument Corp., and it was a business that sold laboratory equipment. It wasn't until the 1970s that they stumbled their way into the aircraft market through an acquisition of a company called Jet Avion, which was really a pioneer of the PMA industry.

And the catalyst, I think, for the growth in PMAs came from an issue in 1985, where there was a British Airlines flight, and there was an engine fire and ended up killing over 50 people. And because of that, the FAA started to mandate the regulatory replacement of the combustion chamber that caused that fire and it was a Pratt & Whitney engine. So because there was now this new demand for the replacement of those parts, Pratt & Whitney didn't have the capabilities to meet that demand and supply enough parts.

There is a licensing deal that was done with Jet Avion and they were the only other company in the world that could supply that part. So that was the birth of PMAs. In terms of when the Mendelsons came along, the story starts in Columbia University, which is when Eric and Victor were in college in the 1980s. And as the story goes, this was off the LDL boom at the time and Eric and Victor had formed the stream to use some of the family's money to acquire an underperforming public company.

And it was actually Victor that found HEICO. And what they found was a management team and Board that own no shares and were not incentivized properly, and that's the cornerstone of the Mendelsons operating philosophy going forward, but they ended up buying 15% of the business for \$3 million at the time, launched a proxy vote to oust the current management team. They actually lost that vote and had to sue for proxy solicitation violations.

They won that and were able to then, in 1990, take full control of HEICO and if you looked at the financial results since then, you probably think it was all sunshine and roses from there, but there is actually a very, very tough start.

So at the time they're trying to get out of the laboratory equipment business, they have this one part on the Pratt & Whitney engine and then on top of everything, the United Technologies company that owned Pratt & Whitney sued the company for \$100 million to stop them making that part.

And this is a company at the time that was \$25 million market cap. So losing your main product line and being sued for 4x that is a pretty dire situation. Luckily, they were acquitted on that, which I think is just an important thing to highlight because over time, we've seen time and time again, predatory practices from OEMs trying to bully the PMA industry out of existence with varying degrees of success.

But here we are 30-some years later with a growing PMA industry. It just proves the value proposition that regulators and airlines want this. In terms of what got HEICO to be in the position that it is today, the other historical event that's important to call out is in 1997, the Mendelsons had formed a relationship with the Chairman and CEO of Lufthansa Airlines and pitch them on the value proposition that PMA could bring to their maintenance, repair and overhaul capabilities and the cost savings it could drive.

And Lufthansa ended up investing in HEICO's PMA business acquiring 20% of it, which is a stake they actually still hold. And what that did was a few things. Obviously, it massively accelerated PMA development but it also gave HEICO a very unique information advantage where they were able to use Lufthansa's technical data and Lufthansa could pick out the highest volume, highest value parts for them to PMA.

And then HEICO had an anchor tenant to go sell that part to immediately after approval. And then it also really enhanced the marketing capabilities because it validates that PMA when you have a major customer to then go sell out to the other airlines. So this really launched HEICO into being the leader in the space.

So I think from there, fasting forward, you can say it was mostly sunshine and roses from that one initial part through organic and inorganic acquisition, they now have a portfolio of 19,500 parts and have also built out the largest non-OEM repair and overhaul network as well as acquired about 50 other electronic technologies business that make up that segment. Just to round it up, since the Mendelsons took over HEICO in 1990, sales have compounded annually at 15%, net income at 18%, and that's driven a 21% annual return. So not too shabby.

**Matt: [00:21:25]** Not bad. Mendelson brothers - different college experience than I had - was not doing takeovers, but admire that. And while they seem to be on the other side of bullying campaigns, they seem pretty sharp themselves in terms of business operations. On the Lufthansa deal, that 20% stake, do you have any idea of what that would be worth now, just ballparking when they invested versus what the business has become?

**Eric: [00:21:54]** It's really hard to track because the initial investment was for 20% of the aerospace business. But as HEICO has acquired other repair and overhaul businesses, there are some niche OEM businesses, the 20% has moved and they've liquidated some of their stake, but they still hold 20% of the PMA business. So I don't want to put out a number because it will be probably pretty off, but it's safe to say that it's many, many multiples of the initial, which was \$25 million and increased eventually to \$50 million.

**Matt: [00:22:23]** And as the business has transitioned, I assume they are out of the laboratory parts business.

**Eric: [00:22:30]** So that was divested immediately within, I think, a year, and they've only ever divested 2 businesses in their careers.

### **HEICO's Component Segments and Diversified Revenue Base**

**Matt: [00:22:39]** What does the actual segment allocation look like today, just in terms of the different buckets where they're generating revenue and if there's profit pools to attach to those as well?



**Eric: [00:22:48]** So just the company level, HEICO is about roughly a \$3.8 billion revenue business going into 2024. And just to clarify, I'm pro forming for the Wencor acquisition, which is the largest deal they ever did, which closed a few months ago. So working those numbers in as I'm talking about this, but that split is roughly 55% commercial aerospace, 35% defense and space and then 10% other niche products.

And at the segment level, there are 2 segments: the Electronic Technologies Group, which you can think of as the defense space and other niche technology bucket. And then the Flight Support Group, which houses the PMA business, the repair and overhaul business and their distribution businesses on the aircraft parts side.

So revenue split between those 2 segments. FSG is about 2/3 of sales. ETG is about 1/3 of revenue, but it's actually a higher percentage of total profits about 40% and just to spend a few minutes, I think, is worthwhile on the Electronic Technologies Group. It tends to not get the same limelight as FSG.

I think that's because of, a, just recently, there's been so much going on in commercial aerospace that there's plenty to talk about on flight support, the PMA business is really the legacy core crown jewel asset, and there are really identifiable growth drivers in the aerospace side of the business.

And in the Electronic Technologies business, it's this black box. So with a very diversified portfolio, it's harder to really get your arms around the drivers, but the best analogy that I think would make sense to a lot of listeners when thinking about the Electronic Technologies Group is think analog semiconductors, but less cyclical, also less growth.

And the attributes I'm trying to get at there is heavily diversified product portfolio, so well over 100,000 different SKUs that they're selling, mission-critical technology, usually components that are a very low percentage of the end bill material in a much larger system. So this is made up of about 50 acquired businesses, and they sell everything from antennas on aircraft, their RF switches, microwave power modules and some cool stuff that goes on with lasers in the Mars Rover.

So a lot of variety across the technology layman like myself, gets pretty complex, pretty quickly. But the common theme is that these are highly engineered components and subcomponents that often end up acting as a piece of the brain or power source of a larger system within aircraft, fighter jets or missiles and other weapon systems as well as some medical devices, things like the \$10 interconnector that if it fails the MRI machine doesn't work.

**Matt: [00:25:35]** You laid it out well there just in terms of how to think about it not being as cyclical semiconductors, also not having the same type of growth. Historically, have there been major swings just given it's 1/3 of revenue and 40% of operating profit? It feels like the type of thing where even if you don't understand it, it could be a risk to the business performance. So just historically, have there been any major swings or anything that you look out for related to that business?

**Eric: [00:26:02]** Yes. I think part of the reason, too, that people tend to not spend as much time on it is because of the fact that it is so much more stable. So you have less of a focus on the risk there. Now that doesn't mean there isn't swings, and this is a very mixed sensitive business. Because of the differing margin profile of the products.

So when you think defense, which is the biggest piece of this segment, very tied to budget growth and outlay spending, which tends to not be cyclical because defense spending is more driven by the global threat environment than it is any economic cycle.

And that business grew straight through the pandemic, not at a high rate, but it was growing. So it provides you a buffer during those periods. And just touching a bit on why the margin profile is different, also comes into the fact that these are subcomponents going into the defense industry.

And when you think defense, it's really very similar to aerospace in terms of the technological capabilities, manufacturing capabilities, the long product cycles, long-term steady growth. But the cost structure is quite different.

And the reason you're able to have, I think, the margins that they do in the segment, which on the defense side, are well north of 30% is when you're a mission-critical technology solution, obviously, that comes with a fair bit of price not being the determining factor.

But when you're selling primarily to the defense primes and you think about the incentive structure, a lot of their revenue is driven by cost-plus contracts. And I don't want to say that, that incentivize you to ramp up costs, but it doesn't incentivize you to cut them in the same degree. The negotiation with the Lockheed is just not the same process as a negotiation with Boeing. So it provides you with a fair bit of cushion.

**Matt: [00:27:48]** Everything you've described about the Mendelsons is they're very thoughtful about capital allocation, about running this business for shareholders. Has there ever been a contemplation that you could split that business out, divest it, create its own vehicle. It's just interesting to hear how it is very unique relative to the FSG, just flight-related businesses. So how much are they complementary versus how much could this be some opportunity in the future to potentially break things up a little bit?

**Eric: [00:28:19]** I don't think the Mendelsons would ever split anything off because their entire operating philosophy is owned forever, and they operate in a very decentralized fashion. And while the businesses are very unique, there is some complementary attributes and a lot of that will end up being tied in with the fact that ETG has some manufacturing capabilities in low-cost solutions that FSG is able to leverage.

The manufacturing capabilities are often very similar. So you could end up having crossover of different suppliers that gives you more leverage. And the same thing with FSG. So FSG has some different technologies that are also useful or complementary to the ETG businesses.

And while they're never vertically integrated, the segment presidents are often incentivized and encouraged to work together and able to use the resources from both to complement each other. And the last thing I'd just say why ETG makes sense is it throws off a lot of steady cash flow and that allows for a capital allocation vehicle for the Mendelsons to use both for development and FSG, but obviously, with the acquisition machine that they have running.

**Matt: [00:29:25]** We're going to get to the acquisition machine. I do promise that. On the FSG segment, I think we've talked a lot about that business, what drives it, the unique characteristics. Are there any other things that have been missing there? And specifically, as it relates to HEICO, it's a market where they're generating nice, steady margin, seems to be growing very successfully. What else are the major drivers of that segment line for HEICO?

**Eric: [00:29:52]** Some things that we haven't touched on, I think, are important is to just have a discussion about HEICO's go-to-market strategy against the OEMs because it is quite unique and it's probably the best example of the prisoner's dilemma in practice that I've come across.

So when HEICO is going up against an OEM for any given part, the goal is to get to 30% market share and then leave the OEM alone. And the rationale behind that is because if you run the math on the contribution margin of the OEM at a 30% premium at about a 50% margin and then HEICO at a 30% discount to that, typically something around a 30% margin, once you get above a 30% market share, you start incentivizing the OEM to cut price. And if the OEM starts cutting prices, then there's really not a strong incentive for the airlines to stick with the PMA.

So HEICO's strategy in a way is we'll take a bit of your market in these parts, but we're not a significant threat to you. And the other thing they do in that regard is they don't go after what are called life-limited parts. And what life-limited parts are is really the crown jewel parts of the OEMs. There are parts that have to be replaced after a certain amount of flight cycles, and they're typically the most highly engineered parts, and they're the most safety critical parts and have the best margins for the OEMs.

So HEICO tends to leave those alone. And really, it's just trying to incentivize behavior where both can coexist. And then in terms of drivers of the segment, it's really air travel at a high level. And the way to think about air travel growth historically as flights tend to grow around 4% to 5% a year, and it's very highly correlated to global GDP.

And as economies around the world expand and as people move up in the middle class, one of the first things they do is they start to travel. So as GDP per capita increases, there's a linear relationship with flight growth, something that's interesting that I don't think a lot of people understand in terms of the runway that's left for air travel is I've seen a wide range of estimates from as low as 20%, but certainly not higher than 50% of the world has ever been on a plane.

So even though this has been a very steadily growing industry for multiple decades, there is a very long runway to continue doing that for a long time.

### **Navigating Difficult Environments**

**Matt: [00:32:18]** I'll put COVID aside for a minute, and I do want to know those numbers. But if you look at typical recessions, maybe financial crisis, maybe '15, '16 timeframe, what type of drawdowns do you see in that FSG business specifically, how drastic is it?

**Eric: [00:32:36]** So COVID is an entirely separate beast. Just to give everybody some numbers around what happened with air travel, with COVID. For a few months stretch of time, global passenger levels were down 90%. Outside of COVID, there's never been more than a mid-single digit decline in passengers. So the difference in the falloff in demand, it's a completely separate discussion. But setting COVID aside, there's only been 3 other years really in history that global travel has declined, and it was the recession of the early '90s, it was coming out of 9/11 and it was the great financial crisis.

And you have anywhere from a 2% to 5% drawdown in travel during that time period. And the aftermarket tends to be what gets hit first because you immediately park your planes or you park the planes that aren't needing to be used, but it ramps back the fastest.

So it ends up being a more stable business over a longer duration compared to the OEM cycle that has to ramp down and it's very, very hard to ramp that back up. In terms of numbers on FSG's drawdown, coming out of the great financial crisis, organic growth at FSG was negative 10%.

And that outside of COVID is the worst organic growth year that the company has ever had. And the last thing I would just note is that cycles tend to be very, very good for HEICO. And it's because of the reasons I think we touched on earlier that when there's a drawdown and airlines are looking to cut cost, obviously, a very good way to do that is to cut your maintenance spending and a way to cut your maintenance spending is adopt more PMA parts. So maintenance spending is the third largest expense for airlines. So that ends up being a decently material driver.

**Matt: [00:34:17]** I want to know how low organic growth was during COVID.

**Eric: [00:34:20]** On a year-to-year basis, it wasn't that bad because HEICO 2020 started in November of 2019. So they had some decent contribution. But if you look at the third quarter of 2020, organic growth was negative 44%. And while that's drastic, it's significantly better than their competitors.

So competitors at the time were in the mid-50s to low 60s types of drawdowns, which again just gets back to the fact that you're more likely to adopt PMA parts. So the other thing that's important to note about it's not just during the cycle where customers adopt PMA parts.

Once you adopt the PMA part, the incentive to switch back to the OEM is nonexistent. So it's very, very sticky revenue. So coming out of downturns, HEICO tends to gain share at a much more accelerated rate. And also, there's the M&A aspect of it during downturns as well where this management team tends to be opportunistic, which we can talk about that as well.

**Matt: [00:35:20]** We've talked about OEM versus PMA, but is there a PMA versus PMA competition as well? Are there other selling parts similar to HEICO?

**Eric: [00:35:29]** Not really. Not nearly to the same extent. So when you look at the PMA industry, it's for a few reasons. A, HEICO is by far the largest in the PMA space. I think I could reasonably estimate that they have somewhere around 75% market share of PMAs.

And when you think about their parts portfolio 19,500 parts, that was significantly enhanced by the Wencor acquisition that I just mentioned briefly in the beginning. Wencor was the second largest player in PMA. So before that acquisition, HEICO was around 12,000 parts, Wencor was somewhere around 7,000. So the combined entity is now 19,500. Now that Wencor is out of, not out of the picture, but underneath HEICO, the next closest competitor has less than 2,000 parts.

So the scale differential is quite different and the value proposition that you're able to offer airlines is compounded when you have more scale, which I think is something is important to touch on in a bit.

But the other thing about why there's not really much competition in PMA is the barriers to entry are relatively high, and it would take so long. HEICO is the gold standard. They have the best relationships with the FAA and the airlines, and they can still only pump out 500 to 700 new parts per year multiple decades before you replicate that portfolio. And then if you're going to start developing a bunch of parts why go after HEICO's parts when there are thousands and thousands of other parts in the white space for you to go attack because trying to pitch an airline on selling 5% versus HEICO's part after HEICO has already made that initial frictional sale to get a 30% discount, it's just going to be a lot tougher than going to a new part and offering 30%. So there tends not to be nearly as much competition.

**Matt: [00:37:26]** And has that always been the case? It makes sense in terms of why it would be hard to break into the industry. But as the industry was forming, what led to it just having this sole leader and not having that competition amongst players?

**Eric: [00:37:41]** I think, honestly, it gets back to the Lufthansa investment that we were talking about. I think that is a really key pivotal moment because when you have an airline partner, it just gives you such an advantage in terms of being a first mover and being able to accelerate development, but really throughout history, when PMAs were more in a nascent stage, it still wouldn't have made much sense to really compete over each other because of those dynamics. So there's just more white space to go take and then have an easier sales process to the OEM versus trying to compete with each other on a slimmer pricing discussion.

**Matt: [00:38:14]** It's quite interesting when you have these industries where, to your point, it might not have been en vogue early on, and it's only after you have this player who's built up scale, who shows this financial performance that profit pool all of the sudden looks very attractive. Just to put a bow on this point, when you look at the 12,000 parts that they had and the 7,000 that they acquired, do you know how much overlap there was between the SKUs?

**Eric: [00:38:40]** Very little. I don't have an exact number, but I think it's somewhere around 10% to 15% range. And when you add scale to the portfolio, something that we haven't talked about that I think is really important because we've been talking obviously a lot about PMA parts, but HEICO is much more than a PMA business. They've also added the repair and overhaul capabilities and distribution capabilities of other OEM parts.

And why that's so important is because if you're just a PMA company, you're trying to go convince an airline to use your parts and to just use a real-world example like a hydraulic pump. So often, when we're talking about aerospace parts, we're talking about actually a component that's made up of several other parts. I'm just going to throw out numbers here, they're probably not exactly right, but just for illustration purposes. If you look at a hydraulic pump, it could be 500 different parts. And HEICO made PMA 20 to 30 of those.

So you're then having to go convince an airline to buy 20 to 30 parts at a 30% discount. Well, that's a powerful pitch, it ends up being a low percentage of the bill of materials. But now let's say that instead of just being a PMA business, you also have repair and overhaul capabilities to where you can repair that pump for the airline.

And then let's say, you also have distribution capabilities to where you are the distributor for some of the other OEM parts on that pump. Well, that just gives you, a, a much stronger relationship with the airline

where you don't have as much friction in the sales process. It gives you more visibility into the parts that are moving at high volumes.

So it informs our PMA development process, so you may now go in PMA, more parts on that pump. And then as you develop that relationship with the airline, you're able to offer more cost savings over time. And it's really because you're able to then control both your turnaround time on the repair and your supply of parts.

So you get into these situations where now you can go to the airline and say, I can repair this pump. It's going to cost you \$10,000 and I'm going to have to wait 3 months on all the OEM parts or I can do it with some of my PMA parts. And because I control the distribution of these other OEM parts, I can do it for \$9,000 and only take 2 months. So that's how these things work together to compound the value proposition to the customer.

### **Acquisitions, Culture, Competition and Collaboration**

**Matt: [00:40:56]** It makes a lot of sense that those relationships would evolve in a very favorable way over time where the selling strategy becomes not easier necessarily, but you have a lot more that you can offer when you start to have all these different capabilities inside.

I think some of that comes from the M&A strategy, which you've tapped on a bit here throughout the conversation. It seems like it's cored to the DNA of the business. So talk a little bit about the history of M&A inside HEICO and what it's meant to the growth of the business.

**Eric: [00:41:28]** So HEICO's overarching goal has been to grow the bottom line at 15% to 20% a year annually and about half of that growth historically has come from M&A. And I would describe the M&A strategy at HEICO as very disciplined, very opportunistic, and very aligned with incentives in terms of creating an ownership environment.

So since Mendelsons took over, they've done over 98 acquisitions. They've only divested 2. So they really try to be the acquirer of choice and forever home for businesses. And to just give you an idea of how effective they are, they've deployed over \$5 billion for M&A over 34 years.

There's been less than \$10 million of cumulative restructuring or impairment charges on those deals. And that really comes from. There's just a refusal by the Mendelson to overpay. They really view capital as it's their money, their families money, their friends money, and they're not going to do anything to blow that up.

**Matt: [00:42:26]** Are there quantifiable metrics that they use to key in on acquisitions, whether it's either what they're buying at or the return on capital that's spent?

**Eric: [00:42:36]** Most acquisitions that they do are smaller, medium-sized businesses that they're able to acquire mid- to high-single digits cash multiples. So that gets you right into a teens-type return before considering the growth that you're able to deliver by coming into the HEICO environment.

And really, all they're looking for are critical technologies. Usually, that's expressed through a high margin. So typically, you're looking at high teens to 20% margins is the base level that they're looking for. And

usually entrepreneur-led businesses has been the model. And the way they go about structuring deals historically has been when you find those entrepreneurial-led businesses to leave a substantial piece of the equity to those entrepreneurs, so typically 20% of the equity gets left with the entrepreneur.

**Matt: [00:43:24]** With bringing them into the organization, you want to align the interests. You mentioned they have a decentralized culture, which gives some freedom to operate the business as they see fit. But I do imagine that there needs to be some centralized strategy in terms of offering the airlines all of the capabilities. So how do they balance those 2 things together?

**Eric: [00:43:44]** So it's definitely the gold standard decentralized, let decisions happen locally strategy. The Mendelsons will be the first to tell you that the people in the field running these businesses are much more knowledgeable about the markets than they are. So there's really no middle layer. There's subsidiary presidents, and then there's the Mendelsons and really what the Mendelsons do is just incentivize and encourage those presidents to work together, give them the resources to get stuff done, and they do that through base and compensation on operating profit and operating cash growth at each of the subsidiary levels.

And what ends up happening is a lot of these subsidiary presidents end up running the businesses like they own it because they used to own it. Over 90% of the acquisitions of entrepreneur-led companies that HEICO has done are still led by those entrepreneurs and they still own a significant piece of the business.

So it doesn't take a lot of encouragement to get them to work together even though it is a decentralized structure. And the ownership piece is critical to understanding the culture. So the Mendelsons own about 8% of the equity of the company. The rest of the Board owns about 2.5%, but most importantly, the employees own over 2% of the company, and it's because HEICO has historically gifted stock in the 401(k) plan at 5% a year, and that's ended up creating a lot of multimillionaires down at the factory level throughout the company.

There are over 400 employees at HEICO that have over \$1 million of HEICO stock in their 401(k). And on average, HEICO employees own more in stock than they make in annual compensation, which is something that I've seen public company CEOs that don't have that same alignment.

**Matt: [00:45:31]** It's interesting, and it brings up the natural comparison of HEICO to TransDigm. We did an episode with TransDigm on the show 50X that was very detailed. There's a lot of overlapping similarities between these businesses. Could you just compare and contrast where they're similar, where they're different, just an overview in your own words?

**Eric: [00:45:53]** Absolutely. So this is always a fun healthy debate because if you're an aerospace and defense analyst, inevitably, you're going to find yourself looking at these 2 businesses. And when you do, I like to joke that Larry Mendelson is the angel on one shoulder and Nick Howley is the devil on the other. And I mean, that is no disrespect at all to TransDigm.

I think you could make a very real argument that it's a better business than HEICO, but they're so remarkably similar, yet remarkably different. Both are extremely, extremely high quality, similar exposures from a defense and aftermarket perspective. They both generate most of their profits through part sales. They're both run by talented management teams. Both have a decentralized M&A program as core to their capital allocation and both try to align an ownership mentality within the culture.

But the way they've gone about employing those strategies is almost opposite in a lot of other ways. So where HEICO tends to lead businesses alone, TransDigm has been very willing to go in and cut costs and divest pieces and been very effective in doing that. Where HEICO typically runs at very low levels of leverage, TransDigm is very comfortable to run it 6x and routinely does so.

And then most importantly, where HEICO's entire value proposition tends to rely on operating customer savings, TransDigm is very notorious for raising prices, which I think is something that can be exaggerated at times. But the good news is they really don't compete as much as I think most people think and a lot of ways end up working together. So from an investor perspective, they can complement each other quite well.

**Matt: [00:47:30]** When you say they end up working together, how does that happen?

**Eric: [00:47:33]** So maybe just thinking about why they don't compete first. When you look at the 2 portfolios of parts, TransDigm is over 300,000 parts and HEICO, as we mentioned, 19,500 in the portfolio. So 15x differential in total number of parts.

But when you look at the revenue of TransDigm's aftermarket parts business, it's about a little more than \$2 billion. And if you ballpark HEICO's at \$1 billion, so 2x the revenue, 15x the parts, what does that tell you about the average value per part? So low-value, low-volume parts is where TransDigm is primarily focused. Those are very difficult to PMA, and it also is really hard for an airline to switch off those parts. And then where they end up working together is often in the distribution businesses.

So TransDigm will often take for some of their more high-value parts and go have a PMA company be their distributor. And when you do that, you exclude the PMA company from PMA-ing those parts because you have the distribution relationship, and that ends up just being really a math equation in terms of what can I make by PMA-ing this part versus what can I get distributing it. So Wencor actually is the main distributor for a few of TransDigm's key product lines.

**Matt: [00:48:46]** And that distribution business, is that mostly just the supply chain dynamics? Is there anything more to it than managing it from an inventory and transportation perspective?

**Eric: [00:48:55]** In both the repair and overhaul business and the distribution businesses, there are 2 companies in aerospace. There are companies that are very big and try to do everything, but don't end up doing anything really well, and there are companies that try and focus on a few key areas of parts and repairs and do those really, really well. Those are the businesses that HEICO has acquired into the repair and distribution businesses.

**Matt: [00:49:19]** Understood. It's interesting just to hear, again, another example of the industry cooperation almost in terms of segments being left alone, in terms of who is willing to compete in them and there's obviously barriers to entry. But again, it's just very important when you think about industry structure and how much competition there is.

**Eric: [00:49:39]** Absolutely.

## Financial Profile of the Company



**Matt: [00:49:40]** When you round everything together, we gathered a lot of interesting information there just in terms of the numbers, organic versus M&A growth. What does the business look like just through the income statement? What does the earnings profile look like? How much of that is actually converting to free cash flow? And anything else you would point to just in terms of how you think about the financial model of this business?

**Eric: [00:50:01]** So the FSG business is about a \$2.5 billion business that runs at low 20s percent margins, which has been a steady improvement over time as you increase volume, primarily through the PMA business, which is the highest margin piece.

ETG business is about a \$1.3 billion business, around 25% operating margins. And then this is a very low capital intensity model, primarily because you don't have the upfront development costs and they're just quite savvy about how they go about putting in capacity, which just gets back to the ownership model. But free cash tends to convert at over 130% of net income. So it throws off a lot of cash, and that's really what funds the M&A funnel.

**Matt: [00:50:45]** What is the dynamic that drives that?

**Eric: [00:50:47]** So it's really the mismatch between depreciation and specifically amortization expense and the low levels of needed CapEx. So they run a lot of amortization because of the acquisitions that they've done, but that doesn't end up ever having to be replaced. So their cash margins are much higher than their GAAP margins by about 5%.

**Matt: [00:51:07]** That's not a bad thing. A good set up there, a good financial model. If I start to think about risks with this business, one of the things that I would think about is just the M&A opportunity from here. You mentioned they've consolidated the industry quite a bit. So when you think about that looking forward, where are the opportunities? How much can M&A be key to the growth story going forward?

**Eric: [00:51:29]** I think that's honestly key, probably the biggest risk from an investment perspective as it is often with any serial acquirer is just how long can they continue to invest at increasing either deal size or deal volume.

And it's hard to underwrite that because the supply chain is so complex. I feel very confident saying that there's not another Wencor out there, which was a \$2 billion deal, like the hand-and-glove fit with FSG.

But I do think that there is plenty of runway to do a lot of smaller \$10 million, \$20 million, \$50 million, \$100 million deals because the supply chain is just so fragmented and so diverse, but I do think it's going to start to trend more towards, and we started to see this before the Wencor deal, that deals have started to shift towards the Electronic Technologies segment into more niche areas rather than in the aerospace market. And I'd say that's a risk.

I think it's the piece of the investment thesis where you're really relying on the Mendelsons capital allocation savviness, which they obviously have a really good track record of. But honestly, when you look at the bull case for HEICO, I think half of it is these are really good underlying businesses and half of it is you're trusting the Mendelsons to continue to prudently invest the cash that they threw off.

And the Mendelsons will tell you that even if they didn't have another PMA part developed that they think that they can hit 15% bottom line growth by expanding into other areas and they'll buy ice cream cone stands if they can do 20% margins.

**Matt: [00:52:58]** 15% is an insane number to point to. That's not setting the expectations low for yourself, but I do respect and admire that confidence and the track record to prove that they can do it. When they do make those acquisitions in the ETG business, how does the market respond to those?

**Eric: [00:53:19]** I think any time a press release comes out that HEICO has done an acquisition, people get excited. And it just gets back to the track record to talk about 98 deals, they've kept all but 2 of them and have pretty much no impairment.

And this management team will tell you repeatedly, if it's not accretive, it doesn't do anything for us because they're not planning for salaries, they're planning for increase in equity value. So I just don't see them overpaying for something. I think it's more of a risk that there isn't enough opportunity than it is that they do a bad deal.

And the other reason why I think people end up getting excited is this is a very opportunistic management team when it comes to doing deals. I mentioned the big Wencor deal. 6 of their 8 largest record M&A years came in years when industry M&A spending was down over 10%.

So usually, when you see a big deal done by HEICO, it's because the competition in the space for that asset was at a disadvantage, which just gets back to you how they go about managing the balance sheet and how they think about in decades rather than quarters.

**Matt: [00:54:19]** That's an awesome statistic. It's such an easy concept in textbook fashion to understand you should be investing at those times, but to actually do it in practice and to have that type of track record speaks for itself. When you think about the succession plan, it sounds like you have the brothers who are still of able age to be managing this business.

Are there any considerations when it comes to succession plans and just who's operating the business? Anything along those lines as it relates to the family that becomes a risk or anything related to that?

**Eric: [00:54:55]** When it comes to succession planning, often it's one of the biggest risk in family businesses, and I think it's a rare case here where I almost don't think about it as a risk.

And that's because you have a management team that's been in place for now over 30 years and all signs point to, at least Eric and Victor being in place for multiple decades more. That's just something that I certainly haven't seen any other business like it. So Eric and Victor are both, I think, in their mid-50s, no signs of slowing down.

And then I think because of the decentralized model, the bench is extremely deep here at the subsidiary president level. I think the Mendelsons would tell you that a lot of those presidents are more skilled than they are, but you don't see who they are on earnings calls.

**Matt: [00:55:33]** And do you think there's any risks that we haven't touched on? I think, obviously, you have just general macro trends, flights and aviation and just willingness to get on to planes, but anything else that we haven't covered that you would point to as a risk for the business?

**Eric: [00:55:47]** Certainly, if we have another COVID, that's going to blow up, at least the near-term picture. But I think front and center, the biggest risk is that you have a part failure that causes a crash. That would be Armageddon scenario for PMAs as an industry, and that's why there's such a focus on quality. I don't really see that happening given the track record and the fact that they tend to stay away from safety critical parts, but it's certainly there.

And then lastly, I would just say, HEICO has now gotten to a stage where a \$3.8 billion company, going on, they're a very significant player and they're able to offer a lot more system-level customer saving solutions, as we talked about before. And they're able to offer a lot more scale that could start to encroach more on OEMs.

So I think there is a risk going forward that you start to poke the bear a bit more. And how do OEMs end up responding to you having a potentially larger threat given the advantages that they have. I would say it's hard to imagine they do anything more than they've been doing historically because they've done everything from price gouging on non-PMA parts to bundling.

They have the advantage of long-term service agreements. They've tried and validating warranties. They've done some pretty anticompetitive stuff in the past. So hard to really say that what it is they would do, but certainly something to keep an eye on.

**Matt: [00:57:10]** On your first point, it does bring up the recent news and ongoing issues at Boeing. As it relates to a part malfunctioning, everything that I'm seeing right now is just tagged on Boeing as being the culprit and the issue. When does it get put on the parts manufacturer? And I know if the part fails, it's on the part, but how do you separate the 2? And is there a history of parts manufacturers really wearing the blame when it comes to those malfunctions?

**Eric: [00:57:39]** I think at the headline level, when you open up the newspaper, Boeing is going to always bear the brunt of it because it's the easiest target. With the recent industries, the majority of those issues, I think, actually are more placed on Spirit, which is the fuselage provider for most of Boeing's aircraft.

It's interesting when you get into how the industry actually operates, you can pretty much always identify the specific part that causes an e-mail function down to the direct SKU. And part of that is a really attractive reason for PMAs because you're able to identify so many parts that aren't safety critical because you have that ability to know which parts it is that causes failures.

So any time there is a part failure, the regulators are going to know who is responsible for it. But as an OEM, you don't wear nearly as much risk because you are ere originally certified into that initial process. You've gone through all of the safety inspections. You are the source of supply.

From a PMA perspective, it's just a different viewpoint because you're viewed as not the original part. So it's just viewed as more risk. So if there was a PMA failure, it would be viewed as a much bigger deal than an OEM part failure.

**Matt: [00:58:51]** It's a very fair point that I hadn't considered in terms of the PMA risk actually being elevated relative to the OEMs for that exact reason. So it makes a lot of sense. We wind down these conversations with the lessons that can be taken away from this business. So what would you point to here just in terms of lessons from HEICO?

**Eric: [00:59:10]** I think there are a lot, I'll point to 3. I think, first off, incentives are important. And when you find a business that has incentives aligned across management, shareholders, customers and even down to the employee level in a growing industry, that's a very, very powerful formula for compounding.

Secondly, I would just say duration of growth should be as, if not more, important than magnitude of growth when analyzing businesses. And then lastly, I would just say it's an example of you should keep things simple as much as you can. A wise man once told me that investing is simple, it's just really hard to do.

And as investors, I think we tend to over analyze things because it's just our nature but truly exceptional businesses tend to hit you in the face when you see them. I think if you spend an afternoon reading HEICO transcripts, it will become apparent to you very quickly that this is a management team that just goes about things differently.

They don't give quarterly guidance, they don't give adjusted metrics. You're much more likely to find them at an industry conference than a sell-side conference. They're often frustratingly conservative in the estimates that they do give you.

And just everything is about long term, growing the bottom line, taking care of customers, and taking care of employees or what they call team members. And these are all things that you can't put into a 5-year DCF. But what we found is when you find a business with an identifiable competitive advantage run by managers that think and act like owners, the math really tends to always end up working out for shareholders.

**Matt: [01:00:42]** This has been a great discussion, Eric. I appreciate you coming on and teaching us about another niche interesting business with a lot of great history, a great management team and ownership group that I plan to learn about more after this. So thank you for sharing the knowledge, Eric.

**Eric: [01:00:58]** Absolutely. Thanks so much for having me on, Matt. This has been fun.