



**MOTOROLA SOLUTIONS**

# **NORTHERN ILLINOIS UNIVERSITY**

CHICAGO, IL • MAY 2022 • CFA RESEARCH CHALLENGE

- May 5, 2022 Close: \$210
- 12-Mo Target: \$258
- Upside: 24.1%
- Recommendation: **BUY**

**UPDATED:  
May 5, 2022**





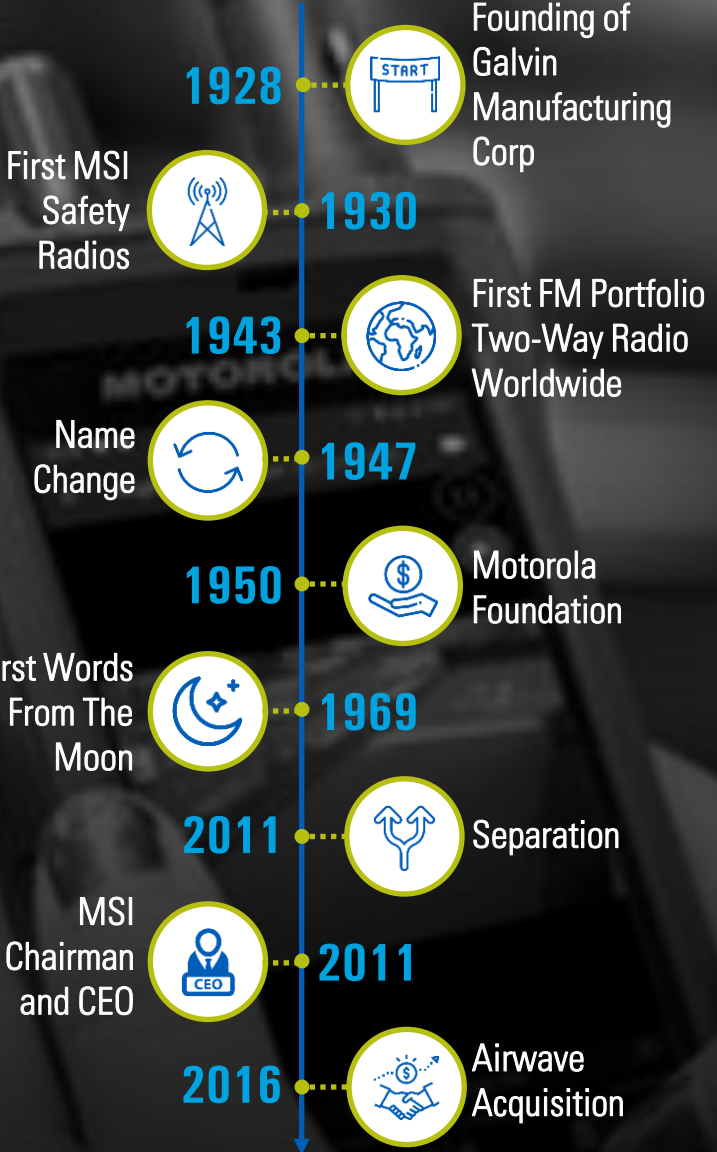
# COMPANY OVERVIEW

Company History &  
Current Portfolio

Environmental, Social,  
& Governance Analysis

Industry Drivers &  
Positioning

# COMPANY HISTORY & PORTFOLIO



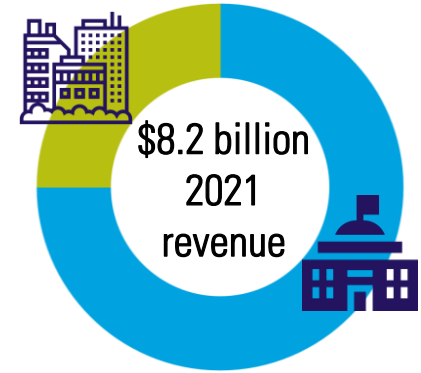
+ Board Chair



11.0 Years Tenure

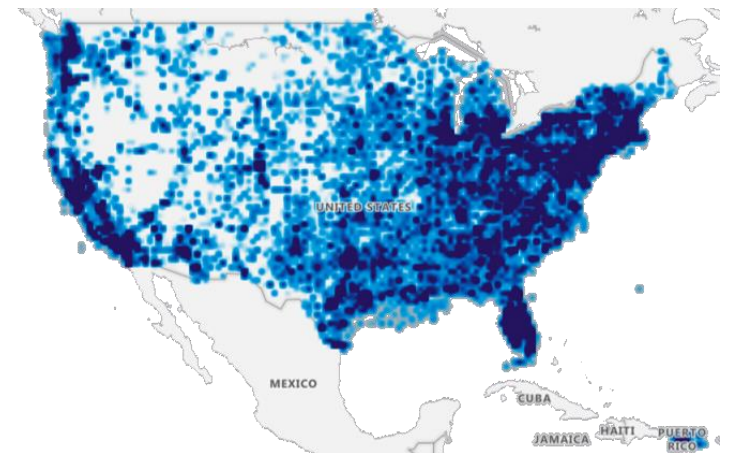


500% Return



Products & Systems Integration	Software & Services

US Commercial Land Mobile Radio Towers



Company .....

ESG .....


Industry




# ENVIRONMENTAL, SOCIAL, & GOVERNANCE ANALYSIS


Relative ESG


ESG Leader


  
Sourcing


  
Transparency

ESG Average


  
Climate Impact


  
Waste Reduction

  
Supplier Standards

  
Human Capital Development


ESG Laggard

  
Territorial Issues

  
Board Structure

Internal ESG Priorities

Environmental Focus

  
GHG Emissions


  
Product Standards

  
Minerals Sourcing

Social Focus

  
Diversity, Equity & Inclusion

  
Data Security

  
Employee Health & Safety

Governance Focus

  
Ethics & Integrity

  
Anti-corruption

  
Business Continuity

E


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S


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G


ESG Rating Summary

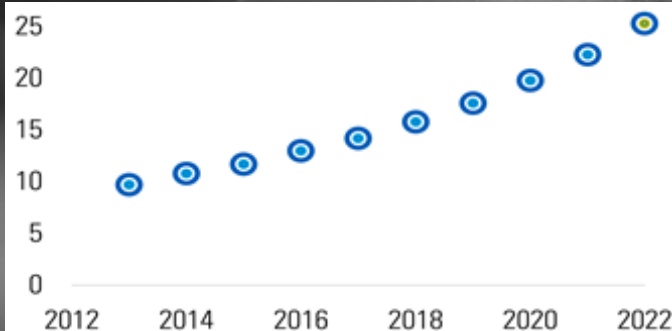
Provider	Measure	Best	MSI	Relative	LHX	AXON	TYL
S&P Global	ESG	100	86	Better	73	59	93
Sustainalytics	ESG	1	14 (low)	Better	30 (medium)	41 (severe)	20 (medium)
Bloomberg (Disclosure)	ESG	100	54	Better	44	23	44
MSCI	ESG	A	AA (leader)	Better	A (average)	Leader	A (average)
MSCI Climate	E	0	1.86° (aligned)		1.99° (aligned)		1.47° (aligned)
CDP Climate Score (Climate, Water)	E	A	C, C	Worse	B, A-		
ISS E QualityScore	E	1	2	Better			
ISS S QualityScore	S	1	1	Better			
ISS G QualityScore	G	1	8 (significant)	Worse	5 (moderate)	5 (moderate)	9 (high)
ISS ESG	ESG	A	C+	Better			

Company ..... ESG ..... Industry

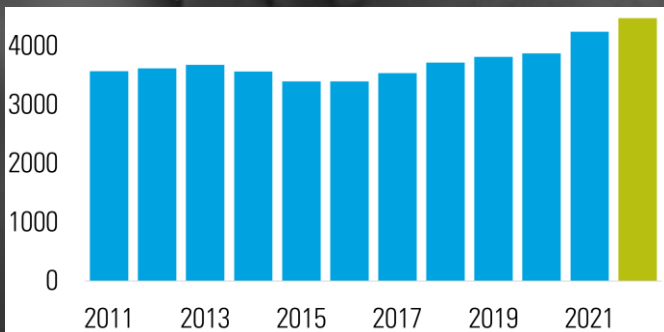


# INDUSTRY DRIVERS & POSITIONING

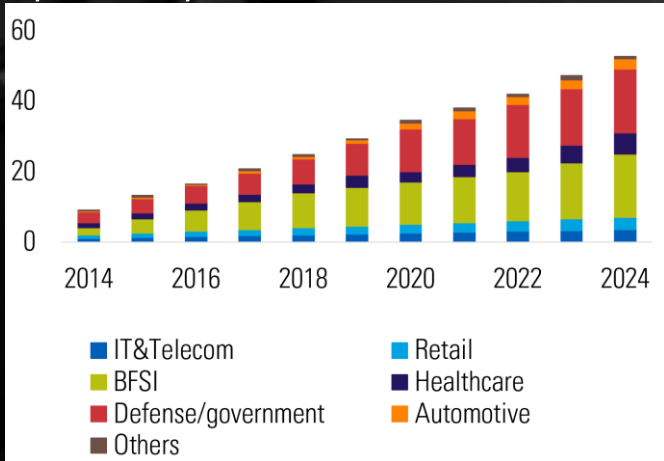
Land Mobile Radio Global Market (in Billions of \$)



Global IT Expenditures (in Billions of \$)



Cybersecurity Market Size (in Billions of \$)



Company	Market Cap (M, USD)	Net Sales (LTM) (M, USD)	Net Sales by Region	Technology Segments	Customer Base	# Employees
<b>Motorola Solutions Inc</b>	<b>\$34,152</b>	<b>\$8,171</b>				18,700
<b>Land Mobile Radio</b>						
L3Harris Technologies Inc	\$46,790	\$17,814		Integrated Mission Systems, Space and Airborne Systems, Communication Systems, Aviation Systems		48,000
Hytera Communications Corp Ltd	\$1,288	\$816		Radio Terminals, Cluster systems, Professional Wireless Communication Devices		6,863
JVCKenwood Corp	\$254	\$2,490		Mobility & Telematics Services, Public Service, Media Service		18,848
<b>Video Security &amp; Analytics</b>						
Axon Enterprise Inc	\$6,932	\$872		TASER, Software, Sensor		2,148
Hangzhou Hikvision Digital Technology Co Ltd	\$50,611	\$11,857		Video and Audio Compression Cards, Network Hard Disk Video Recorders, Network Storage		42,685
Genetec Technology Bhd	\$335	\$35		Integrated Engineering Solutions		116
<b>Command Center Software</b>						
Tyler Technologies Inc	\$15,427	\$1,442		Enterprise Software, Appraisal, Tax		5,536
Mercury Systems Inc	\$3,280	\$943		Homeland Security, Military and Aerospace, Telecommunications Market		2,384
Arista Networks Inc	\$34,516	\$2,772		Ethernet Switches, Pass-through Cards, Transceivers, Enhanced Operating Systems, Adapter Solutions		2,613



# INVESTMENT THESIS

Economic Moat



Adjacency Acquisitions



Favorable Margins

Land Mobile Radio Dominance

Up/Cross-Sell & Fund Acquisitions

Enhance Margins & Cash Flows

# ECONOMIC MOAT

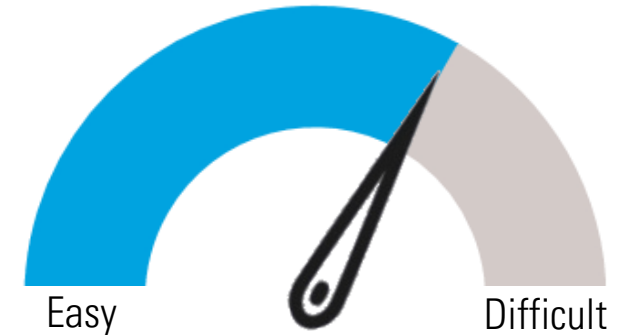
Domestic Land Mobile Radio Market



Global Land Mobile Radio Market



Land Mobile Radio Switching Costs



Frequency of Land Mobile Radio Contract Renewals



1,000 Survey Recipients





# ADJACENCY ACQUISITIONS



Land Mobile Radio Dominance

Up/Cross-Sell & Fund Acquisitions

Enhance Margins & Cash Flows

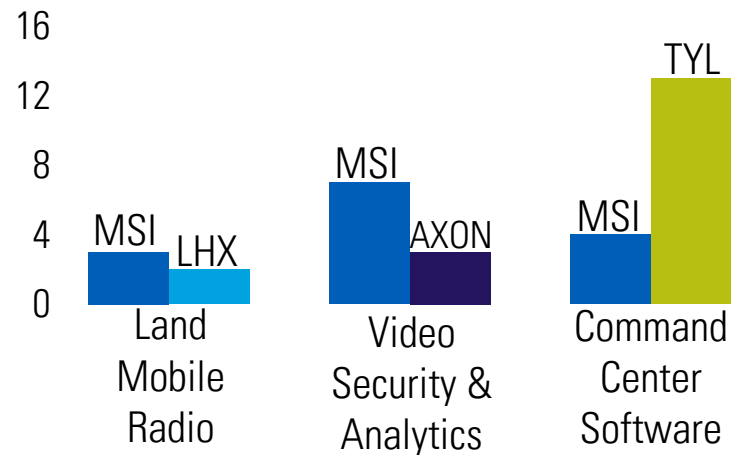
Land Mobile Radio

Video Security & Analytics

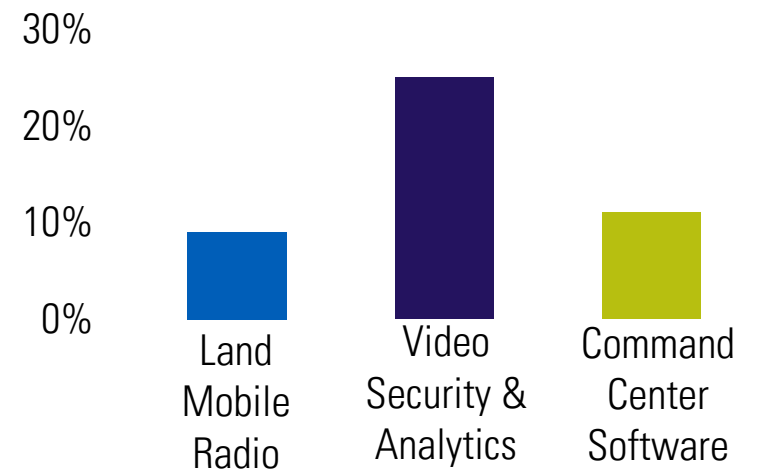
Command Center Software



Number of Acquisitions since 2018



Forecasted Five-Year Market CAGR



Economic Moat

Adjacency Acquisitions

Favorable Margins

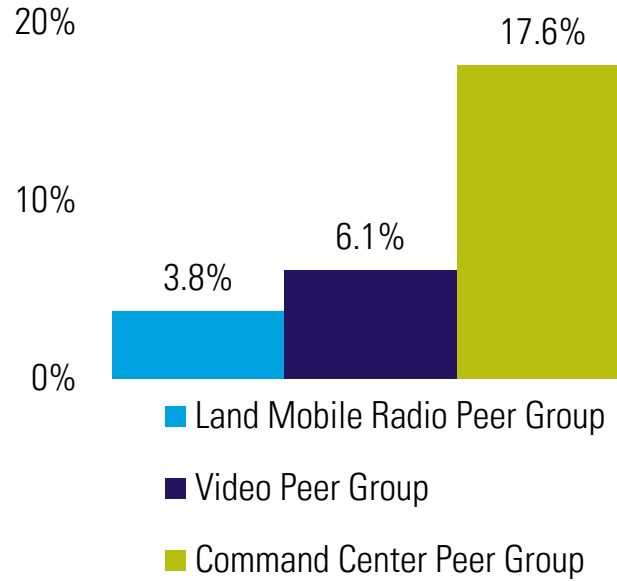
Land Mobile Radio Dominance

Up/Cross-Sell & Fund Acquisitions

Enhance Margins & Cash Flows

# FAVORABLE MARGINS

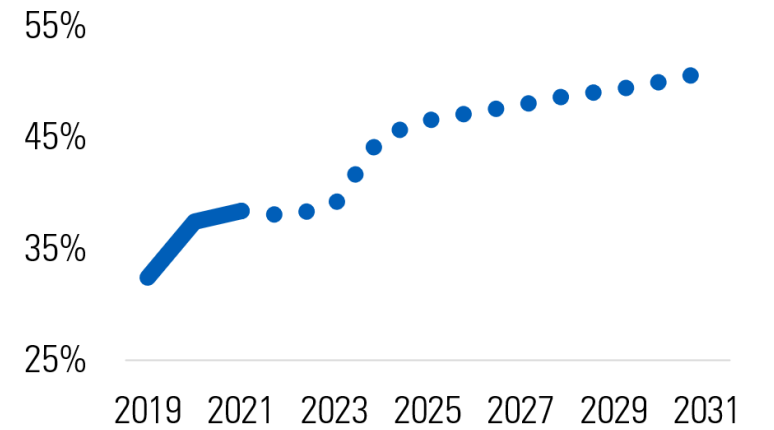
Profit Margins by Technology Group



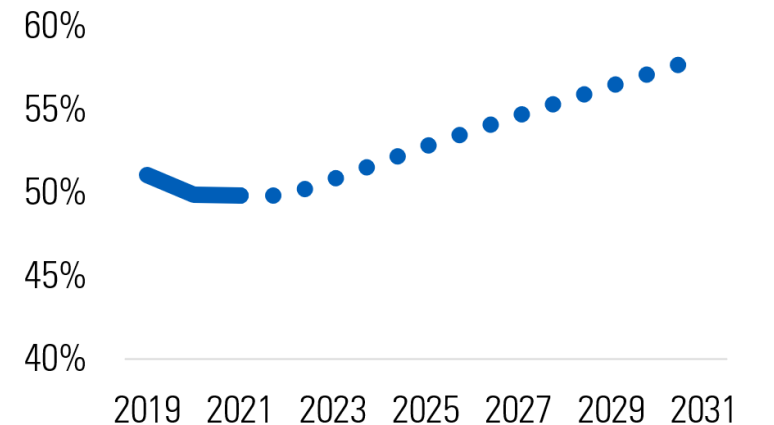
**290 BPS OPERATING MARGIN EXPANSION SINCE 2015**



Forecasted Software & Services Proportional Revenue



Forecasted Gross Margin





# FINANCIAL ANALYSIS

Revenue &  
Profitability



Capital Investments &  
Shareholder Payments

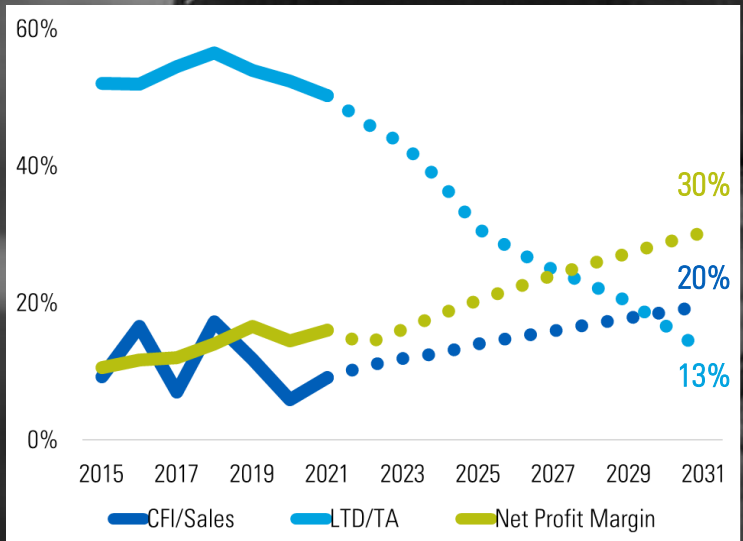


Leverage

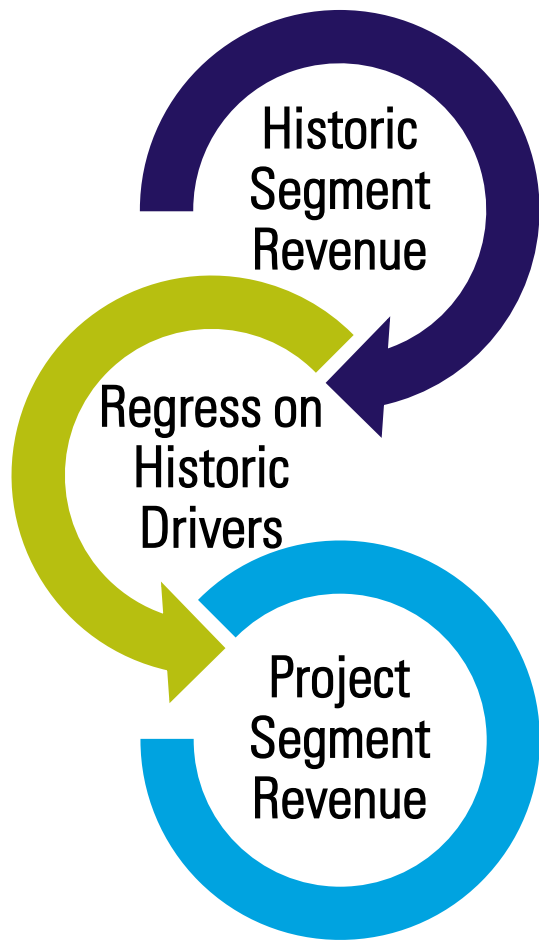
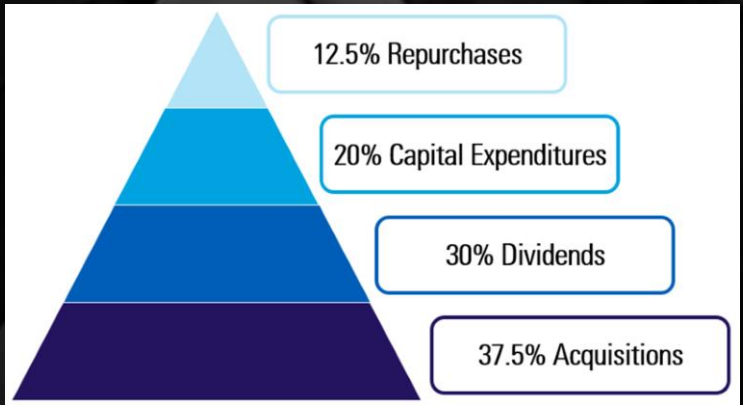


# REVENUE & PROFITABILITY

Key Performance Indicators



Operating Cash Flow Allocation



Revenue



Capital & Shareholder



Leverage

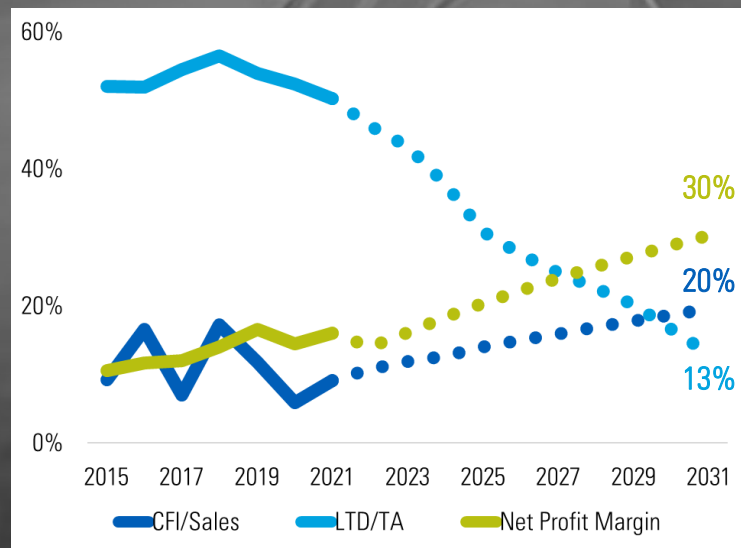
## Drivers



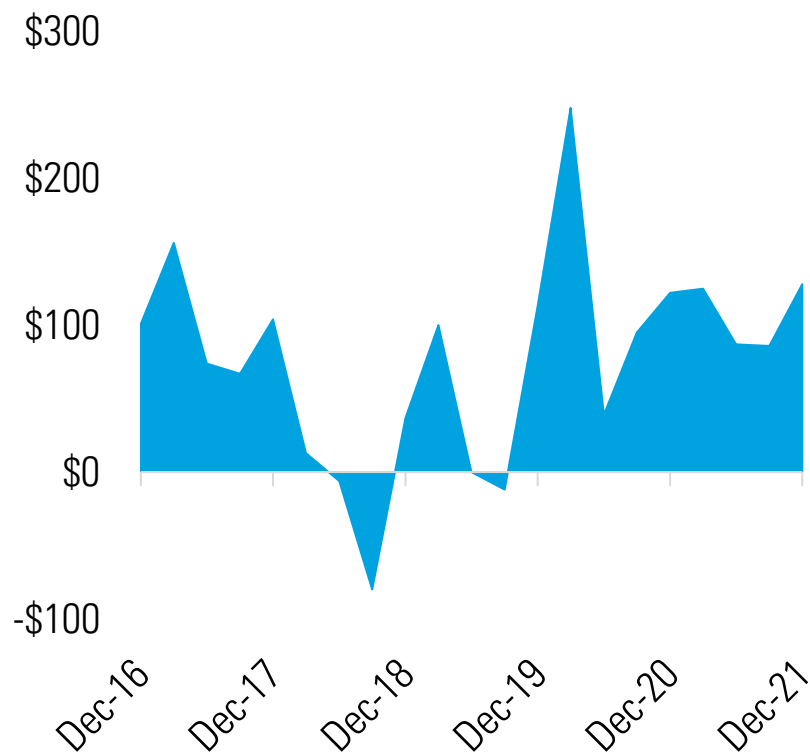


# CAPITAL INVESTMENTS & SHAREHOLDER PAYMENTS

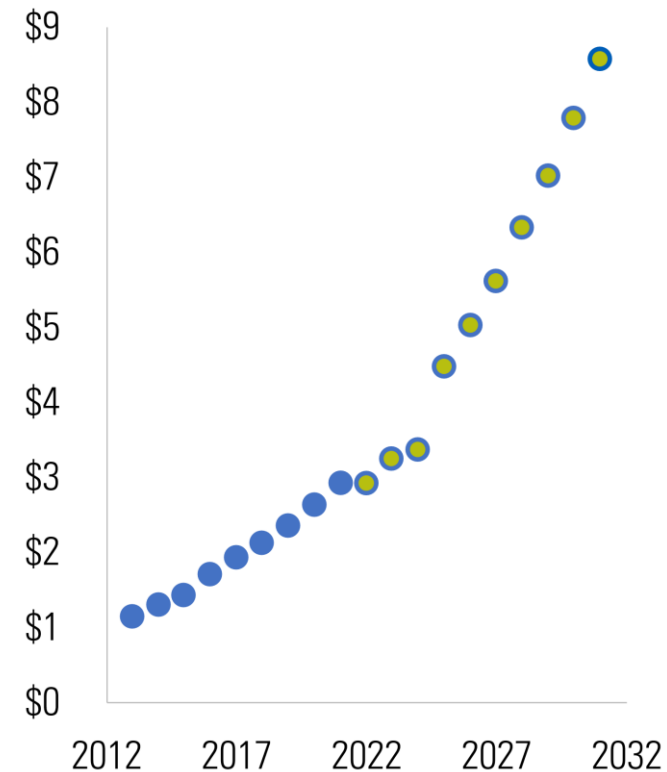
## Key Performance Indicators



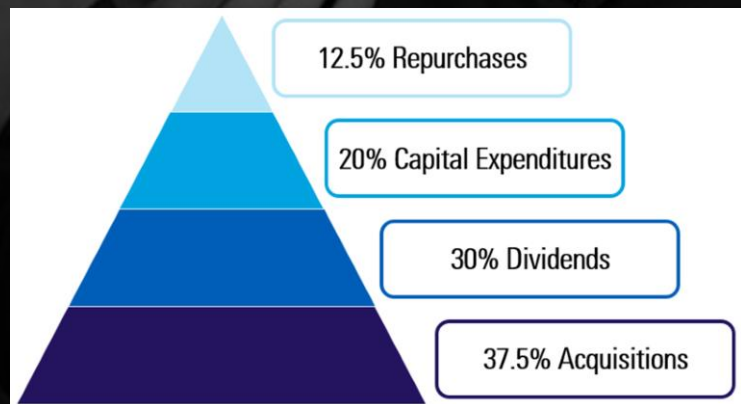
### Share Repurchases and Issuances (in Millions of \$)



### Dividends Per Share



## Operating Cash Flow Allocation



Revenue



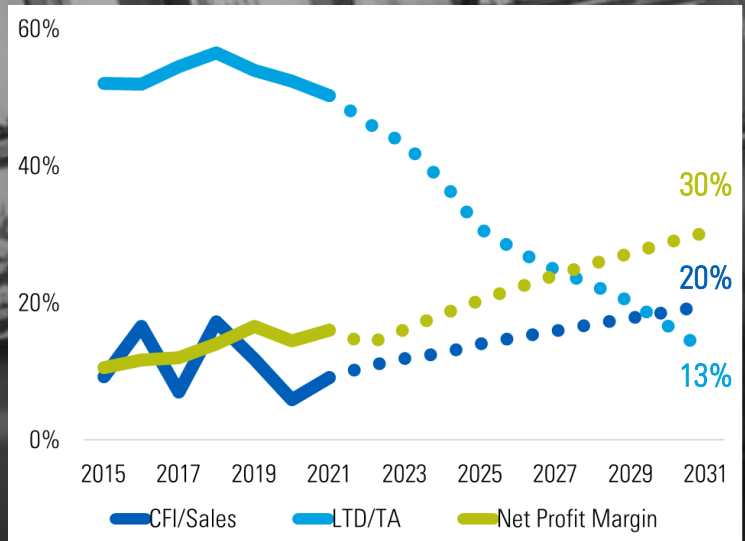
Capital & Shareholder



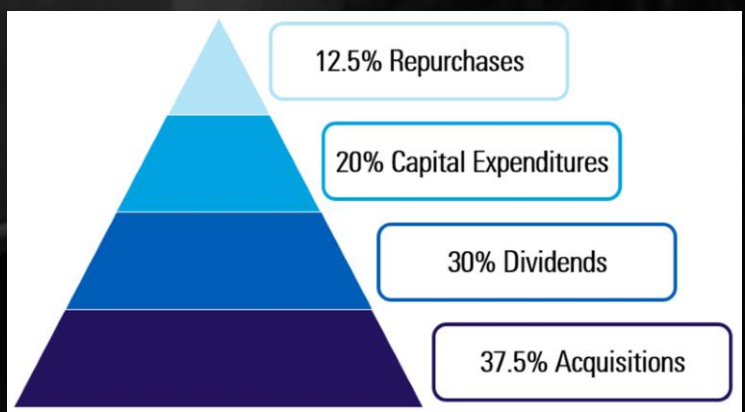
Leverage



## Key Performance Indicators



## Operating Cash Flow Allocation

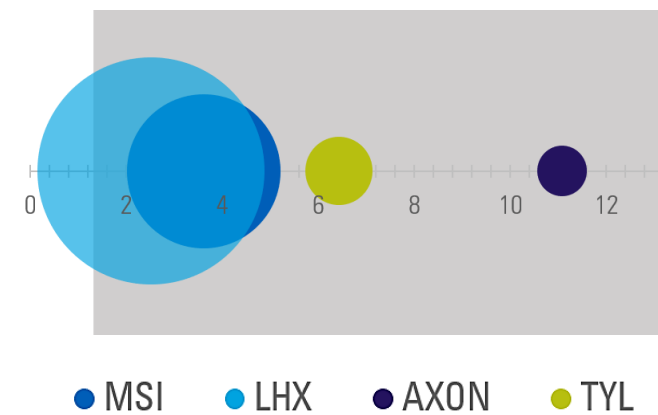


# LEVERAGE

## Credit Rating Comparables

	S&P Credit Rating & Outlook	Total Debt-to-EBITDA	5Yr Default Prob
<b>LMR</b>			
L3Harris	BBB, STABLE	2.5	0.6%
Hytera C	AA-, Negative (China)		5.0%
JVC	None	2.6	3.7%
		2.6	3.1%
<b>Command Center</b>			
Tyler	None	3.8	0.7%
Mercury	None	4.5	1.2%
Arista	None	0.1	0.1%
		2.8	0.7%
<b>Video</b>			
Axon	None		1.0%
Hangzhou	AAA, Stable		0.7%
Genetec	None	1.5	15.3%
		1.5	5.7%
Motorola	BBB-, STABLE	2.7	0.6%

## Altman Z-Score





# VALUATION

## Discounted Cash Flow

WACC

Sensitivity

DCF  
Scenarios

## Supporting Models

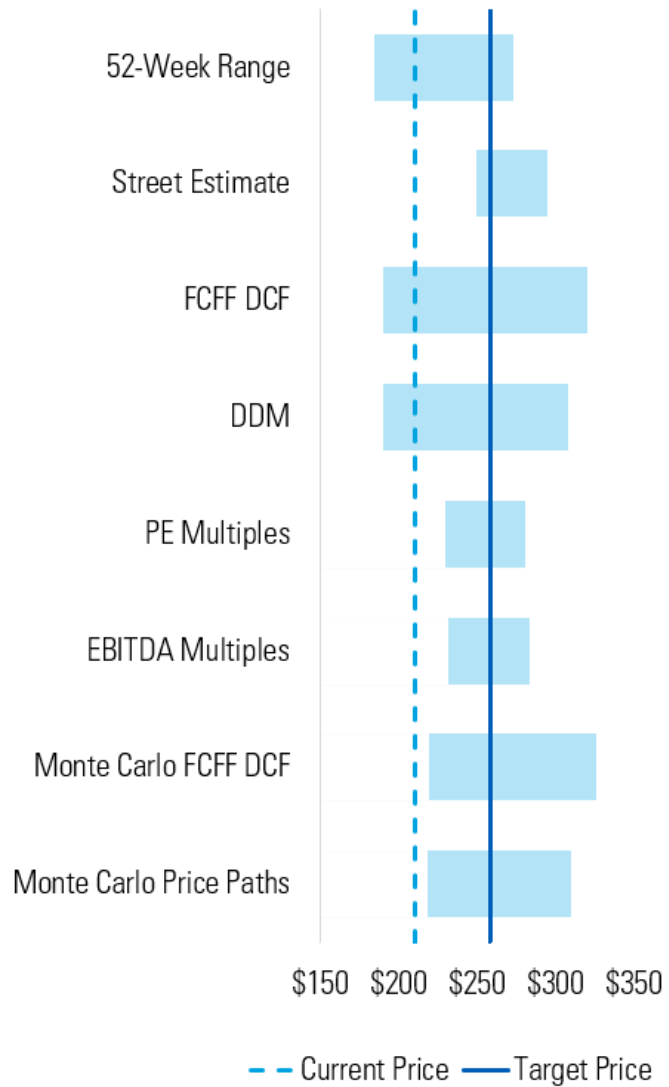
Monte  
Carlo

Dividends

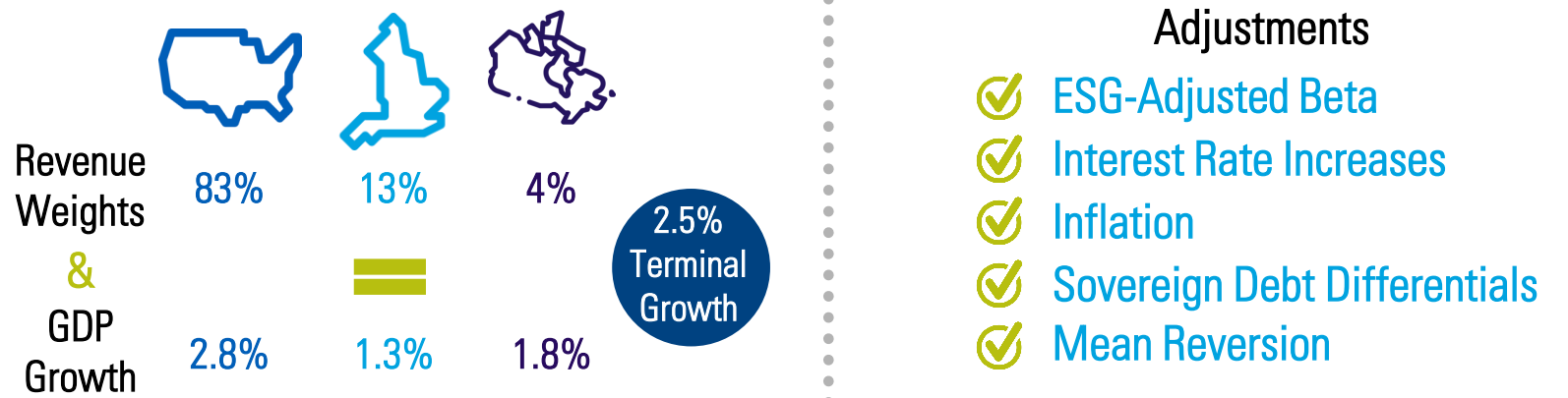
Relative

Comparison

# Valuation Summary

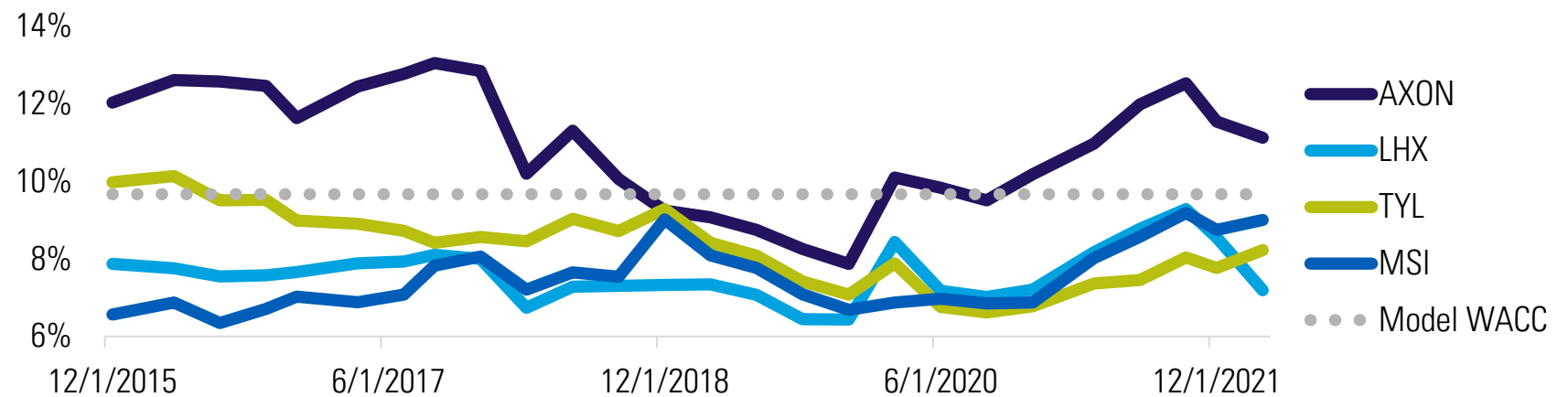


# DISCOUNTED CASH FLOW ESG ADJUSTED WACC



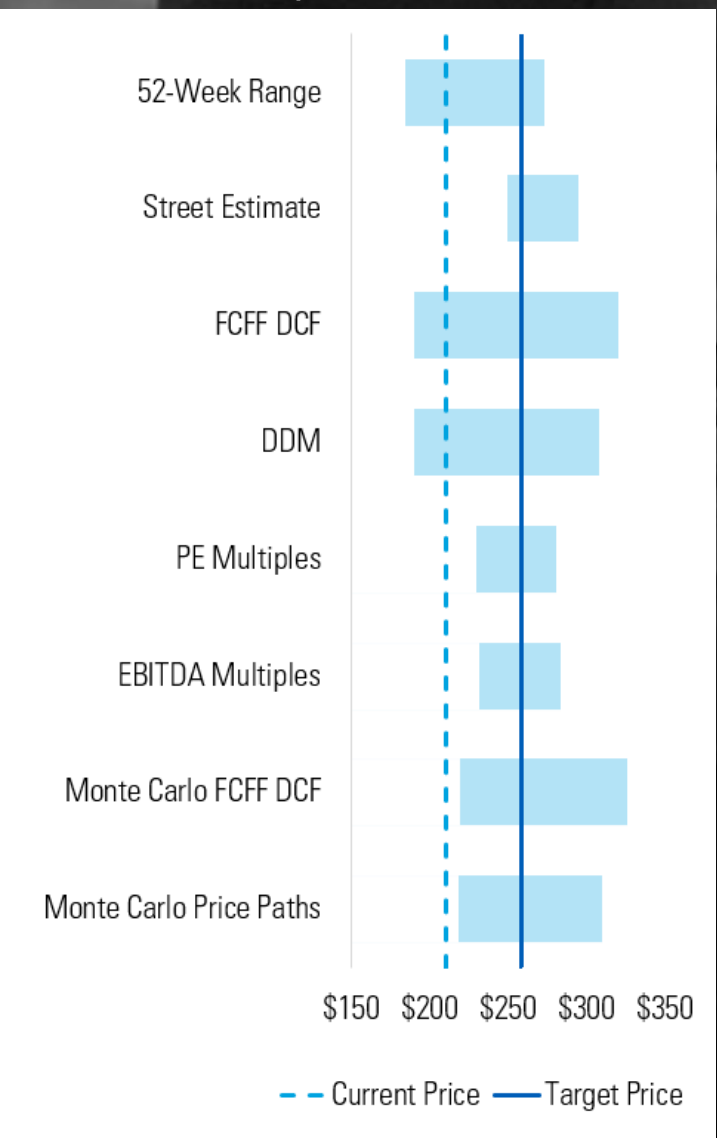
- ### Adjustments
- ✓ ESG-Adjusted Beta
  - ✓ Interest Rate Increases
  - ✓ Inflation
  - ✓ Sovereign Debt Differentials
  - ✓ Mean Reversion

## Comparative WACC

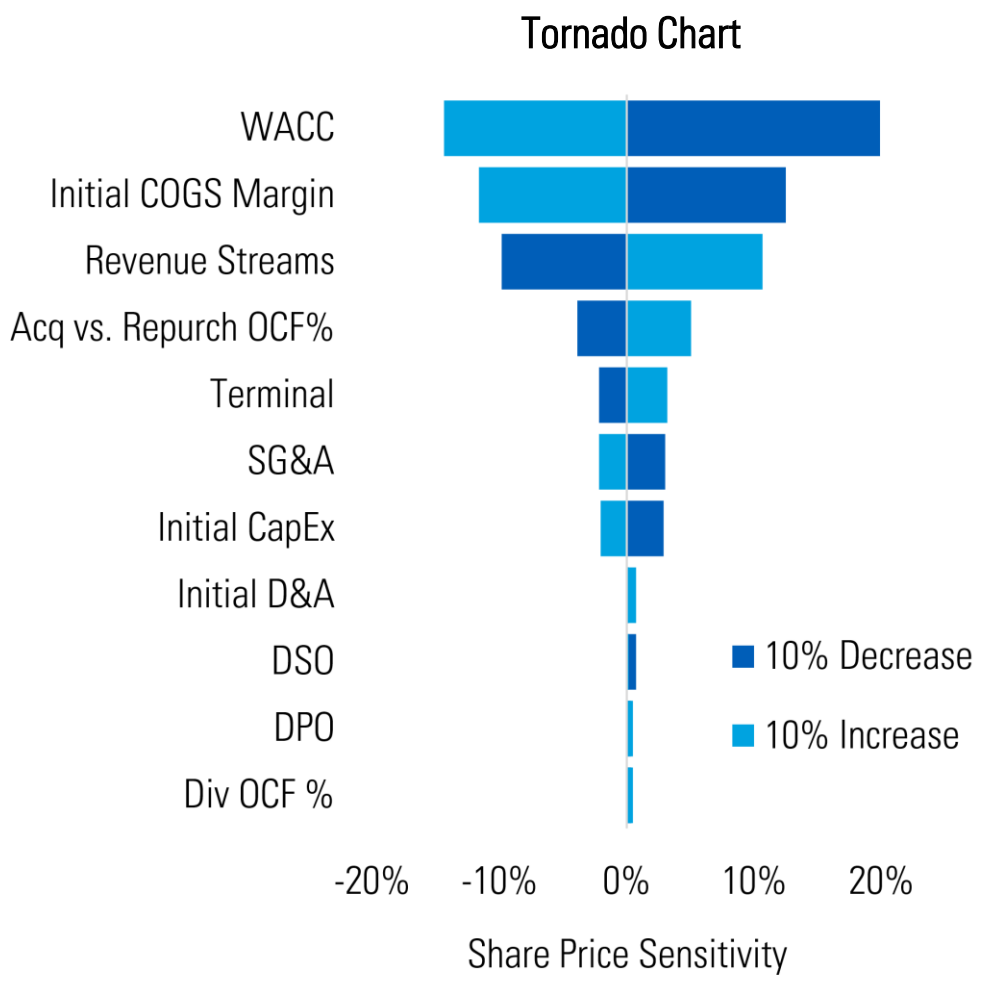




### Valuation Summary



# DISCOUNTED CASH FLOW SENSITIVITY



**MSI**  
24.1%  
**UPSIDE**

**VS**

**S&P 500**  
17.4%  
**UPSIDE**

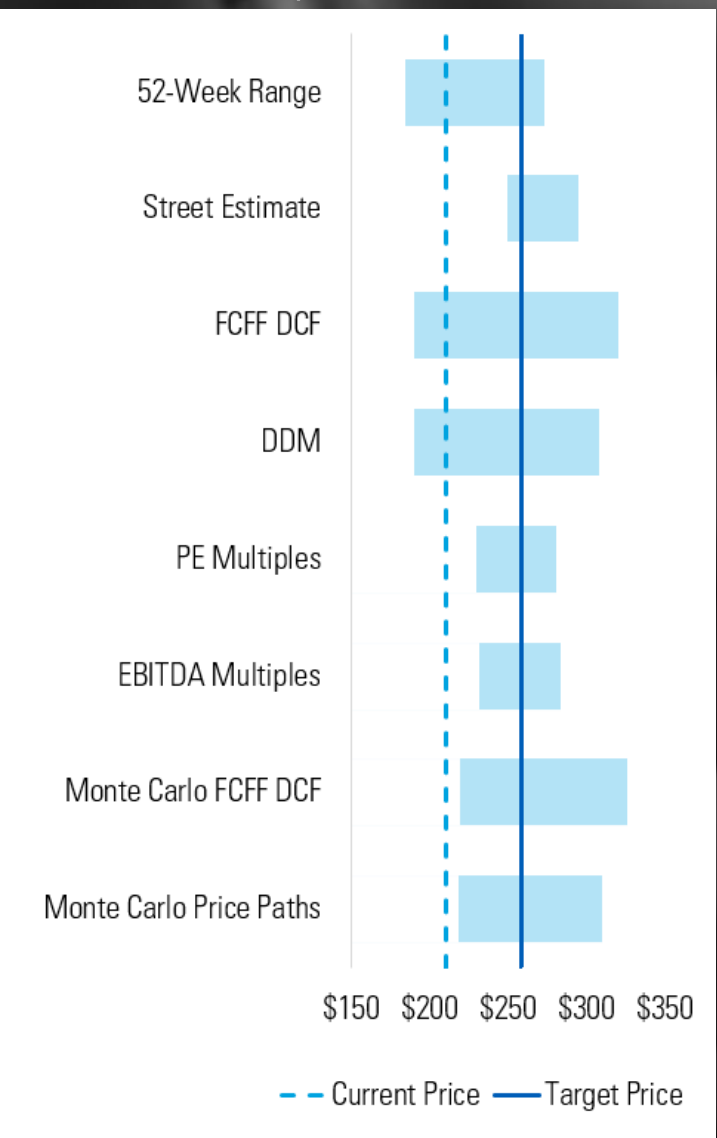




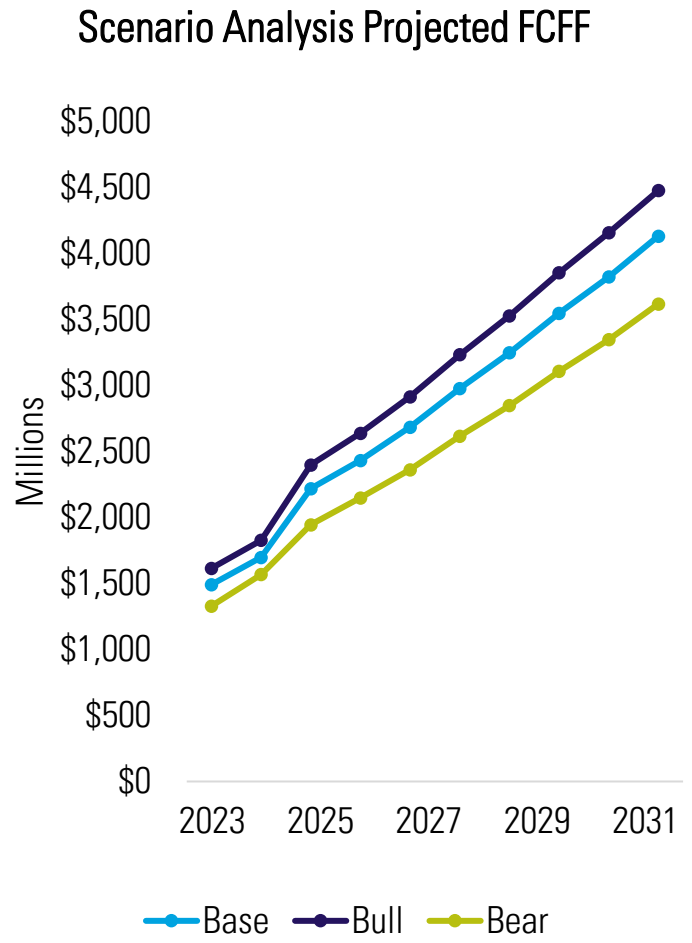
# SUPPORTING MODELS

## DCF SCENARIOS

### Valuation Summary



FCFF DCF	Bull	Base	Bear
Revenue CAGR	6.6%	5.7%	4.3%
FCFF CAGR	9.6%	9.5%	8.1%
Terminal Growth	2.75%	2.50%	2.25%
WACC	9.4%	9.7%	10.7%
Stock Price	\$321	\$258	\$190
Upside (Downside)	53.7%	24.1%	-8.2%

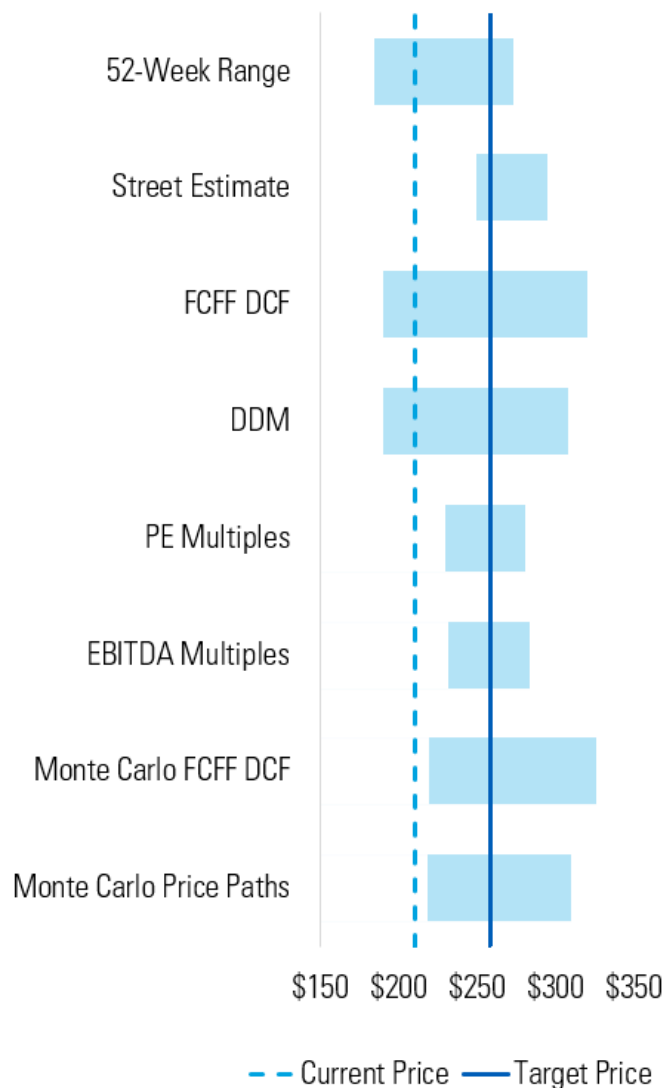




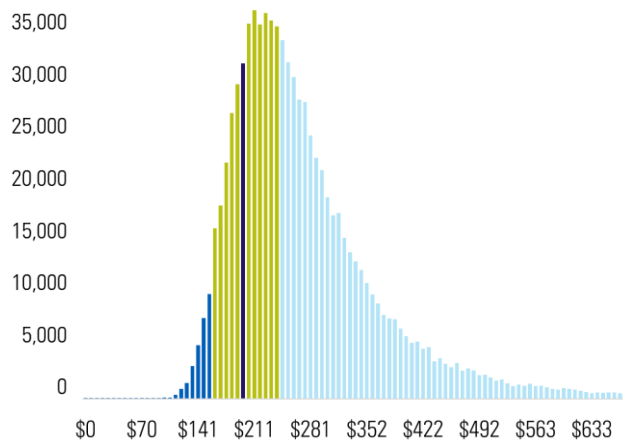
# SUPPORTING MODELS

## MONTE CARLO

### Valuation Summary



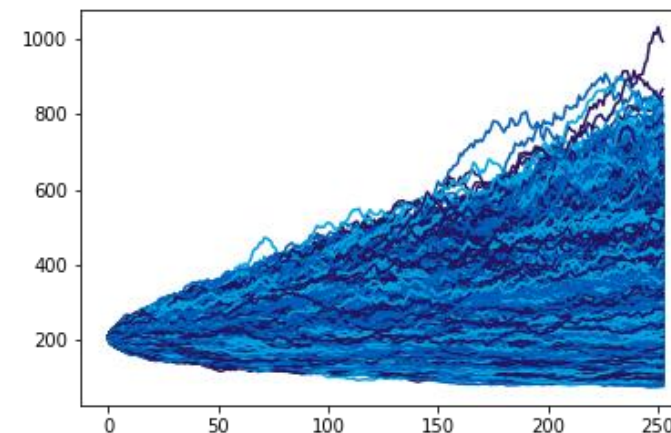
MC FCFF DCF



Monte Carlo DCF

75th percentile	\$327
50th percentile	\$263
25th percentile	\$220
% Buys	59%
% Holds	36%
% Sells	5%
Iterations	1,000,000

Brownian Price Paths



Monte Carlo Price Paths

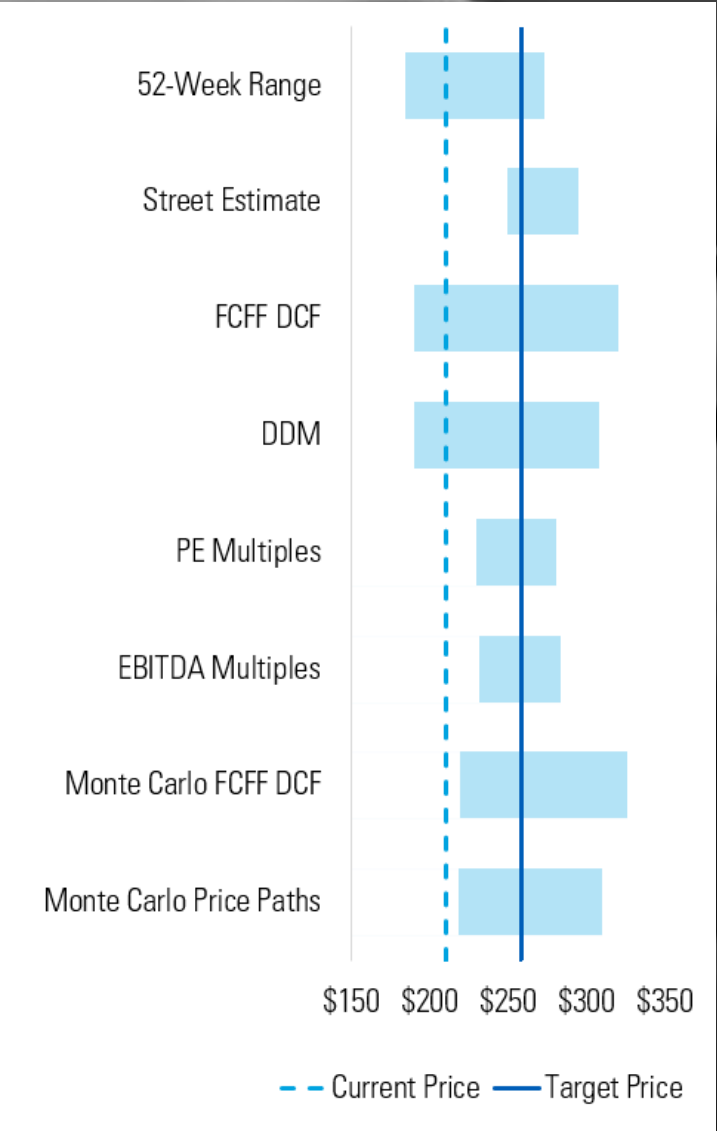
75th percentile	\$310
50th percentile	\$260
25th percentile	\$219
% Buys	58%
% Holds	36%
% Sells	6%
Iterations	1,000,000



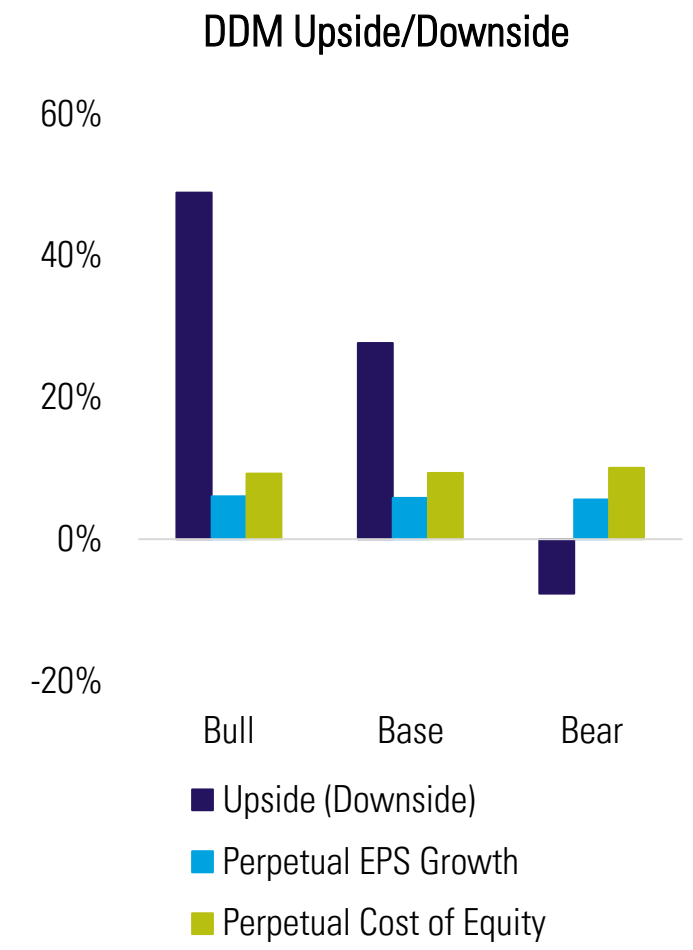
# SUPPORTING MODELS

## DIVIDENDS

### Valuation Summary



DDM Upside/Downside			
DDM DCF	Bull	Base	Bear
Initial EPS Growth	15.1%	14.6%	14.0%
Initial Cost of Equity	9.6%	9.7%	10.5%
Perpetual EPS Growth	6.1%	5.8%	5.6%
Perpetual Cost of Equity	9.2%	9.4%	10.1%
<b>Stock Price</b>	<b>\$310</b>	<b>\$266</b>	<b>\$191</b>
Upside (Downside)	48.9%	27.7%	-7.7%

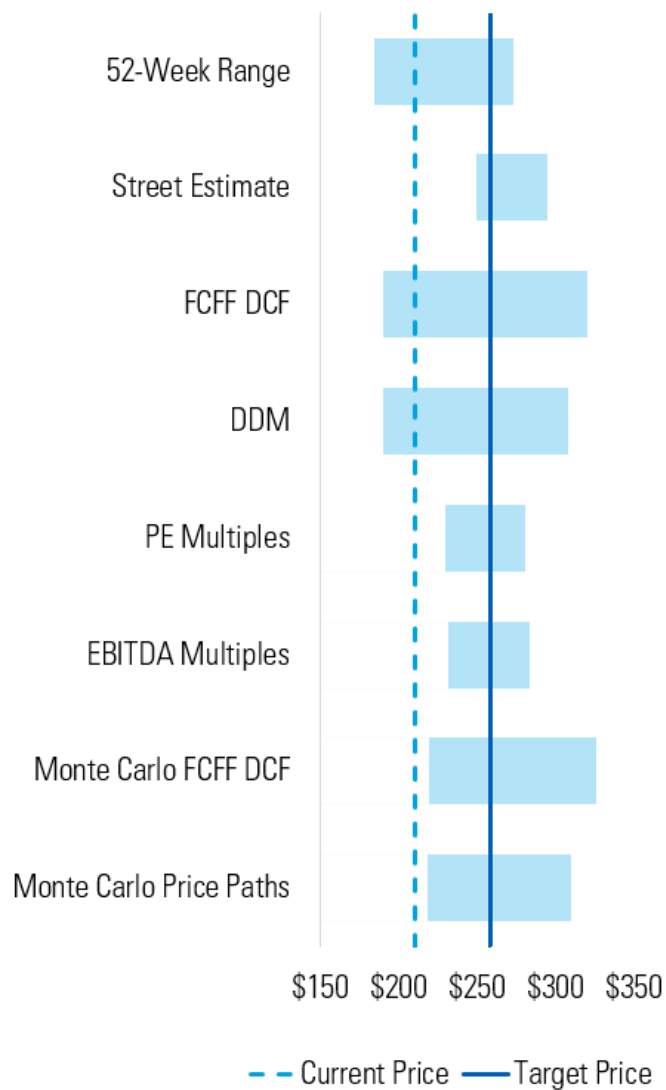




# SUPPORTING MODELS

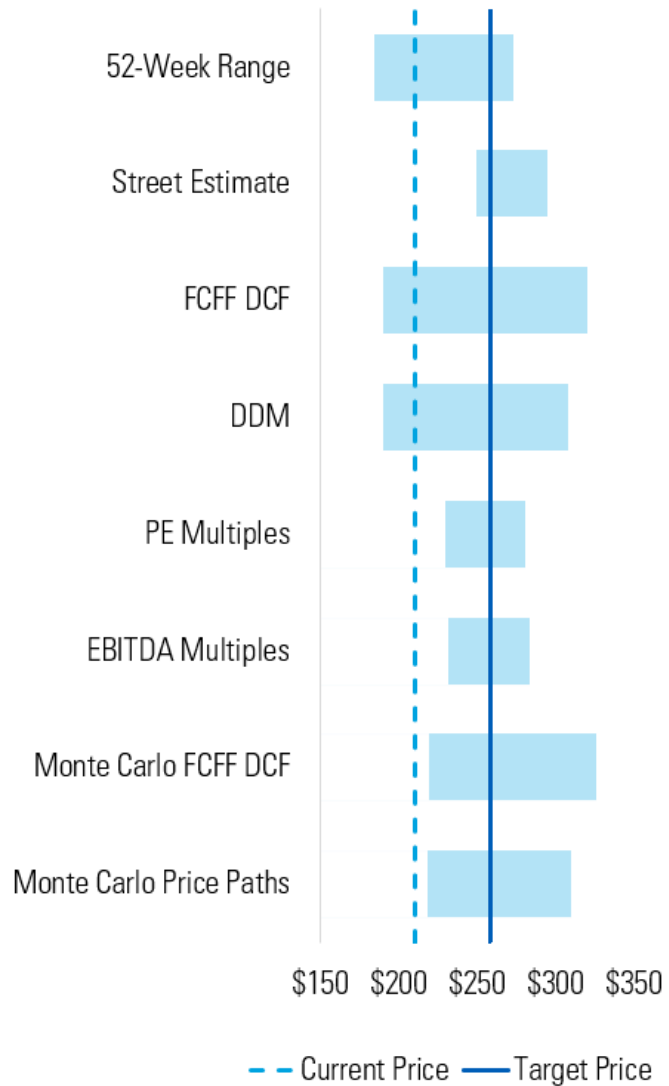
## RELATIVE

### Valuation Summary



	Land Mobile Radio	Video Security & Analytics	Command Center Software	Revenue Weighted	Target Price & Upside
EV/ EBITDA	15.1x	22.2x	31.9x	20.5x	\$258 24.1%
P/E	22.4x	28.9x	62.7x	35.8x	\$256 22.9%





## Valuation Summary



# SUPPORTING MODELS

## COMPARISON

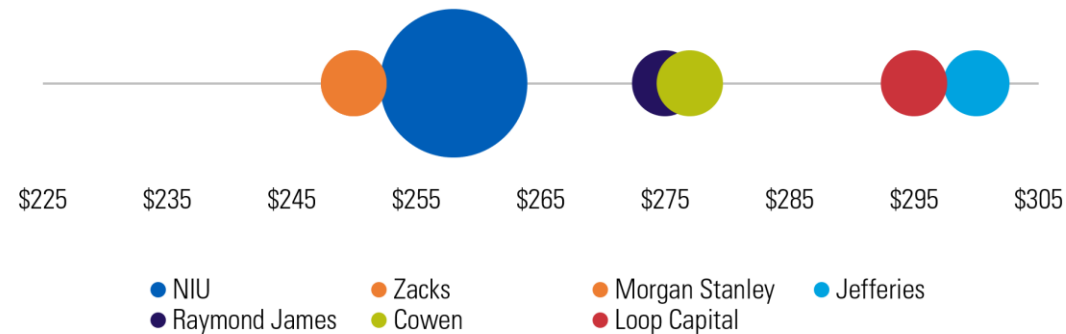
### Common-Size Metrics

	CV	Sharpe	Treynor
	0.08	0.95	0.30
 L3HARRIS FAST. FORWARD.	0.09	0.93	0.29
 AXON	0.12	0.66	0.28
 tyler technologies	0.09	0.87	0.26

### Monthly Factor Analysis

Factor	Coefficient
Alpha	0.01
MRP.	0.68
Size	0.54
Value	0.07
Profitability	0.78
Conservatism	-0.22
Momentum	0.36

### Comparative Valuations



**24.24%  
Return**



# INVESTMENT RISKS

Inflation



Supply  
Chain



Acquisition  
Integration

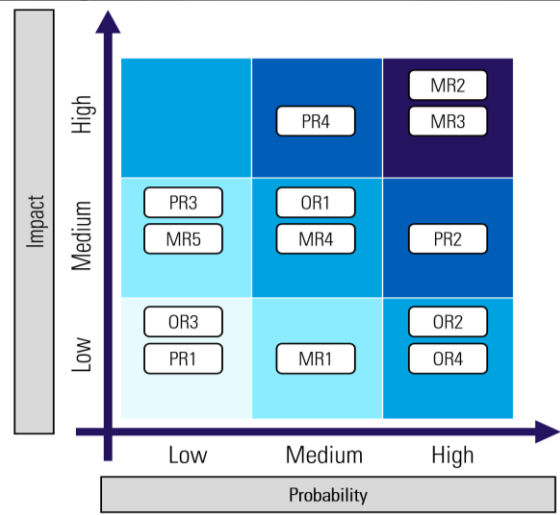


Taxes



Regulation

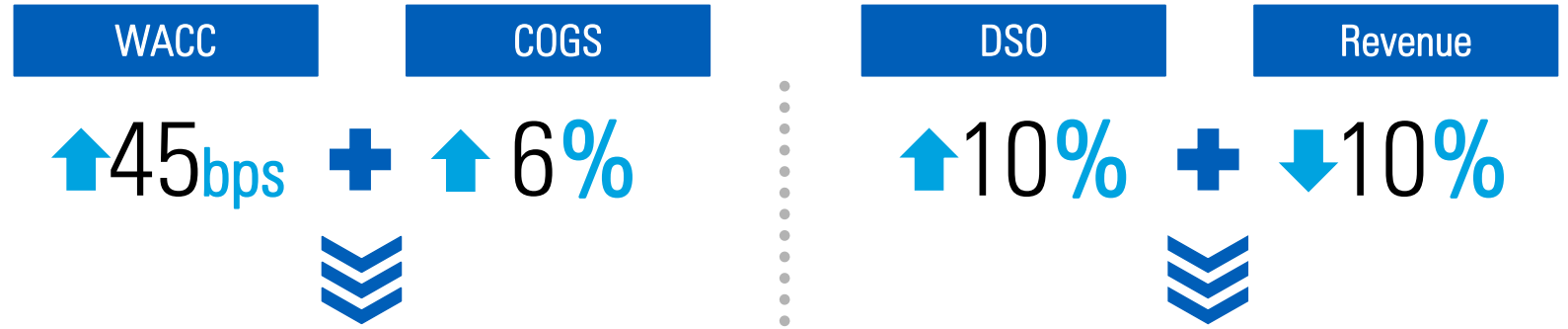
## Risk Matrix



## Risk Overview

Risk	Mitigation
MR2 Inflation	Price Escalators, Conservatism
MR3 Supply Chain	Supplier Diversity, Service Focus
OR1 Acquisition Integration	Monitoring & Divestment
PR2 Taxes	Foreign Tax Credits
PR4 Regulation	PAC Contributions

# INFLATION & SUPPLY CHAIN



**$\downarrow 14.4\%$**

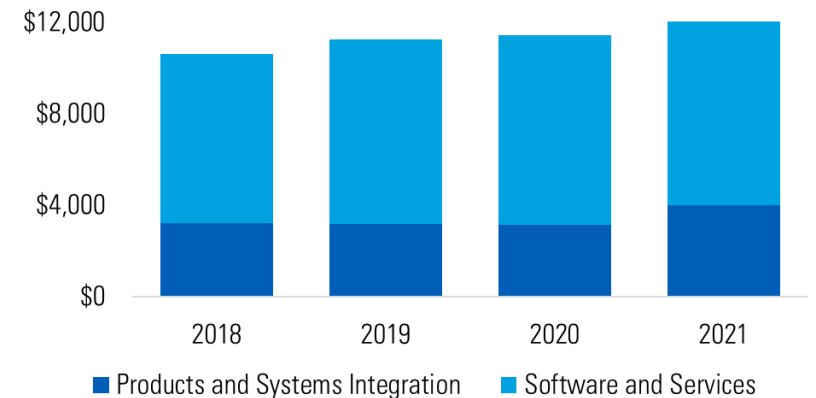
Contract-Embedded CPI Price Escalator



Inflation & Supply Chain

**$\downarrow 10.1\%$**

MSI Historical Backlog

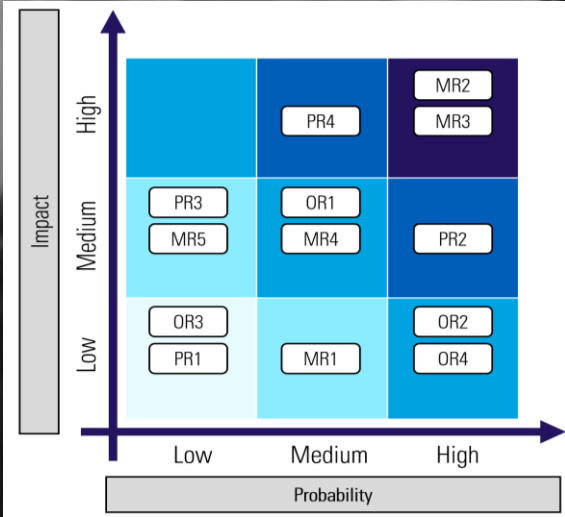


Acquisitions, Taxes, & Regulation





## Risk Matrix



## Risk Overview

Risk	Mitigation
MR2 Inflation	Price Escalators, Conservatism
MR3 Supply Chain	Supplier Diversity, Service Focus
OR1 Acquisition Integration	Monitoring & Divestment
PR2 Taxes	Foreign Tax Credits
PR4 Regulation	PAC Contributions

# INTEGRATION, TAXES, & REGULATION



### Inorganic Revenues

↓ 50%



↓ 5.2%

Companies Divested



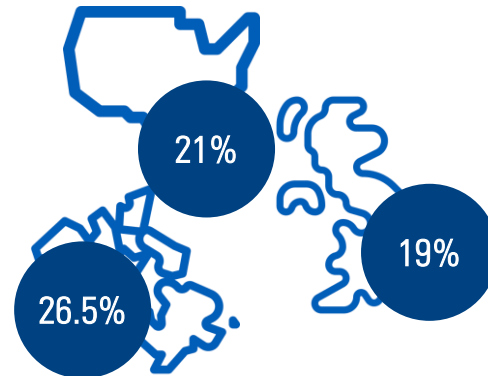
### Tax Rate

21% → 26.5%



↓ 8.2%

Current Market Tax Rates



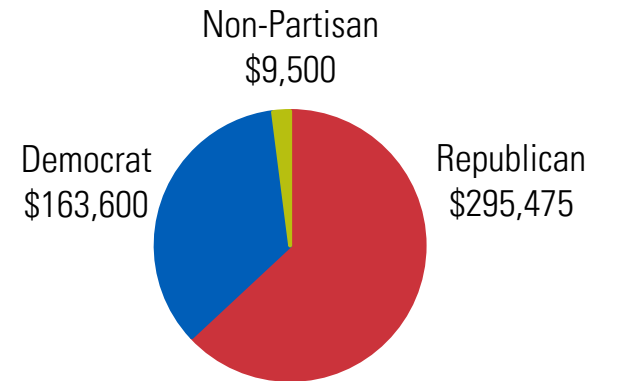
### SG&A Expense

↑ 10% + ↓ 10%



↓ 12.5%

PAC Contributions



Inflation & Supply Chain

Acquisitions, Taxes, & Regulation



**\$258 BUY**

RECOMMENDATION





# APPENDIX MAP

## Macro

- [GDP Growth](#)
- [Inflation, Yield Curve, Recession](#)
- [Sovereign Debt Yields](#)
- [Forecasted Dollar-Value Index](#)

## Industry

- [Industry Drivers](#)
- [Cybersecurity](#)
- [Public Safety Market Growth](#)
- [PSAP by State](#)

## Firm

- [Industries](#)
- [Supply Chain](#)
- [Operating Segment Revenue and Margins](#)
- [Stock Price Events](#)
- [Brexit](#)
- [Covid Impact](#)
- [MTAC](#)
- [Acquisition Timeline](#)
- [Acquisition Multiples](#)
- [Possible Acquisitions](#)
- [Insider Buys/Sells](#)
- [Short Interest & RSI](#)
- [Earnings Estimates](#)
- [Pension Funding Ratio](#)
- [Land Mobile Radio Communications Product Line](#)
- [Video Security & Access Control Product Line](#)
- [Command Center Software Product Line](#)
- [Cybersecurity Services](#)
- [Land Mobile Radio Comparison](#)
- [Ecosystem](#)
- [Command Central Suite](#)

## ESG

- [ESG 2021 Review](#)
- [ESG Goals](#)
- [ESG Performance](#)

- [Executive Committee](#)
- [Board of Directors](#)
- [Board of Directors Expertise](#)
- [Subcommittee](#)
- [Additional Officers](#)
- [Ownership](#)
- [Compensation](#)
- [ISS Environment Report](#)
- [ISS Social Report](#)
- [ISS Governance Report](#)
- [MSI Foundation](#)
- [Awards](#)

## Competitive Positioning

- [Customer Survey](#)
- [Technology TAM](#)
- [Margins by Technology Group](#)
- [Comparative Acquisitions](#)
- [SWOT](#)
- [Porter's 5 Forces](#)
- [Peer Office Locations](#)
- [LHX](#)
- [AXON](#)
- [TYL](#)
- [YTD Return](#)
- [Holding Period Returns](#)
- [Stock Return Comparison](#)
- [Analyst Recommendations](#)

## Pro Formas

- [Pro Forma Assumptions](#)
- [Model Updates 2022](#)
- [Base Case Income Statement](#)
- [Base Case Income Statement Common-Size](#)
- [Base Case Balance Sheet](#)
- [Base Case Balance Sheet Common-Size](#)
- [Base Case Shares Outstanding](#)
- [Base Case Debt Schedule](#)
- [Base Case Cashflow Statement](#)

- [Base Case Ratios & Key Performance Indicators](#)
- [Cost of Capital](#)
- [ESG Factor](#)

## Financial Analysis

- [Alphabet Scores](#)
- [Forecasted D/TA](#)
- [EPS](#)
- [Current Ratio](#)
- [Comparative Dividend Yield](#)
- [Historic vs. Forecasted Income](#)
- [Historic vs. Forecasted Balance Sheet](#)
- [Historic vs. Forecasted Cash Flows](#)
- [Textual Analysis](#)

## Models

- [DCF Assumptions](#)
- [Relative Valuation](#)
- [Base Case Waterfall](#)
- [Base Case DDM](#)
- [DDM Support](#)
- [Base Case Discounted Cash Flow](#)
- [Two-Way Sensitivity](#)

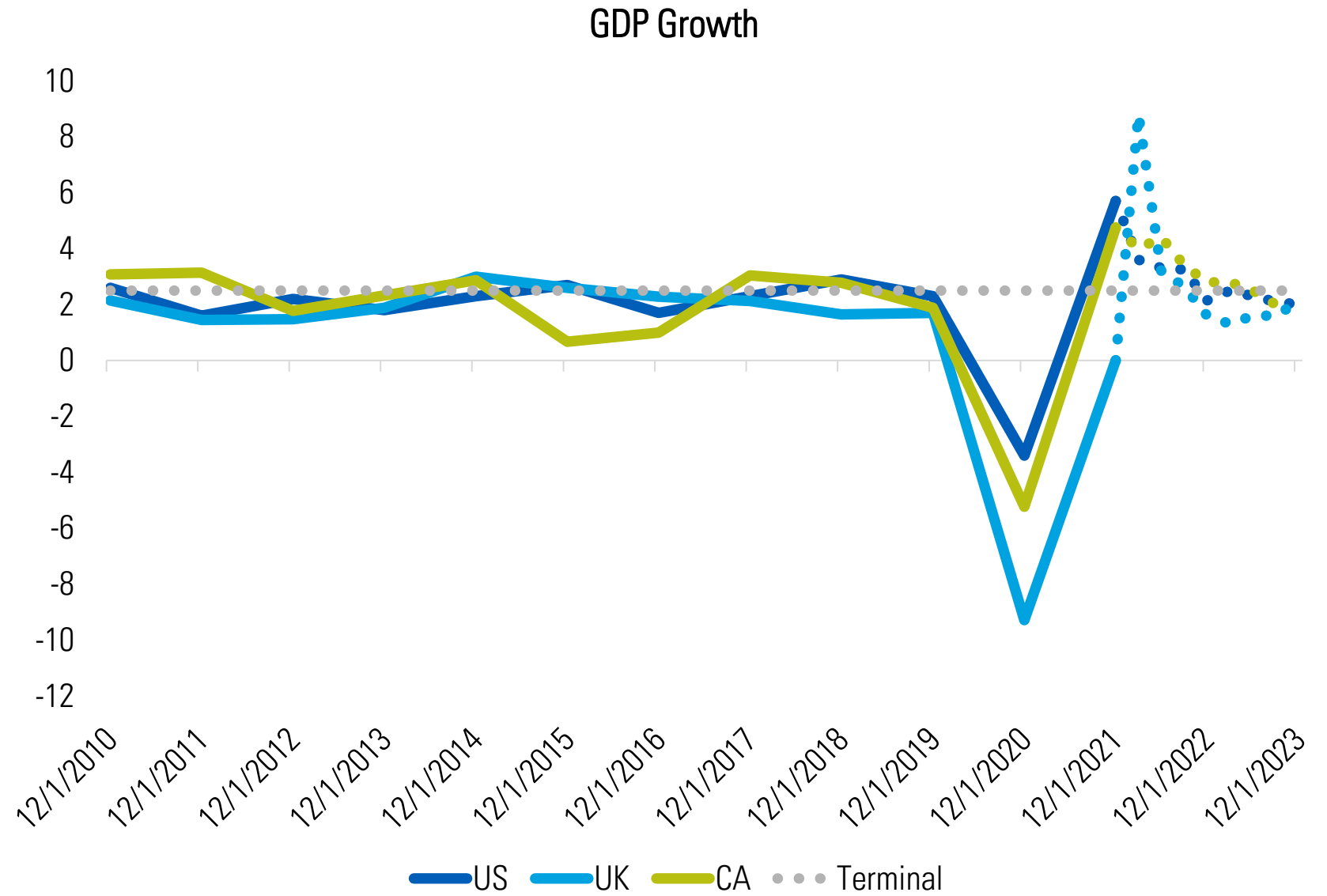
## Risks

- [Investment Risk](#)
- [Operational Risks](#)
- [Market Risks](#)
- [Political Risks](#)
- [Global Risk Report](#)
- [Russian Invasion of Ukraine](#)
- [Announcement Returns](#)
- [Regulatory Burden](#)
- [Intellectual Property Protection](#)
- [Supply Chain Mitigation](#)
- [Value-At-Risk Analysis](#)





# GDP GROWTH





## Inverted Yield Curve

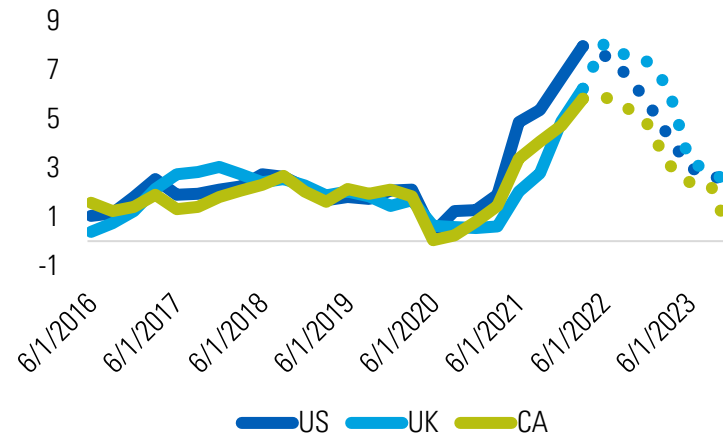
- August 2019
- Q3 Sales +7% YOY
- Q4 Sales +5% YOY
- -13% Price Correction
- 5 Month Recovery

## Recession

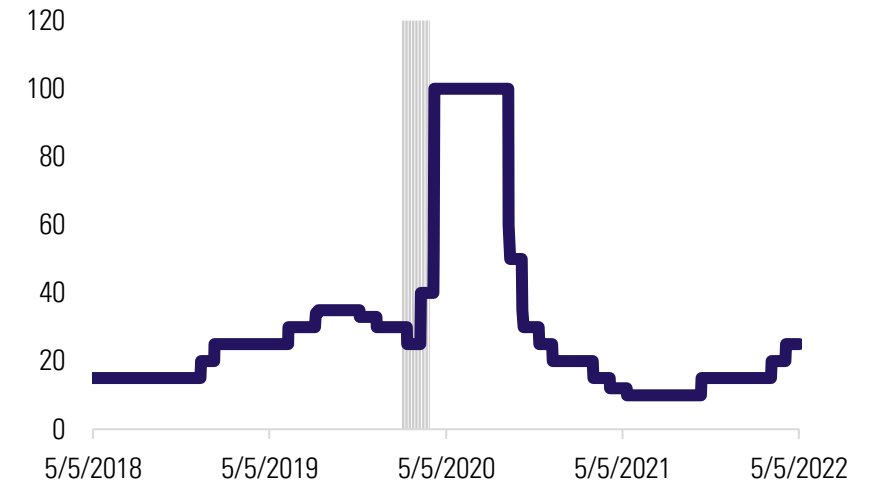
- Feb/Mar 2020
- Q1 Sales -0% YOY
- Q2 Sales -13% YOY
- -33% Price Correction
- 12 Month Recovery

# INFLATION YIELD CURVE RECESSION

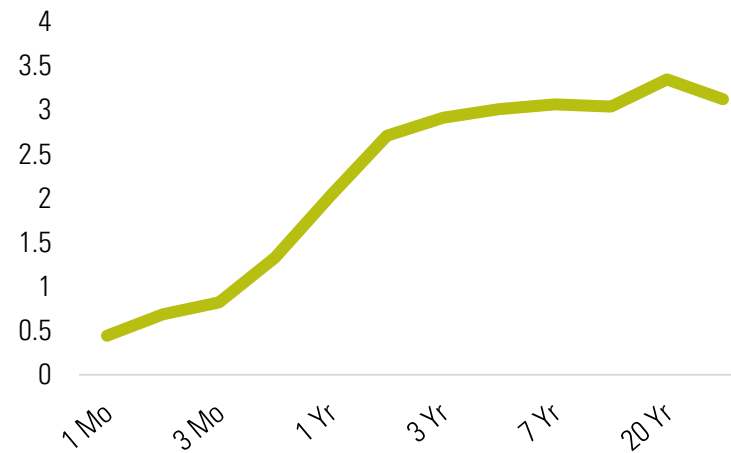
### Inflation



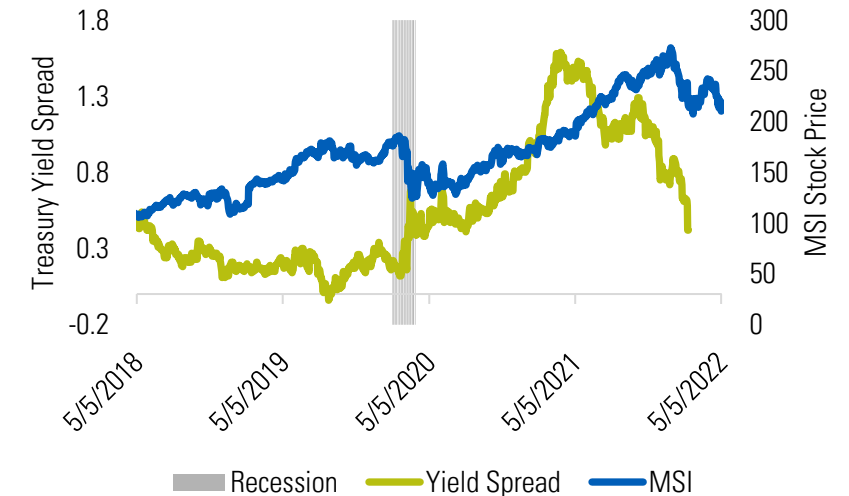
### Probability of US Recession



### US Treasury Yield Curve 5/5/22



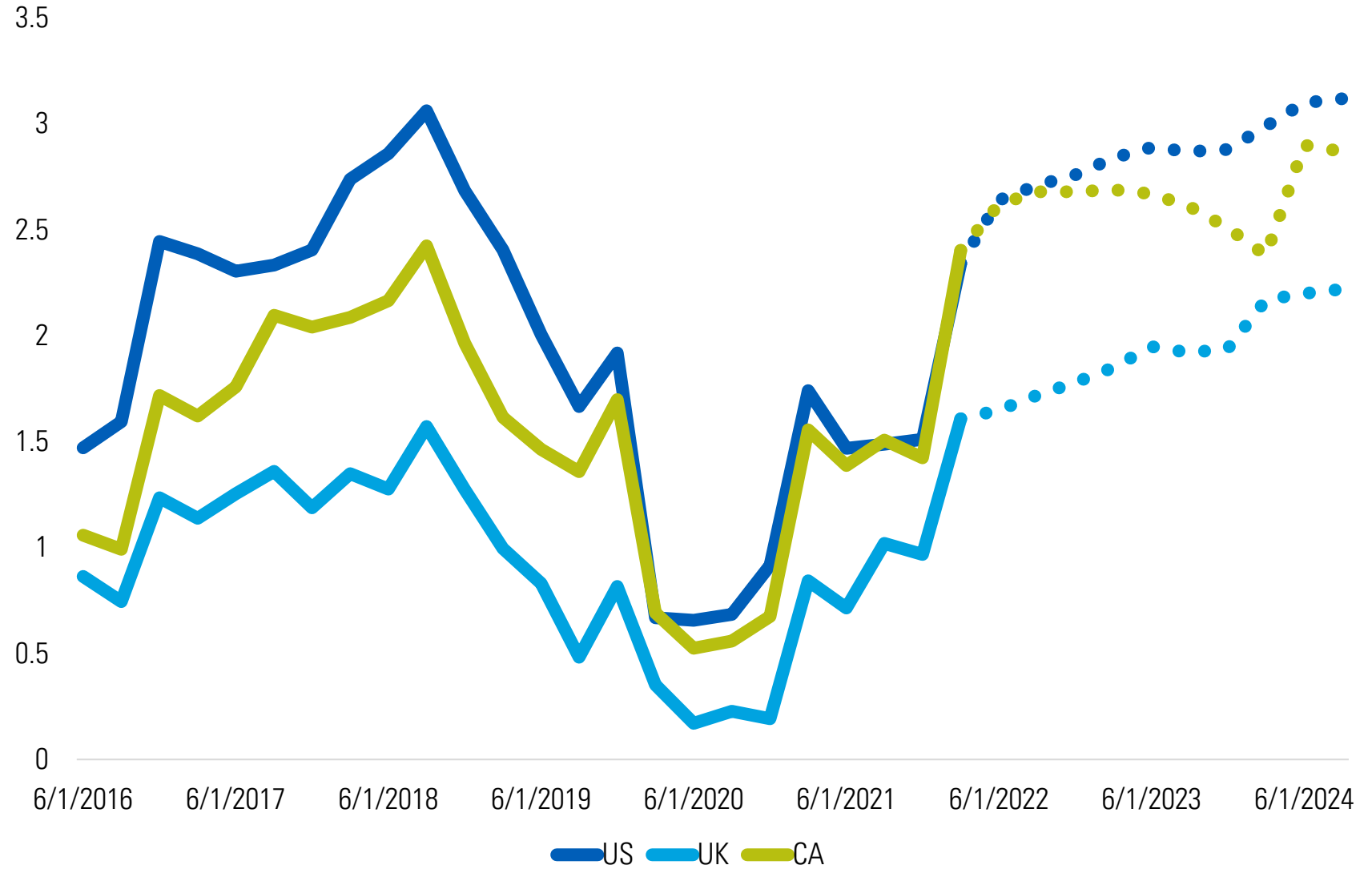
### Treasury Yield Spread & Stock Price





# SOVEREIGN DEBT YIELDS

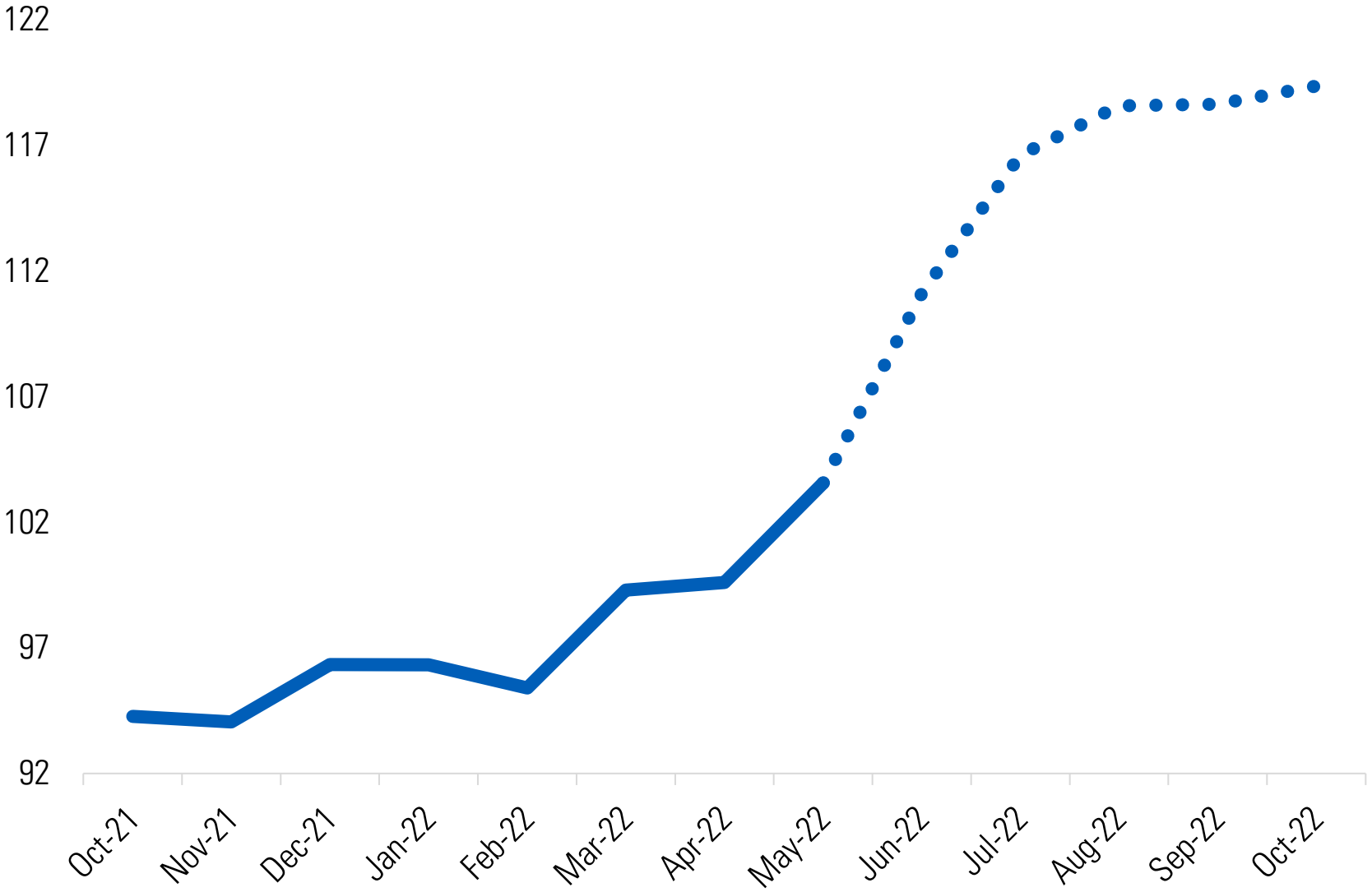
## 10-Year Sovereign Debt Yields





# FORECASTED DOLLAR- VALUE INDEX

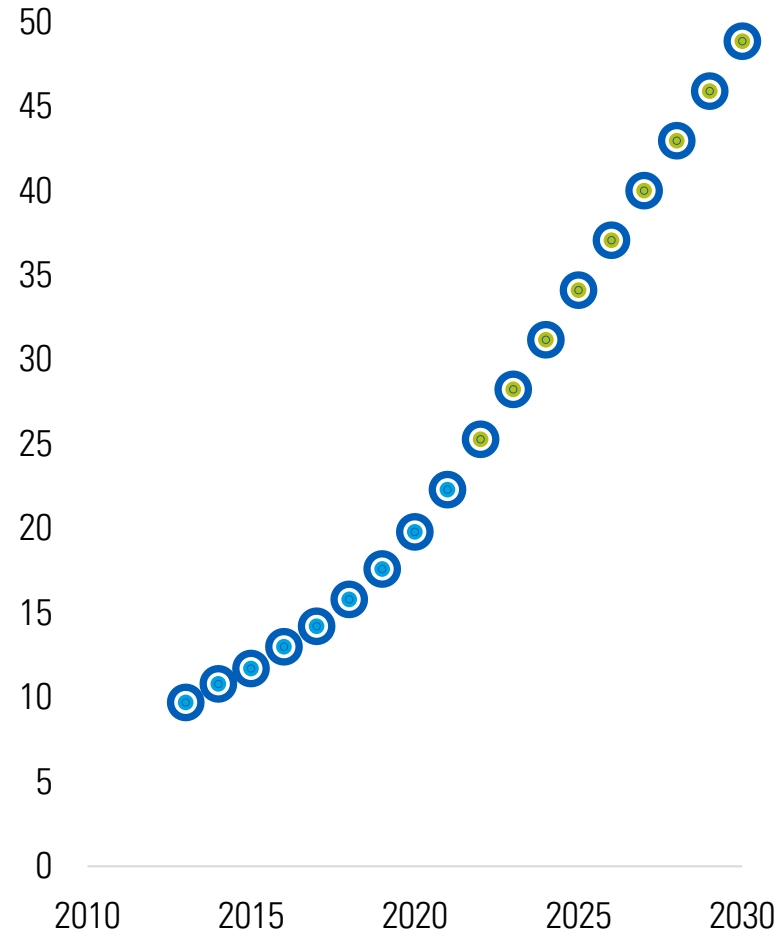
## Forecasted Dollar-Value Index



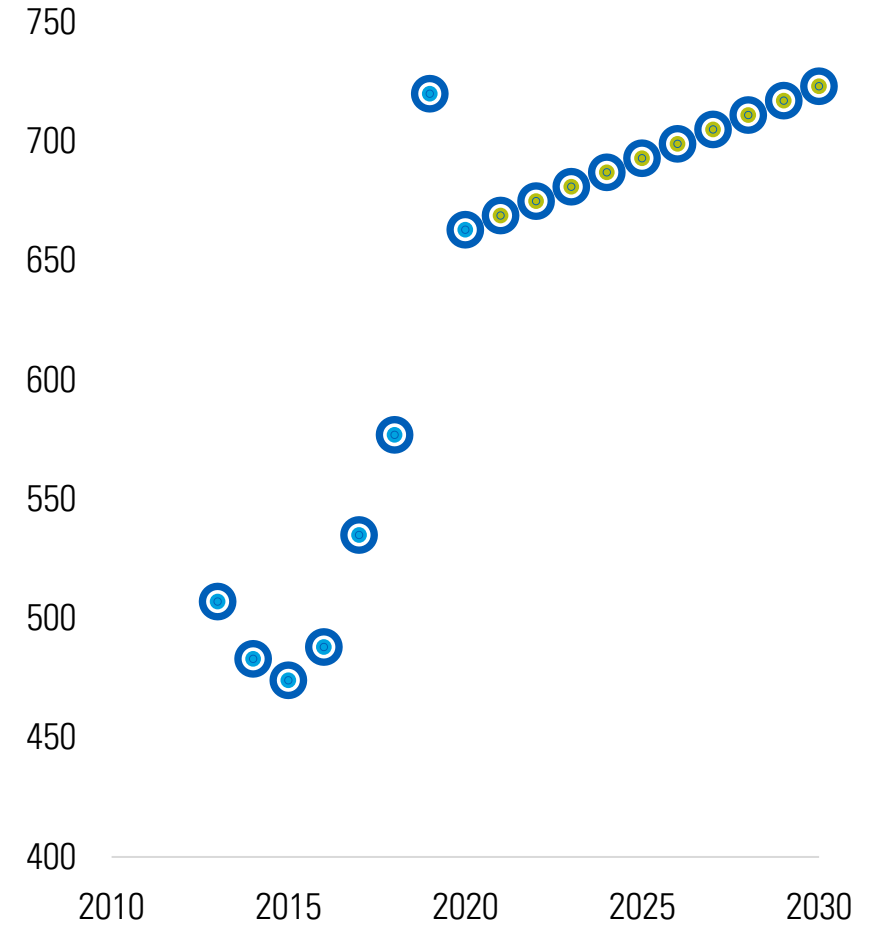


# INDUSTRY DRIVERS

### Land Mobile Radio Global Market (in Billions of USD)



### State and Local Public Safety Spending (in Billions of USD)

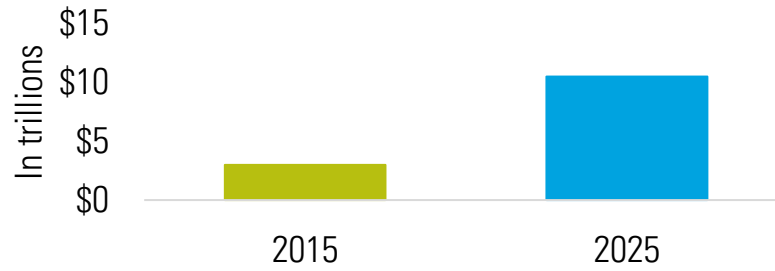






# CYBER-SECURITY

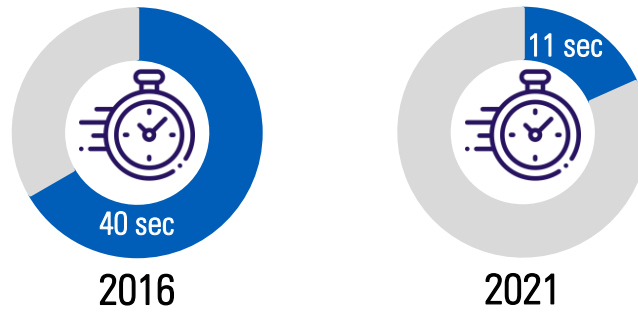
## Cybersecurity Cost



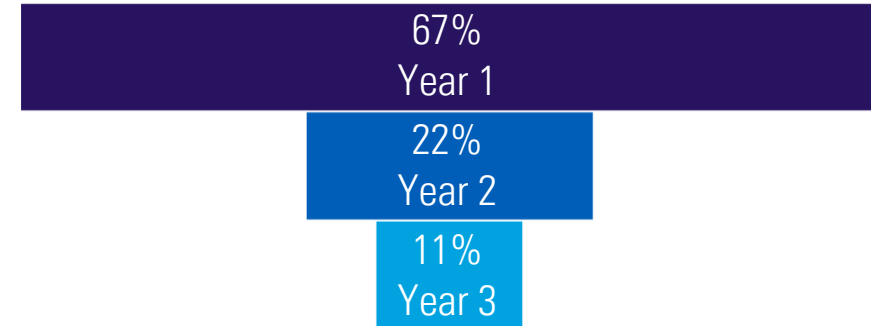
## Cybersecurity Attack Response Confidence



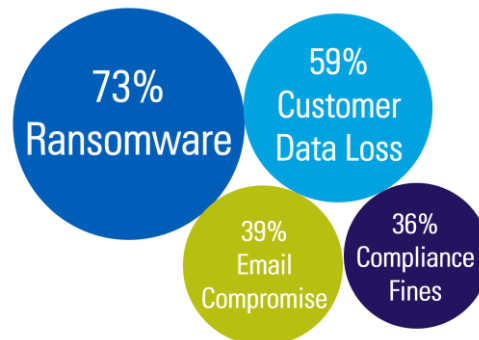
## Frequency of Ransomware Attacks



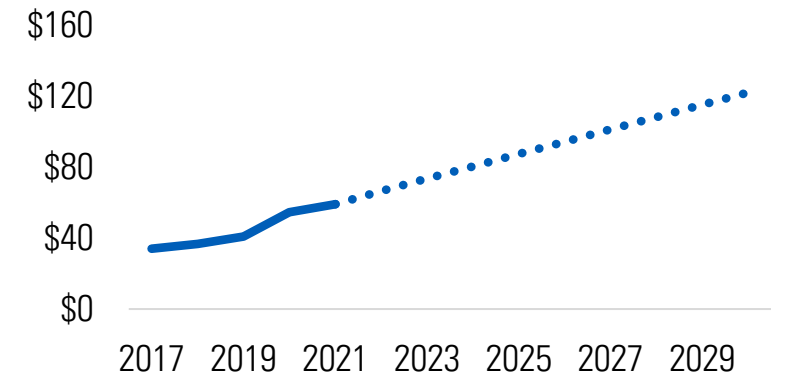
## Longtail Cost of Cyber Attacks



## Most Concerning Threats



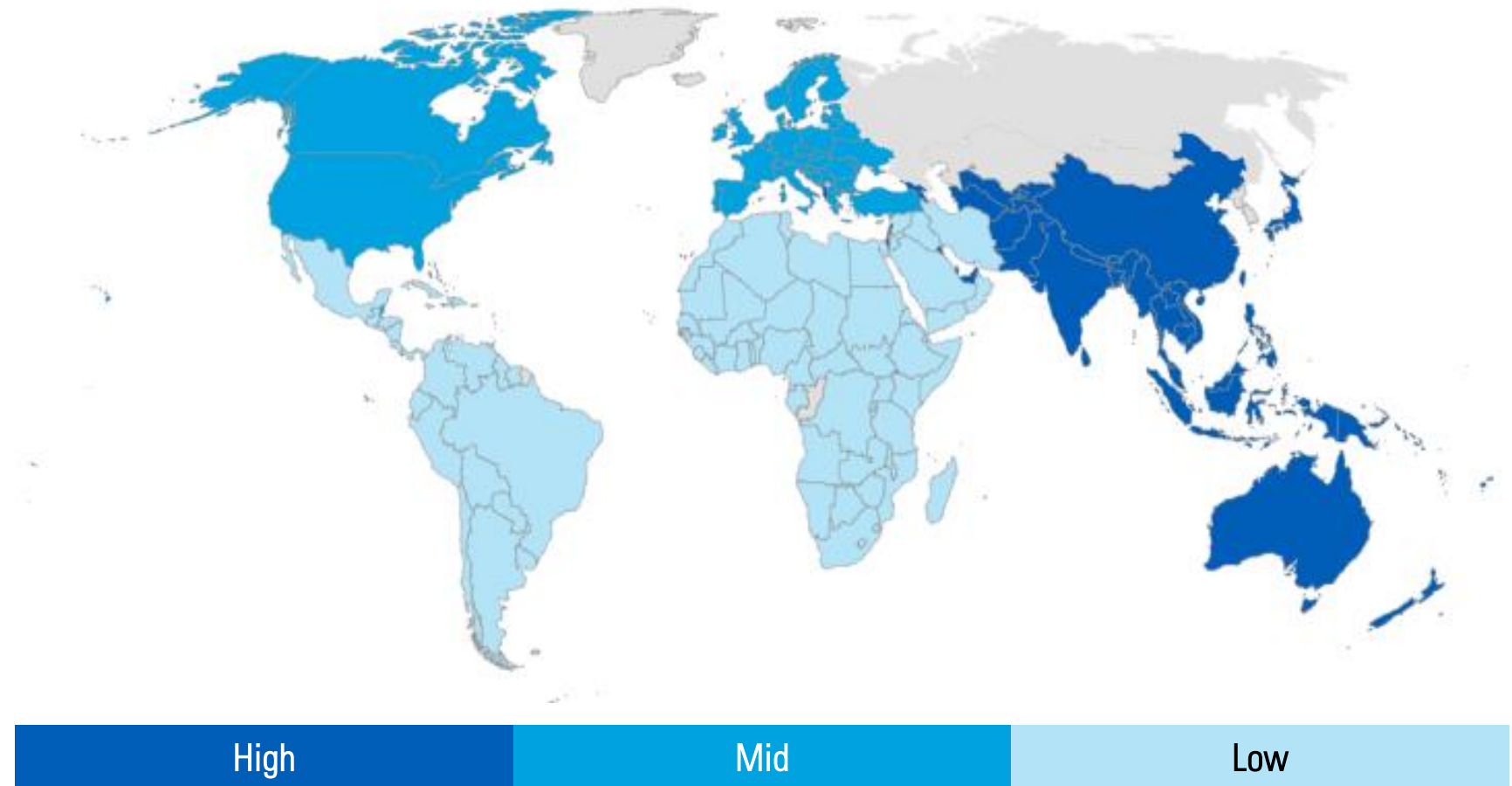
## Spending on Cybersecurity Worldwide (in Billions USD)





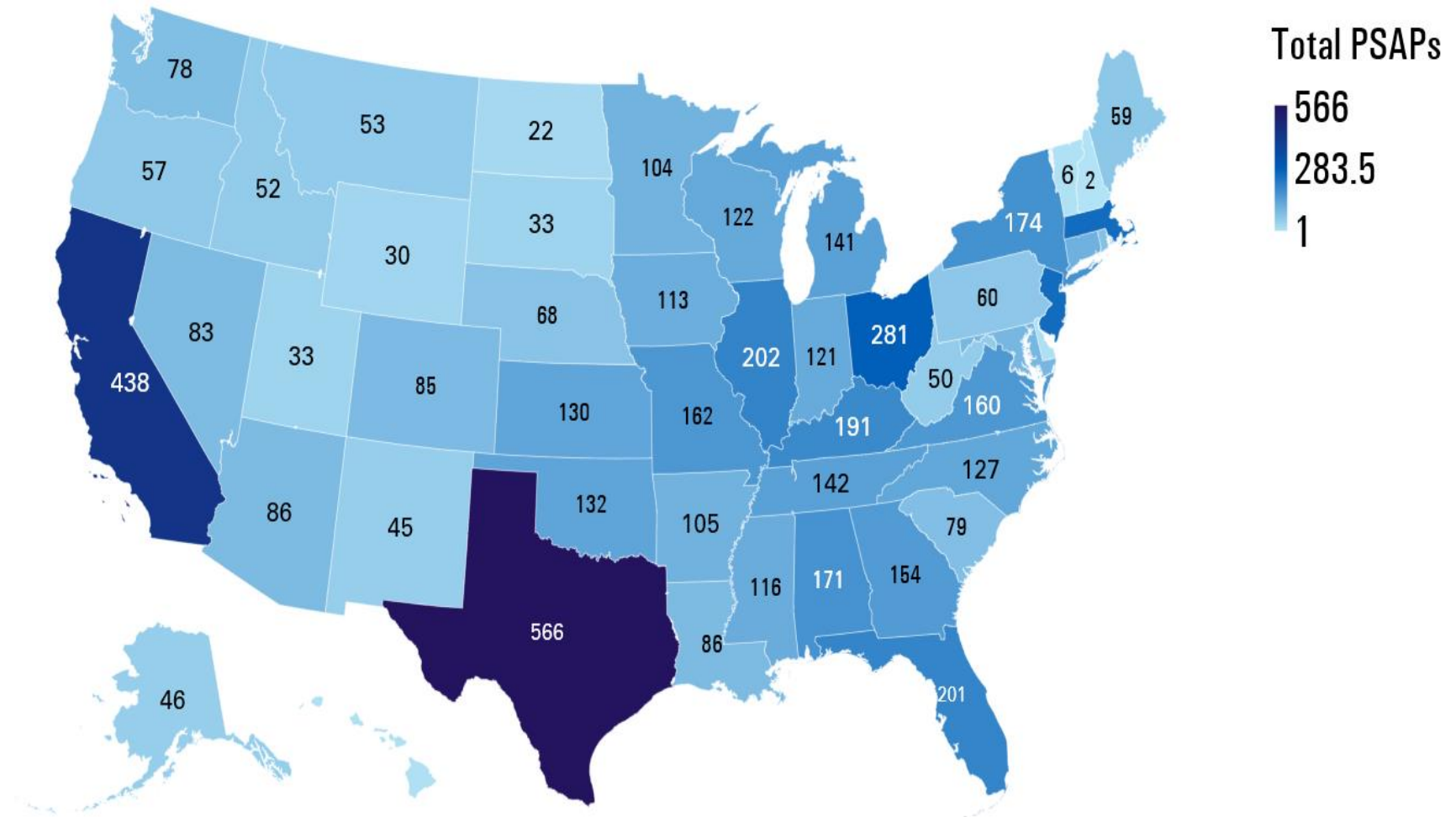
# PUBLIC SAFETY MARKET GROWTH

2020-2025 Public Safety Market Growth





Public Safety Answering Points (PSAP) by State





# INDUSTRIES



Education



Fire & EMS



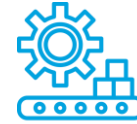
Health Care



Hospitality



Law Enforcement



Manufacturing



Mining



National  
Government Security



Oil & Gas



Parking & Mobility



Retail Store  
Communication



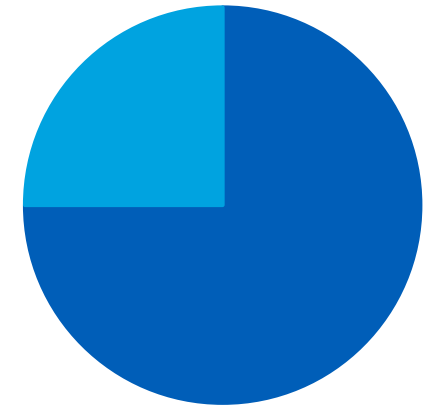
Transportation  
& Logistics



Utilities

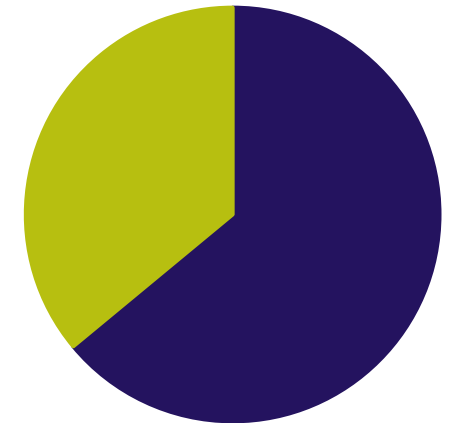


## Customer Base



■ Government ■ Commercial

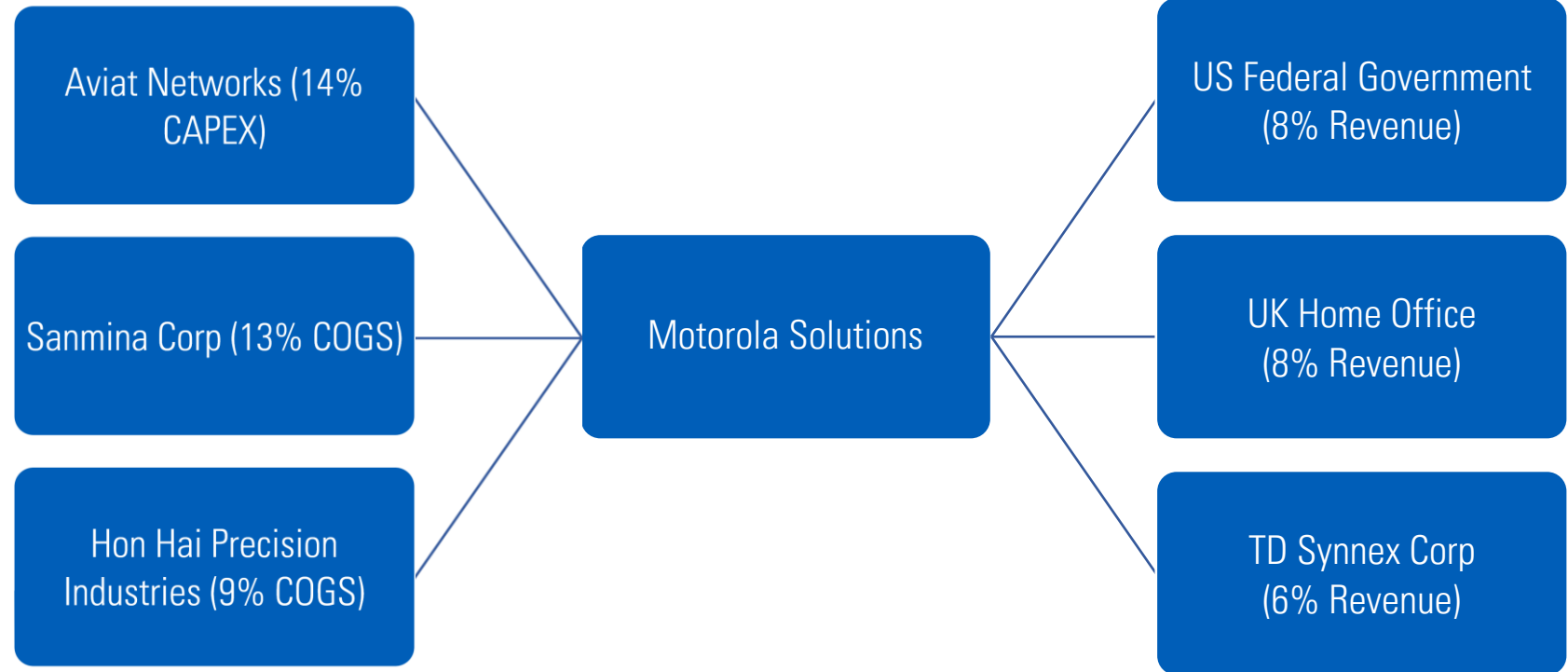
## Sales



■ US ■ International



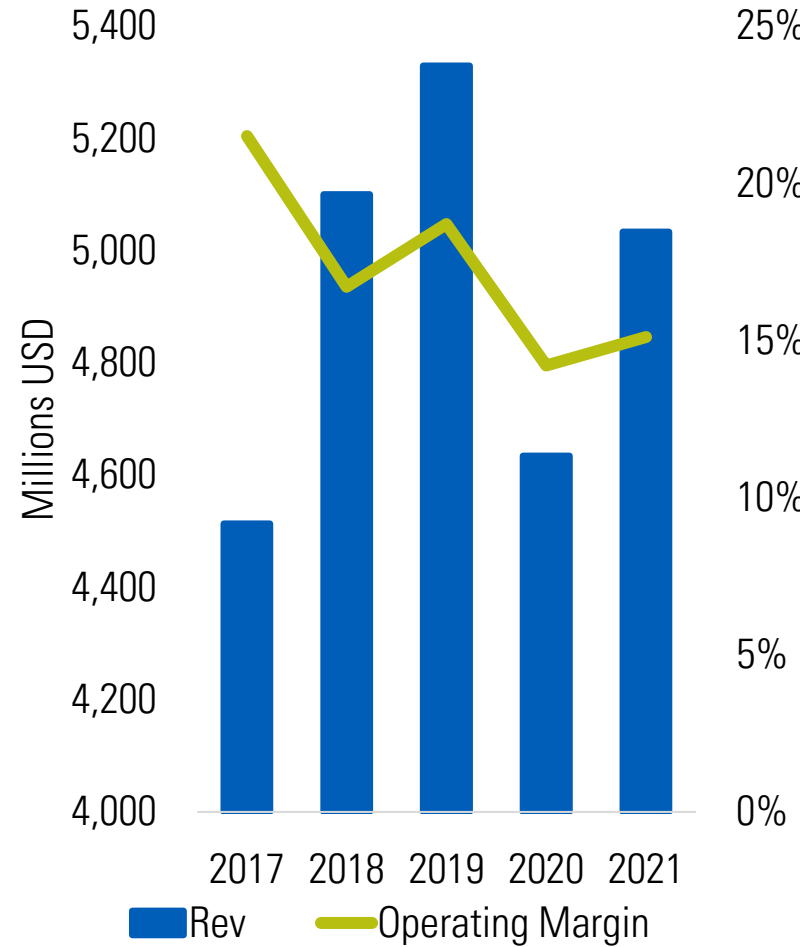
# SUPPLY CHAIN



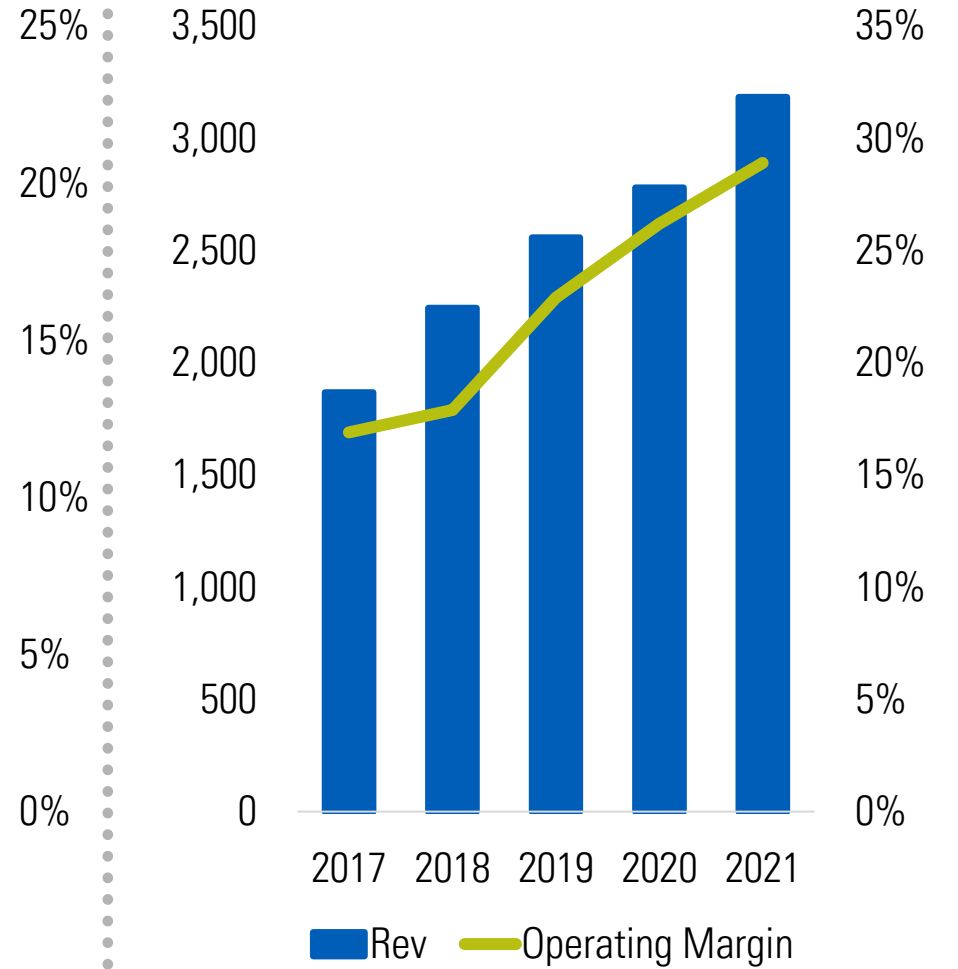


# OPERATING SEGMENT REVENUE AND MARGINS

### Products & Systems Integration Historic Operating Margins and Revenue

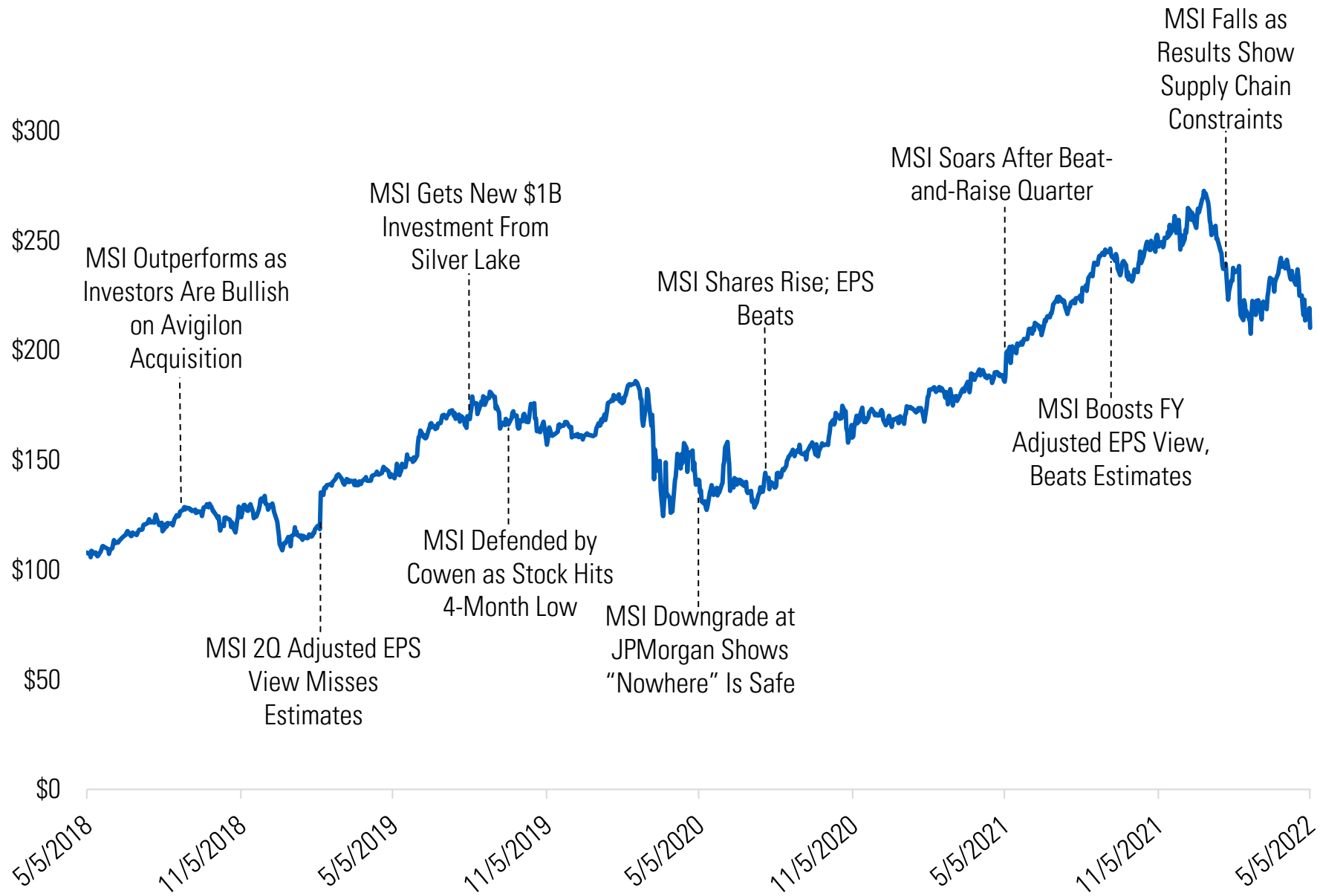


### Software & Services Historic Operating Margins and Revenue



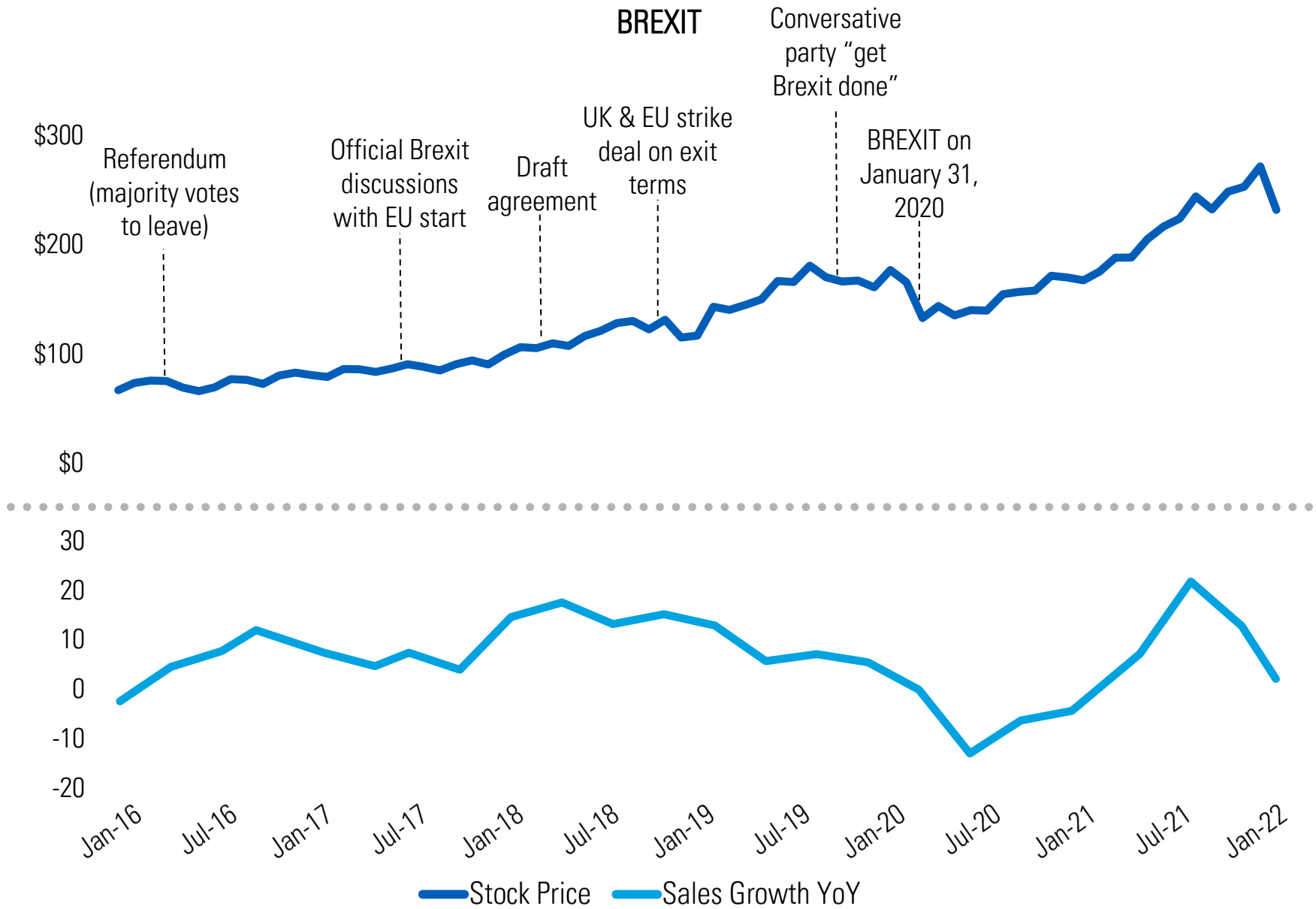


# STOCK PRICE EVENTS





# BREXIT







# COVID IMPACT

↓ 13%

Products and Systems Integration Sales



Freight Costs



Cybersecurity Threats



Temporary Suspension 401-K Match

80%

Remote Work Option for Employees



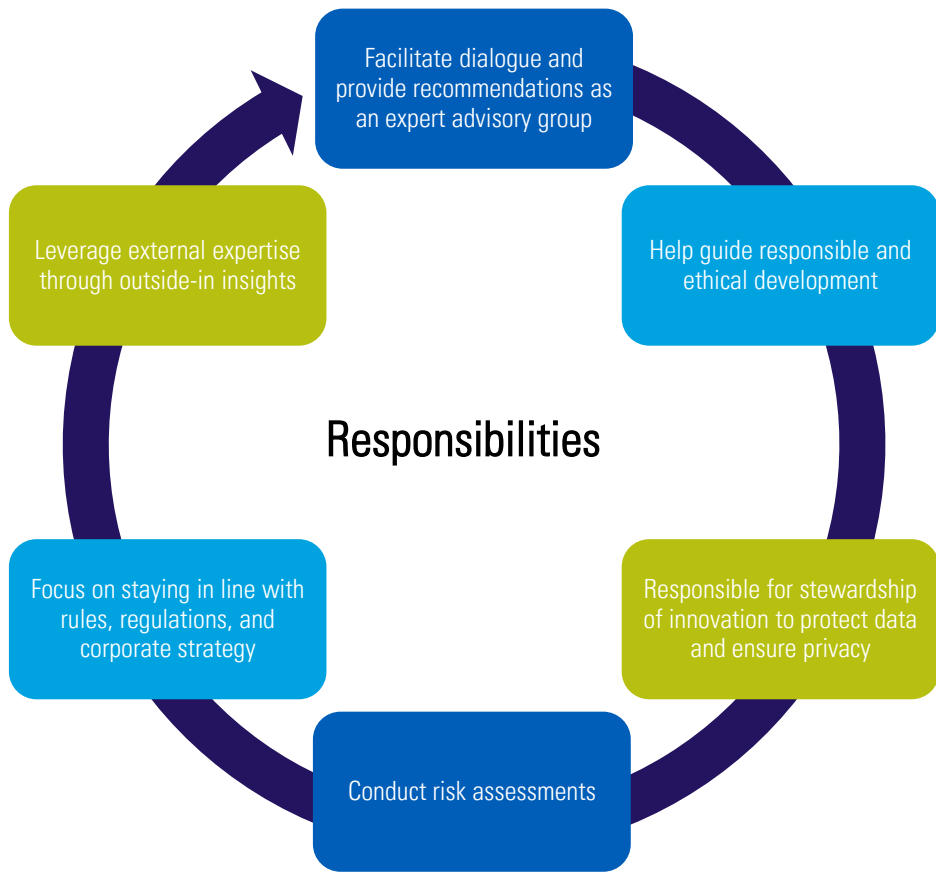
↓ 30%

Planned Reduction in Headquarter Office Space

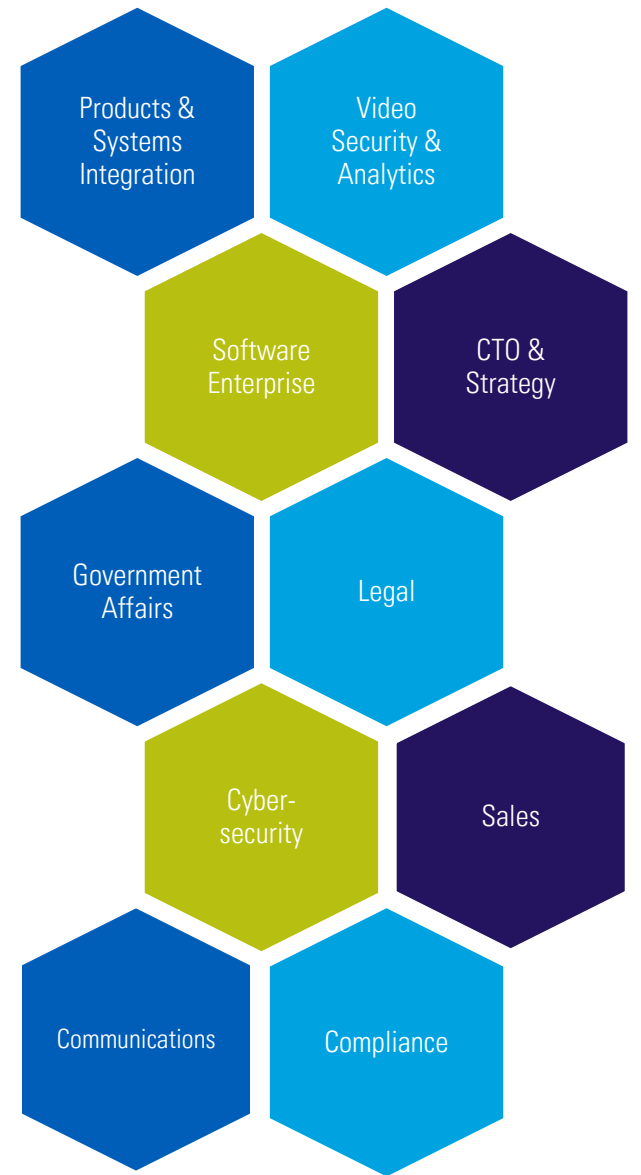




# MTAC

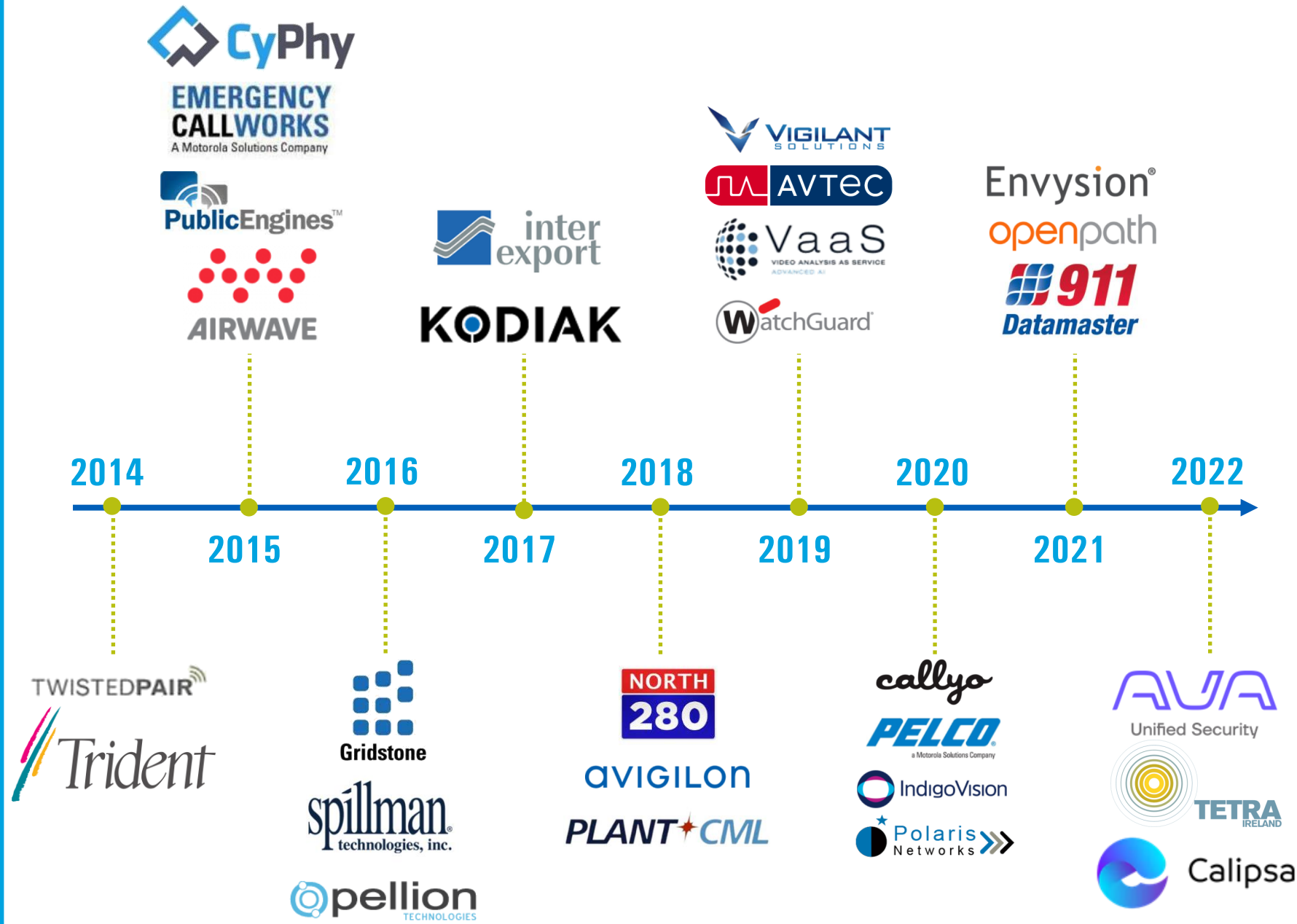


## MTAC Members





# ACQUISITION TIMELINE





# ACQUISITION MULTIPLES

Target	Price (m)	EV/EBITDA
	\$1,041	14.96
	\$445	15.32
	\$36	12.47





# POSSIBLE ACQUISITIONS



European presence could bolster MSI's expansion into Western Europe



Open platform enhances value and fosters application development



Physical access control offerings complements MSI's Openpath acquisition



AI-embedded crime prevention solutions



Public Safety Analytics helps solve cases more quickly



Finance and property tax software complements MSI's existing Command Center offerings

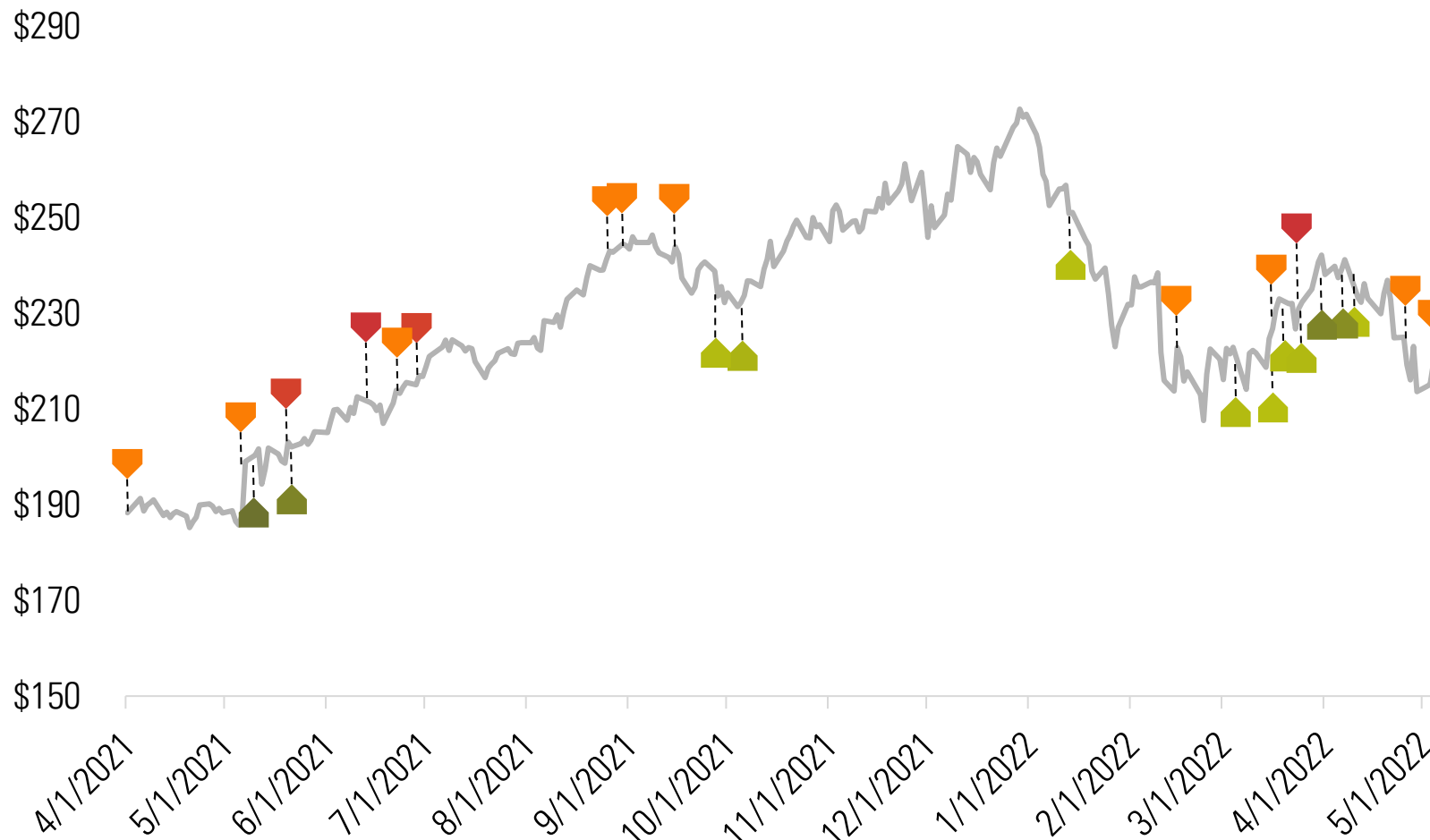




# INSIDER BUYS/SELLS

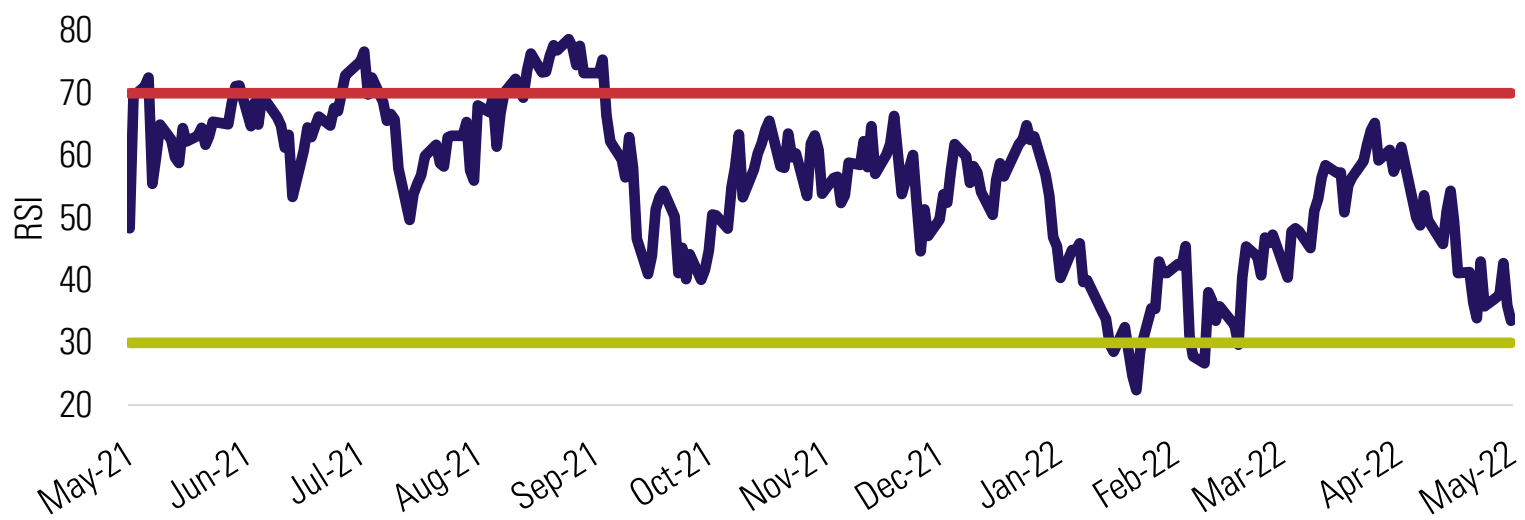
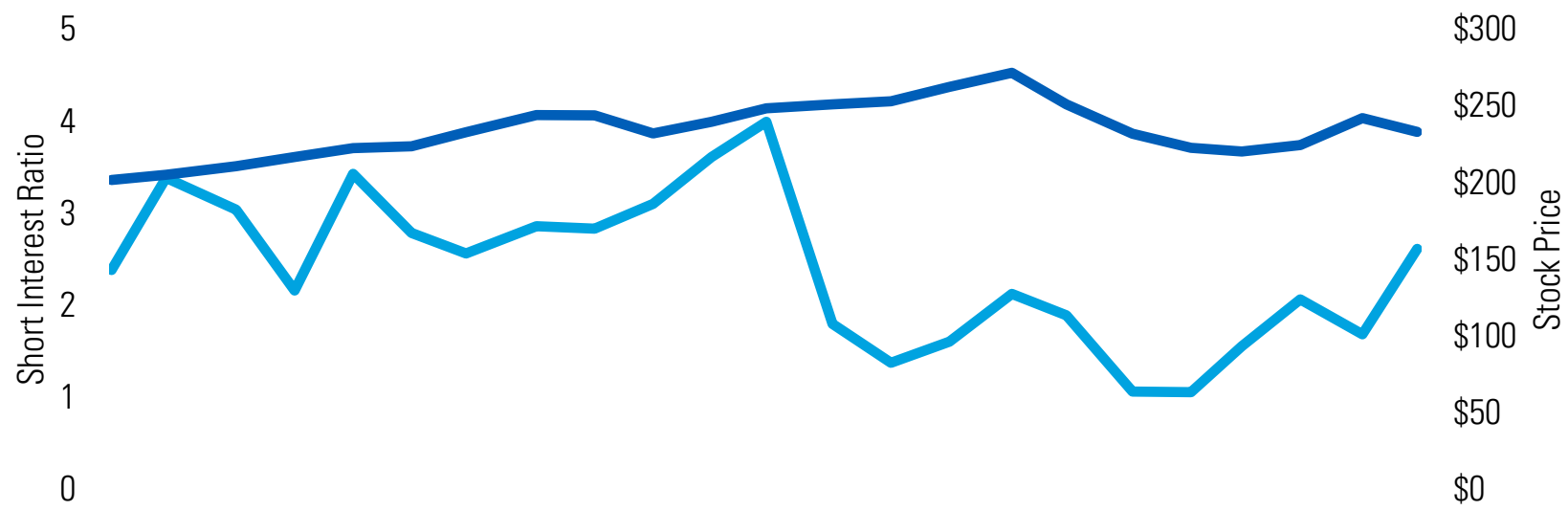
Sale  
\$2,367,676

Purchase  
\$5,065,033





# SHORT INTEREST & RSI



Short Interest Ratio   Stock Price   RSI   RSI Oversold   RSI Overbought





# EARNINGS ESTIMATES

## Q1 22 Earnings Estimates



- Zacks
- Loop Capital Markets
- Barclays
- Bloomberg
- Morgan Stanley
- William Blair
- Company Guidance
- Citi
- Raymond James

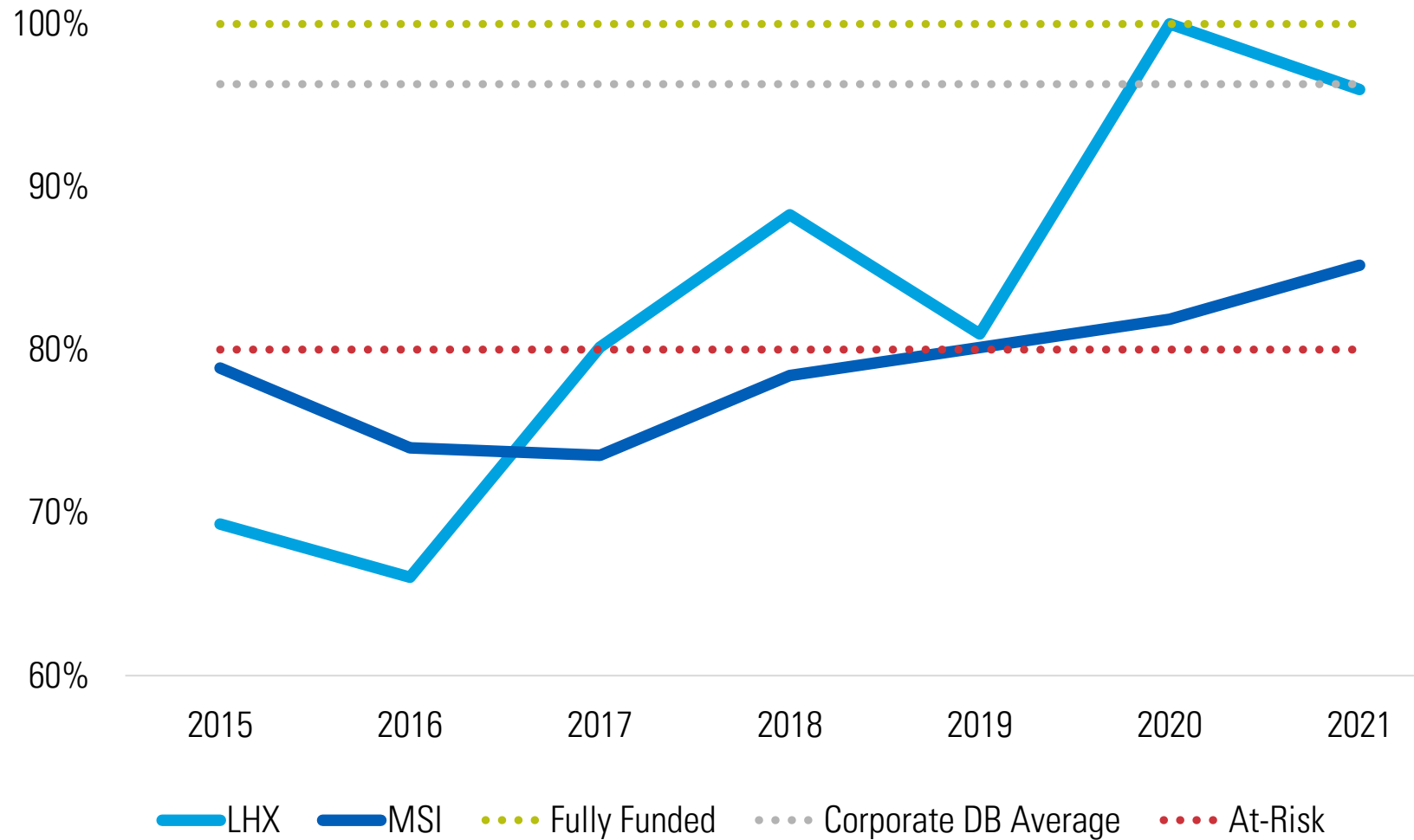






# PENSION FUNDING RATIO

## Pension Funding Ratio





# LAND MOBILE RADIO COMMUNICATIONS PRODUCT LINE

## High End APX Line

APX NEXT XE All-Band P25 Smart Radio



APX NEXT XE merges a touchscreen interface with AI for reliable use in extreme environments. Stay focused on any situation that is presented.

APX 1500 SINGLE-BAND P25 MOBILE RADIO-ORIGINAL



Designed to provide reliable communications at an affordable price. Rugged simplistic design allows for prime use for first responders.

APX 900 SINGLE-BAND P25 PORTABLE RADIO



Designed for public works. Efficiently focused including Bluetooth connection, device management, and software support.

## Standard Line

MOTOTRBO R7 Digital Two-Way Radio



Designed for skilled professionals, high-performance integrated voice and data features for efficient operations. Wi-Fi, tracking, support.

XPR 5000E Mobile Two-Way Radio



Superior audio capabilities for mobile based responding unit. Loud and clear sound allows use in harsh environments. Advanced connectivity.

## Commercial

MAG ONE BPR40 Portable Two-Way Radio



Reliable and intuitive communication available through eight channels and two programmable buttons. Low power, channel delete, and repeater talkaround make this versatile for any use.

## Business

Curve Two-Way Radio for Business



Seamless integration with other products. Allows for vocal log creation, programmable button, LED signal lights, and supported superior range allows for prime use in business setting.



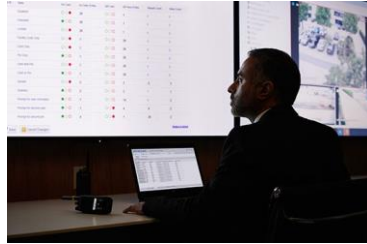


# VIDEO SECURITY & ACCESS CONTROL PRODUCT LINE



## Fixed Video Security Systems

Solutions help find and share vital information at a superior speed than competitors. Allowing swift and decisive responses that keep operations, people, and assets safe.



## Avigilon Access Control Solutions

Real-time access to information regarding entry points, allowing for selective admissions. Seamless pairing with other video security solutions for unprecedented awareness.



## Openpath Cloud-Based Access Control Solutions

Touchless access with mobile credentials, fully remote cloud-based software for around the clock, company wide visibility. Enterprise-grade allows for scalability and integration between other solutions offered.



## In-Car Video

Rugged in-car video system with frictionless body-worn integration allows for wireless uploads and license plate detection. Ensuring safety and accountability for officers and the communities they serve.



## License Plate Recognition Camera Systems

Proven to work, day in and day out. Help detect plates, alert to sightings, analyze location data and automate processes.



## Body-Worn Video

Public facing roles including healthcare workers and officers rely on non-biased evidence provided by body-worn products. Additionally, they provide trust and safety for community development and officers alike.



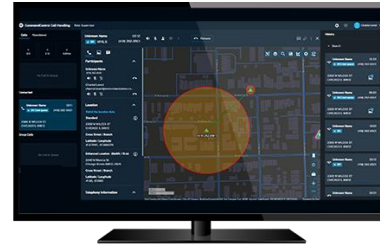
# COMMAND CENTER SOFTWARE PRODUCT LINE



## CommandCentral Community

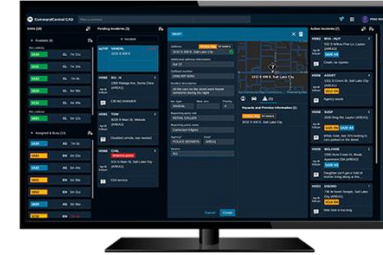
Single place for building transparency and collaboration between public and law enforcement agencies

## CommandCentral Call Handling



Call handling offers integration and data sharing for multimedia content.

## CommandCentral CAD



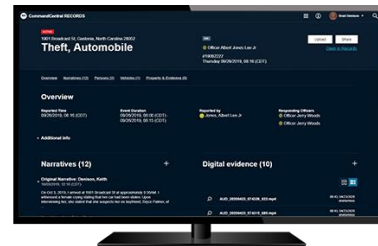
Enables dispatchers to process critical information faster and gain insights through reporting.

## CommandCentral Aware



Single view ties operations and improves situational awareness with location, real-time video and alerts.

## CommandCentral Records



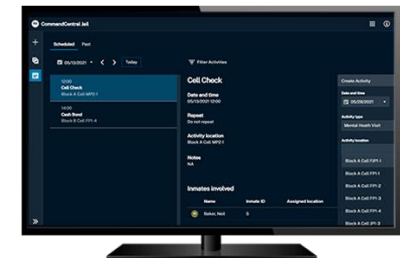
All in one display pulls case data for easy access and secure distribution with judicial contacts.

## CommandCentral Evidence



Solution fully integrated with Records, offering storing, managing, redacting, and transcribing of digital evidence.

## CommandCentral Jail



Focused on improving inmate and officer safety, this simplified jail management system uses automation, alerting, and increased awareness of jail activity.





# CYBERSECURITY SERVICES

## Advisory Services

-  Skilled Professionals
-  Scenario-Based Drills
-  Collaborative Approach

## Managed Security Services

-  Cybersecurity Expertise 24/7
-  Focused Threat Intelligence
-  Improved Visibility

## Cybersecurity Training

-  Flexible Learning Options
-  Field-Proven Security Experts
-  Powerful Partnership

## Security Patching

-  Security Patch Identification
-  Security Patch Testing
-  Security Patch Development





# LAND MOBILE RADIO COMPARISON



**MOTOROLA**  
SOLUTIONS



**L3HARRIS™**

REMOTE UPDATES  
VIA CLOUD  
TECHNOLOGY



TOUCH SCREEN  
INTERFACE



AI-ENABLED  
VOICE  
COMMANDS





# ECOSYSTEM





# COMMAND CENTRAL SUITE

## Incident Awareness

## Incident Management

## Post-Incident Resolution



Community  
Engagement



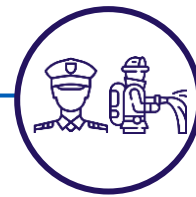
Emergency  
Call  
Management



Voice and  
Computer-  
Aided Dispatch



Real-Time  
Intelligence  
Operations



Field  
Response and  
Reporting



Records &  
Evidence  
Management



Analysis and  
Investigation



Jail & Inmate  
Management













# ESG 2021 REVIEW




## Events

-  Mindfulness Webinar
-  International Women's Day: Networking events and Workshops worldwide
-  Diversity Events throughout the months

## Growth and Development

-  Inclusive Language Document
-  Formalized charter for Inclusive Solutions Employee Advisory Council
-  Supplier Diversity: Launch of "Supplier Connect"

## Business Council Volunteerism

-  Virtual Donation Program for "Supply a Teacher" Initiative
-  Conference Participation: National Society for Black Engineers and Society of Hispanic Professional Engineers
-  Radio Support for ROTC Training

## Foundation

-  56% increase in funding for diversity in first responders
-  \$90,000 to American Red Cross
-  Over 47,000 volunteer hours across 43 countries





# ESG GOALS

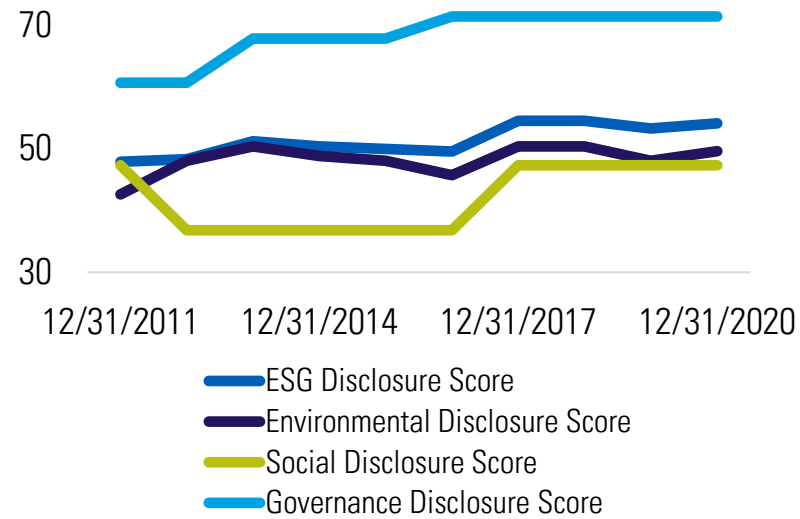
Environment	Status	Social	Status	Governance	Status
Evaluate suppliers for risk at least every 2 years		Expand online courses (data privacy, intellectual property) & cyber security training across units and customers		Internal audit of privacy program maturity & GDPR compliance	
100% audits of "high risk" suppliers		Enhance Business Conduct Champion & increase support of the Supplier Diversity Network		Update privacy policy, corporate rules & data collection notices	
Add CR KPIs to supplier scorecard		Increase program funding in support of people of color, first responders & education		Additional internal stakeholder partnerships	



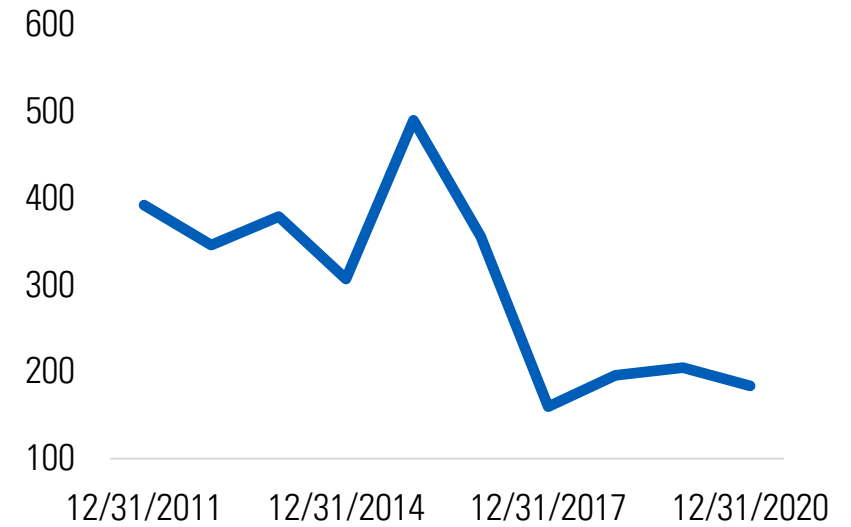


# ESG PERFORMANCE

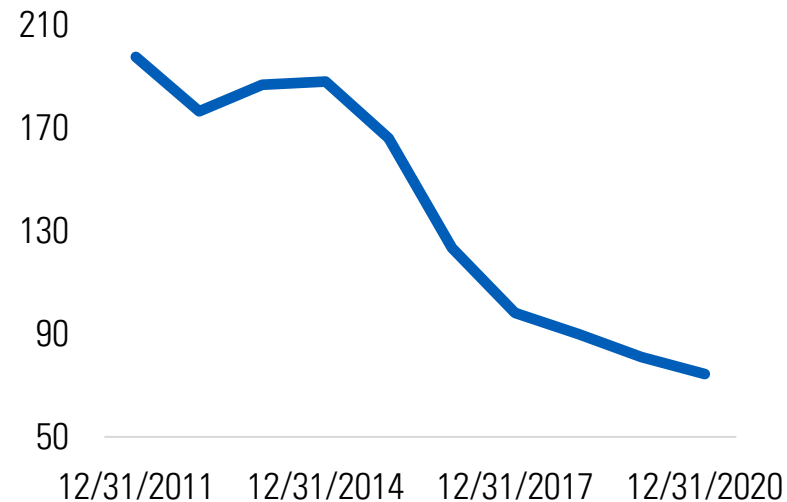
### Disclosures



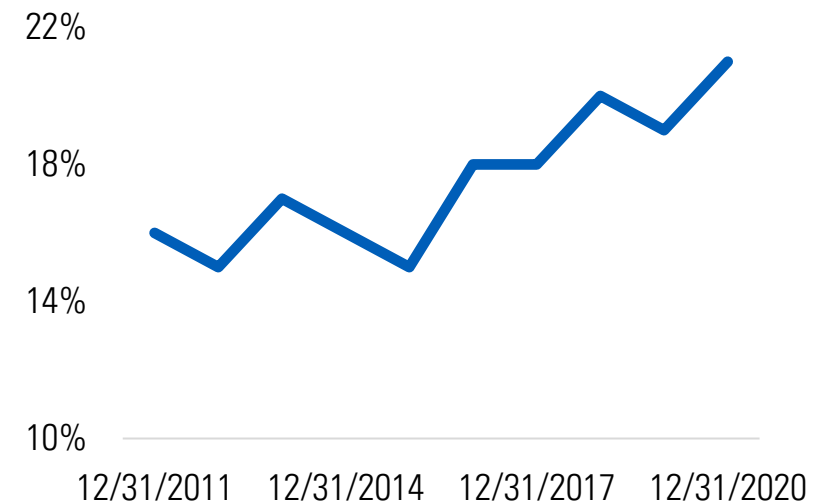
### Total Energy Consumption



### Total GHG Emissions



### Percentage of Women in Management



## Strengths



Long Tenure



Dedication and Passion










Complementary Experiences  
& Expertise

## Weaknesses

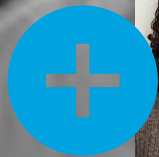


Limited Diversity

# EXECUTIVE COMMITTEE

Name	Position	Age	Tenure (Years)	Year Joined	Education	% TRA	% Peer TRA
 Gregory Q. Brown "Greg"	Chairman/CEO	61	11.0	2003	Economics (B) Humane letters (D)	17.01	2.48
 Jason J. Winkler	Exec VP/CFO	48	1.8	2001	Business Admin. (B) Business Admin. (M)	27.71	20.61
 John P. Molloy "Jack"	Exec VP/COO	50	0.5	1994	Marketing (B) Business Admin. (M)	-35.72	-32.35
 Dr. Mahesh Saptharishi	Exec VP/CTO	44	3.3	2018	Artificial intelligence (D)	21.19	6.60
 Mark S. Hacker	Exec VP/CAO/General Counsel	50	7.3	2001	Accountancy (B) Law Degree	19.67	5.16
 Cynthia M. Yazdi	Senior VP/Chief of Staff	57	3.8	2000	Civil Engineering (B)	15.94	0.60
 Dr. Rajan S. Naik	Senior VP/Strategy & Ventures	50	2.2	2015	Engineering (B) Engineering (D)	23.69	37.87





Dr Ayanna Howard



February 15, 2022



Dean of Engineering



Philosophy (D)  
MBA  
Electrical Engineering (M)  
Engineering (B)



AI & Robotics

# BOARD OF DIRECTORS

Name	Position	Age	Tenure (Years)	Director Since	Independent	% TRA	% Peer TRA	Other Positions
Gregory Q. Brown "Greg"	Chairman/ CEO	61	11.0	2011		17.06	2.54	
Kenneth D. Denman "Ken"	Lead Director	63	3.0	2019	✓	13.89	6.52	Venture Partner, Sway Ventures
Judy Carol Lewent	Board Member	73	11.3	2011	✓	17.85	2.18	Former Exec VP and CFO, Merck & Co.
Clayton M. Jones "Clay"	Board Member	73	7.0	2015	✓	21.81	4.80	Former Chairman, CEO and President, Rockwell Collins, Inc.
Gregory K. Mondre "Greg"	Board Member	47	6.8	2015	✓	22.59	6.30	Co-CEO, Silver Lake
Egon Pierre Durban	Board Member	48	6.8	2015	✓	22.59	6.30	Co-CEO, Silver Lake
Joseph M. Tucci "Joe"	Board Member	74	5.0	2017	✓	22.01	3.47	Chairman of Bridge Growth Partners





Dr Ayanna Howard



# BOARD OF DIRECTORS EXPERTISE





# SUBCOMMITTEE

	Audit	Comp.	Gov. & Nom.	Exec.
Brown				✓
Denman		✓	✓	✓
Lewent	✓			✓
Jones	✓			
Mondre			✓	
Durban		✓		
Tucci		✓	✓	✓
Howard	✓			

✓ *Chairman*

✓ *Member*





# ADDITIONAL OFFICERS

## CHIEF DIVERSITY OFFICER



### TINISHA AGRAMONTE



1.5 years with Motorola



University of Oklahoma, MA Human Relations

California State University, BA Mass Communication



Experienced civil servant, consultant, and instructor

## DATA PROTECTION OFFICER



### IRENE AMU



16 years with Motorola



Queen Mary & Westfield College, Corporate & Commercial Law  
University of Kent, Bachelor of Laws



Experienced compliance and privacy counsel







# OWNERSHIP

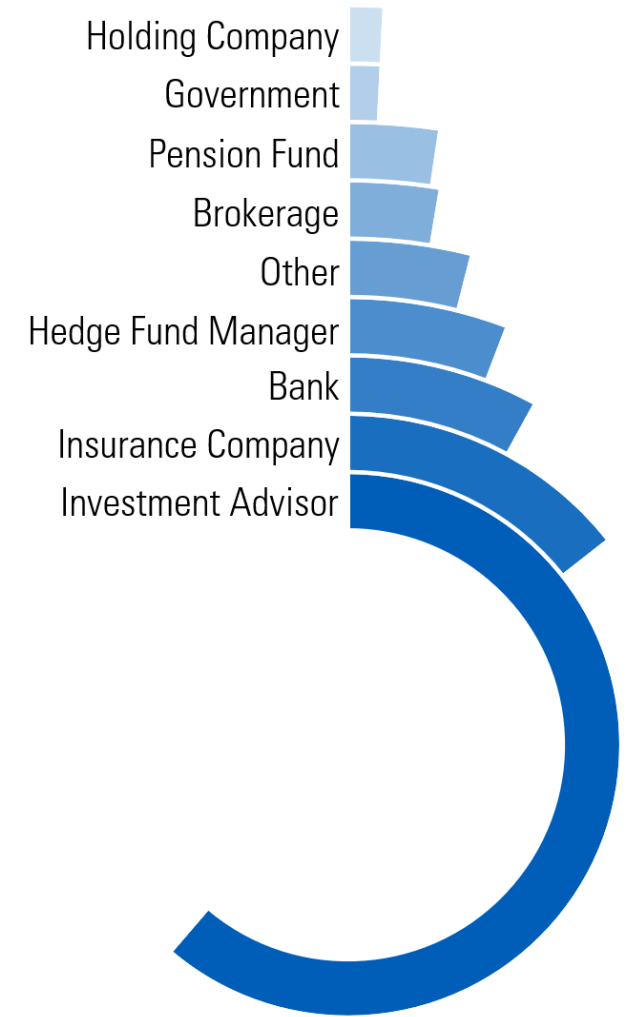
## Top Institutional Owners

Vanguard Group Inc/The	11.08%
BlackRock Inc	8.55%
Capital Group Cos Inc/The	6.12%
State Street Corp	4.44%
Wellington Management Group LLP	2.47%
Macquarie Group Ltd	2.24%
Credit Agricole Group	2.11%
Geode Capital Management LLC	1.86%
AllianceBernstein LP	1.76%
Neuberger Berman Group LLC	1.73%

## Top Insider Owners

Brown Gregory Q	0.30%
Molloy John P	0.02%
Lewent Judy Carol	0.02%
Mark Kelly S	0.02%
Hacker Mark S	0.01%
Mondre Gregory K	0.01%
Durban Egon Pierre	0.01%
Jones Clayton M	0.01%
Saptharishi Mahesh	0.01%
Naik Rajan S	0.01%

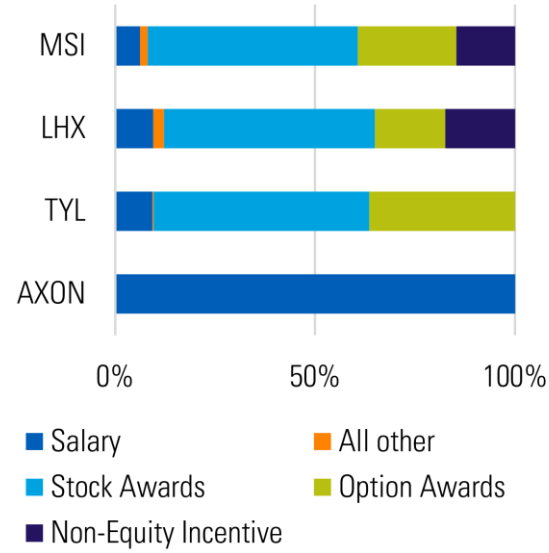
## Shareholder Ownership



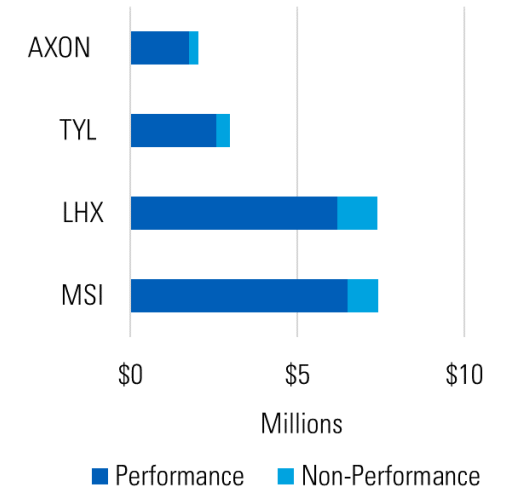


# COMPENSATION

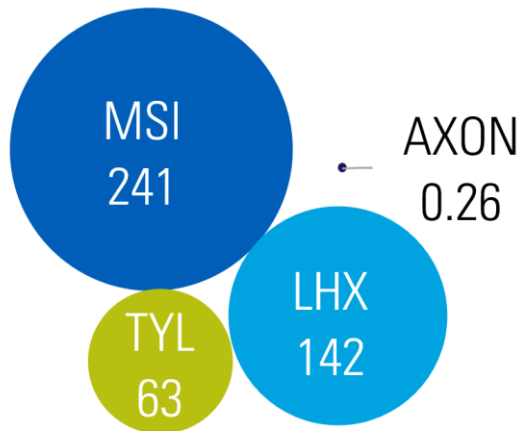
## CEO Compensation



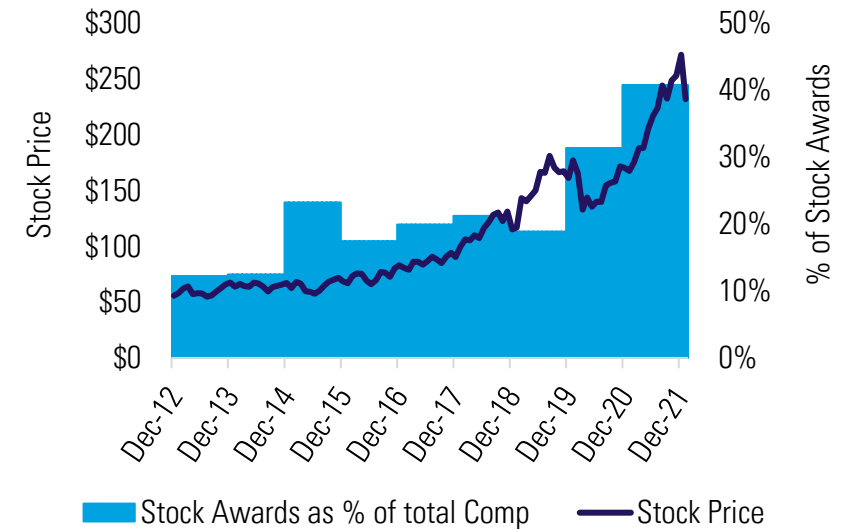
## Executive Compensation



## CEO Pay Ratio



## Stock Price vs. CEO Stock Awards





# ISS ENVIRONMENT REPORT

## 2

### 1

#### Management of Environmental Risks and Opportunities



Policies, Systems & Disclosures

### 2

#### Carbon and Climate



Energy & Fuel Efficiency



Policies, Systems & Disclosures



Technology & Opportunity



GHG Emissions

### 1

#### Waste and Toxicity



Emissions & Spills



Electronic Waste



Packaging Material



Hazardous & Non-hazardous Waste

### 3

#### Natural Resources



Water



Land, Forests & Biodiversity



# ISS SOCIAL REPORT

1

## 2 Human Rights



Policies, Systems & Disclosures



Consultation & Engagement



Supply Chain Standards



Ethical Sourcing

## 1 Labor, Health, and Safety



Labor Relations & Management



Occupational Health & Safety



Workforce Diversity & Equality



Supply Chain Standards



Training & Development



Compensation & Benefits

## 1 Product Safety, Quality, and Brand



Product Safety & Toxicity



Supply Chain Standards



Product Quality & Safety



Ethical Marketing & Communication

## 1 Stakeholders and Society



Business Ethics & Anti-corruption



Lobbying & Political Advocacy



Consultation & Engagement



Sustainability Mgmt & Oversight



Motivation & Accountability

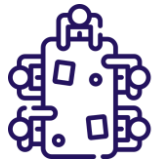


Policies, Systems, & Disclosures





# ISS GOVERNANCE REPORT



10



6



2



2



Governance Assessment	Impact Score
<b>Board Structure</b>	<b>10</b>
57.14% of the board of directors is considered independent according to ISS' local market classification.	+
The roles of Board Chair and CEO have not been separated.	-
57.14% of the board of directors is considered independent based on an ISS global classification.	+
The company has identified a lead independent director.	+
The chair of the nomination committee is considered an independent director.	+
The chair of the audit committee is considered an independent director.	+
The chair of the compensation / remuneration committee is considered an independent director.	+
66.67% of the audit committee members are independent.	-
66.67% of the compensation committee members are independent.	-
66.67% of the nominating committee members are independent.	-
66.67% of the nominating committee members are independent based on an ISS global classification.	-
66.67% of the compensation / remuneration committee members are independent based on an ISS global classification.	-
66.67% of the audit committee members are independent based on an ISS global classification.	-
The company has set up a policy requiring an annual and individual performance evaluation of its directors.	+
The company has a policy prohibiting the hedging of company stock.	+
The company discloses board/governance guidelines.	+
Directors are subject to robust stock ownership guidelines.	+
1 non-executive(s) serve(s) on an excessive number of outside boards.	-
66.67% of the sustainability committee members are independent.	+
The company has disclosed the existence of a formal CEO and key executive officers succession plan.	+
The average outside director's compensation amounts to 0.94 times the median of company peers.	-
71.43% of directors permitted to own stock with more than one year of service own stock.	+
0 woman/women is/are (a) named executive officers at the company as of the last annual meeting.	-
The board is 14.29% composed of women.	-
The standard deviation of director tenure is 3.62.	+
66.67% of non-executive directors have been on the board for less than six years.	+
The standard deviation of director age is 11.59.	+
The board has not disclosed whether it has set up any mechanism to encourage director refreshment.	-
28.57% of directors on the ballot received shareholder approval rates below the 80% level at the most recent shareholder meeting.	-
The lowest percentage of vote support received by a management-nominated director on their most recent shareholder vote was 56.51%.	-
<b>Compensation</b>	<b>6</b>
All of the company's active equity plans expressly forbid exchanges of underwater options for cash.	+
All of the company's equity plans expressly forbid option repricing without shareholder approval.	+
All active plans prohibits share recycling for options/SARs.	+
the text of its active equity plans.	-
text of its active equity plans.	-
The company has a clawback or malus provision for both cash awards and equity awards.	+
The CEO's stock ownership guidelines are equivalent to 1000% of salary.	+
The company employs at least one metric that compares its performance to a benchmark or peer group.	+
The company discloses complete information on the short-term cash incentive plan.	+
The company discloses full information on the performance measures used in the long-term incentives it grants to its executives.	+
The basis for the CEO's golden parachute is Salary + Target Bonus.	-
The company has made special grants to executives excluding the CEO in the most recent fiscal year.	-
The company's most recent Say on Pay proposal received shareholders' vote support of 89.96%.	-
The CEO's total pay last year was 416.30% that of the next-highest-paid executive officer.	-
<b>Audit and Risk Oversight</b>	<b>2</b>
6 directors on the board have information security experience.	+
Senior leadership briefs the board on information security matters, but the company has not disclosed the frequency.	+
66.67% of the committee responsible for information security risk is independent.	+
The company has general disclosure for identifying and mitigating information and security risks.	+
The company is externally audited or certified by top information security standards with partial scope.	+
The company has an information security training and compliance program, but the frequency of training is not disclosed.	+
The company has entered into an information security risk insurance policy.	+
The company has identified 3 financial expert(s) serving on its audit committee.	+
<b>Shareholder Rights</b>	<b>2</b>
All directors are elected annually.	+
The board is authorized to issue blank check preferred stock.	-
The company has an exclusive venue/forum provision.	-
The company's charter and bylaws may be amended by a simple majority vote.	+
20% of share capital is needed to convene a special meeting.	-
Shareholders may act by written consent.	+
The company has a majority vote standard with a director resignation policy.	+
The proxy access ownership threshold for nominators is 3% of the voting power.	+
The proxy access ownership duration requirement for nominators is 3 years.	+
The proxy access cap on nominees is the greater of 2 board seats or 20% of the board.	+
A maximum of 20 shareholders may aggregate to form a proxy access nominating group.	+
Shareholders have a proxy access right.	+



# MSI FOUNDATION





## Values



## Focus Areas

-  Annual Grants
-  Disaster Relief
-  Community Investment
-  Employee Programs
-  Volunteerism

## 2021 Achievements

-  \$12+ million Awards
-  Majority funding To people of color
-  65K Volunteer hours
-  \$800,000 From Donations for Donors

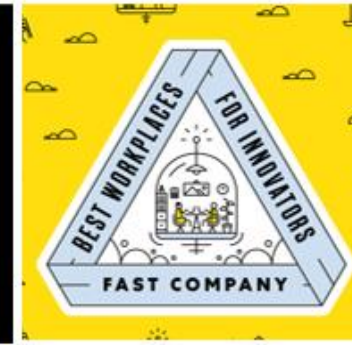
## Grant Partners

-  Canadian Mental Health Association  
*Mental health for all*
-  MOVEMENT FORWARD
-  Fundación GLOBAL  
Arte Ciencia & Tecnología
-  FIRST RESPONDERS CHILDREN'S FOUNDATION
-  AkiraChix  
SHE BUILDS • SHE SERVES • SHE LEADS
-  MONASH University



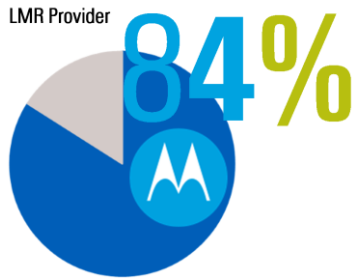


# AWARDS





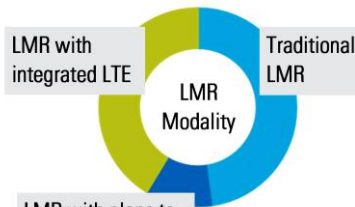
# CUSTOMER SURVEY



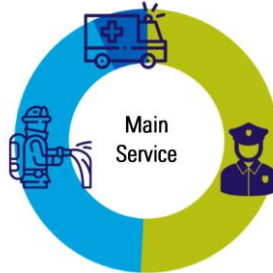
Increased Need For Public Safety Equipment Spending



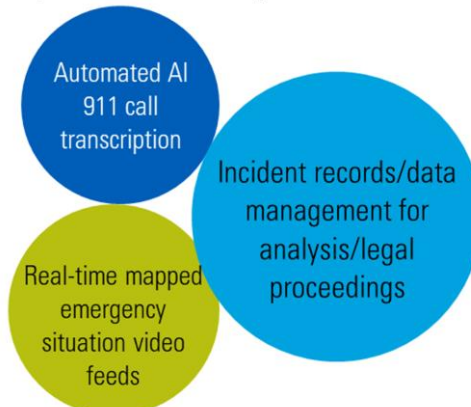
Open To Relying On One Provider For All 911 Call Center Software



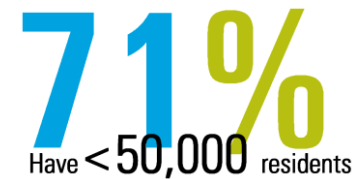
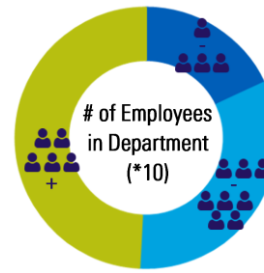
LMR with plans to integrate LTE



Important Command/Dispatch Center Features



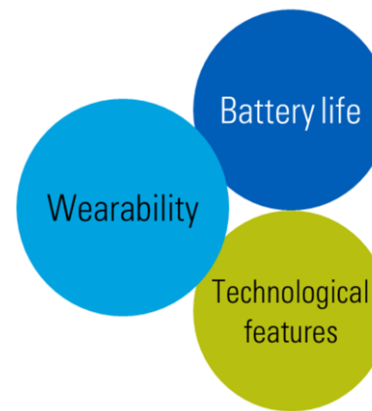
Plans To Integrate Voice, Data, and Video Streams In 911 Call Center



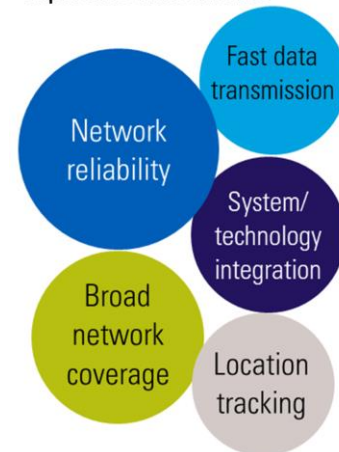
Body Camera Providers



Important Body Camera Features



Important LMR Features



Quality of LMR



Switching LMR



Reliability of LMR



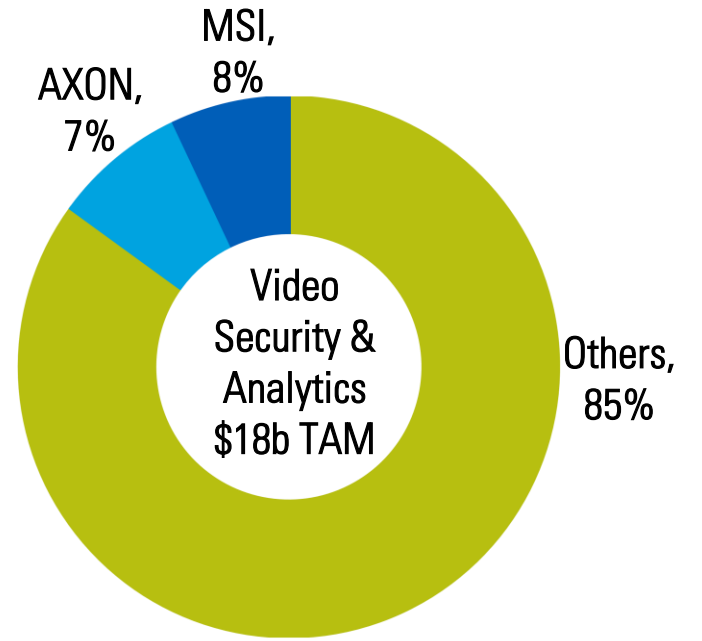
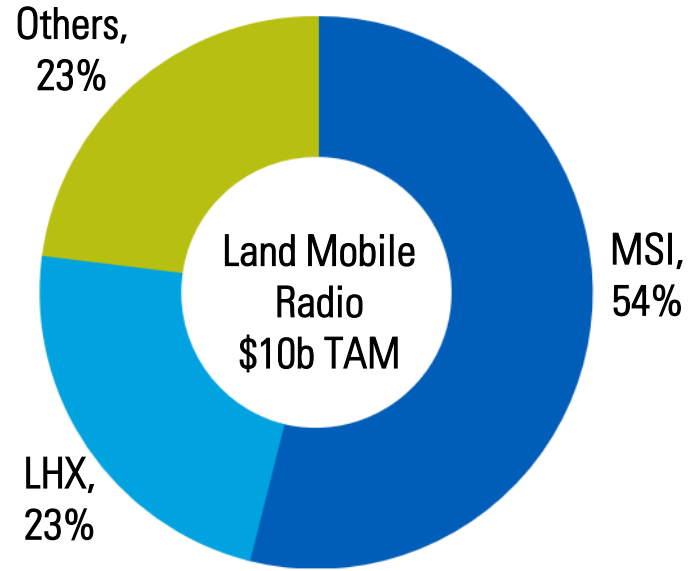
Satisfaction of LMR



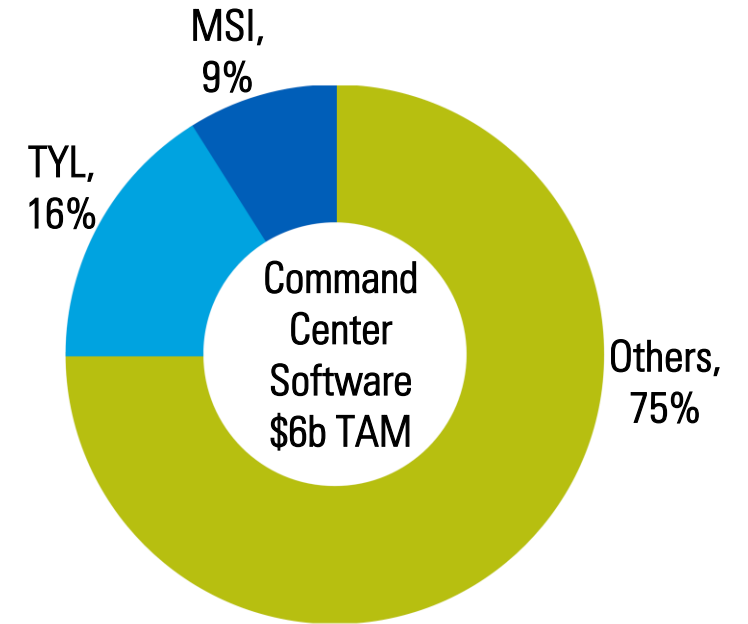




# TECHNOLOGY TAM



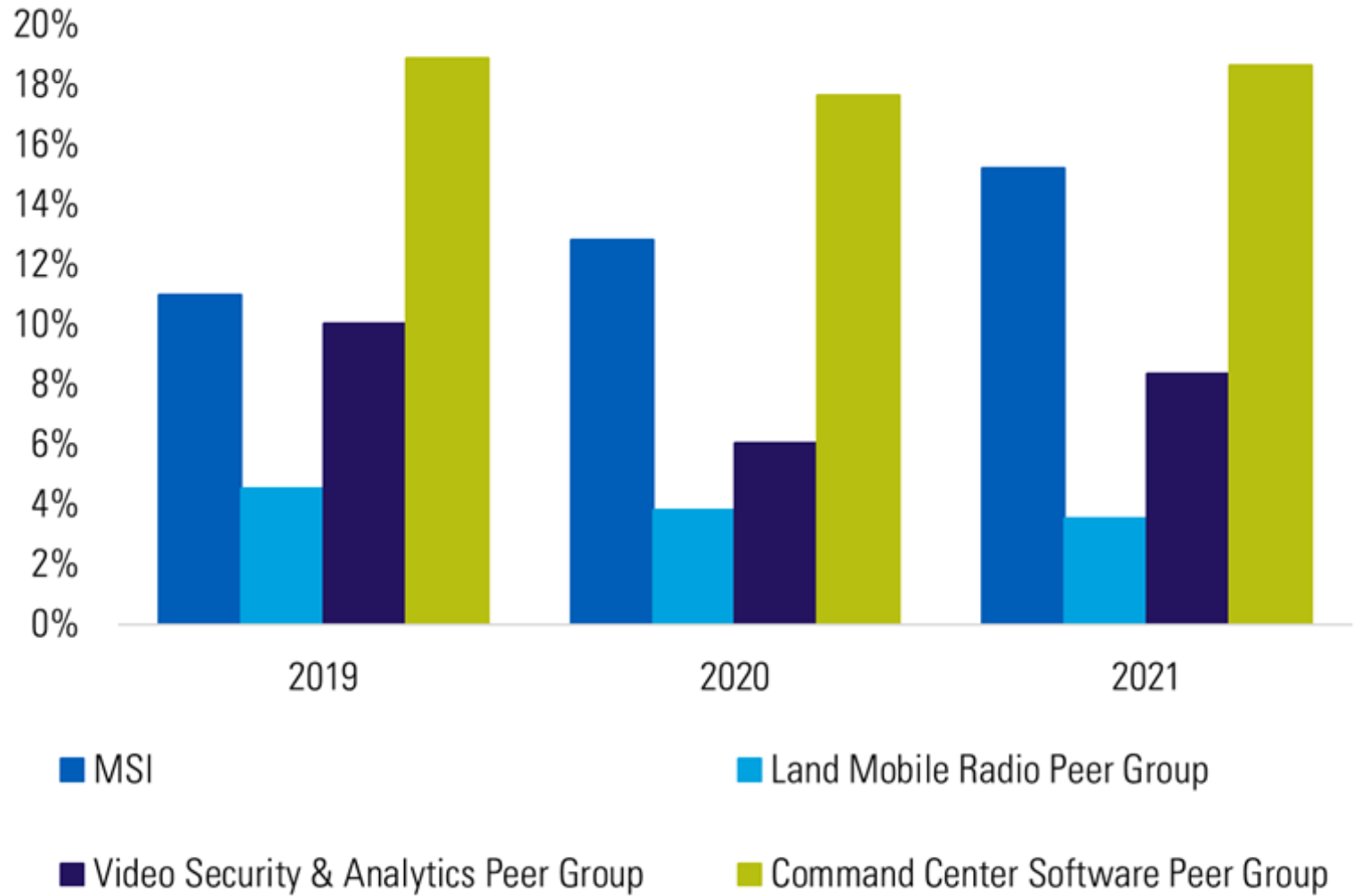
**\$47B OVERALL TAM  
(\$13B MANAGED  
AND SUPPORT  
SERVICES)**





# MARGINS BY TECHNOLOGY GROUP

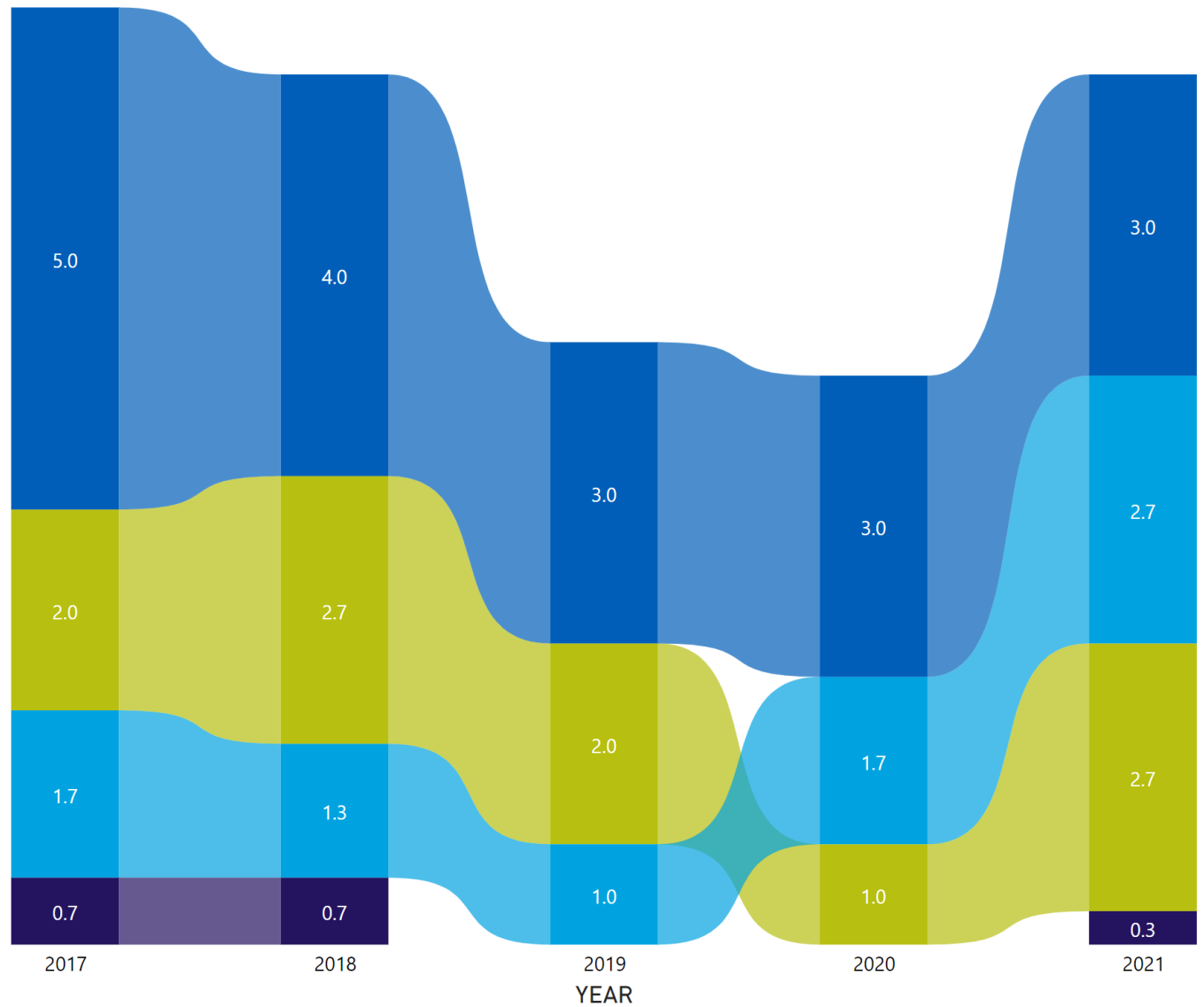
Comparative Historic Profit Margins by Technology Group





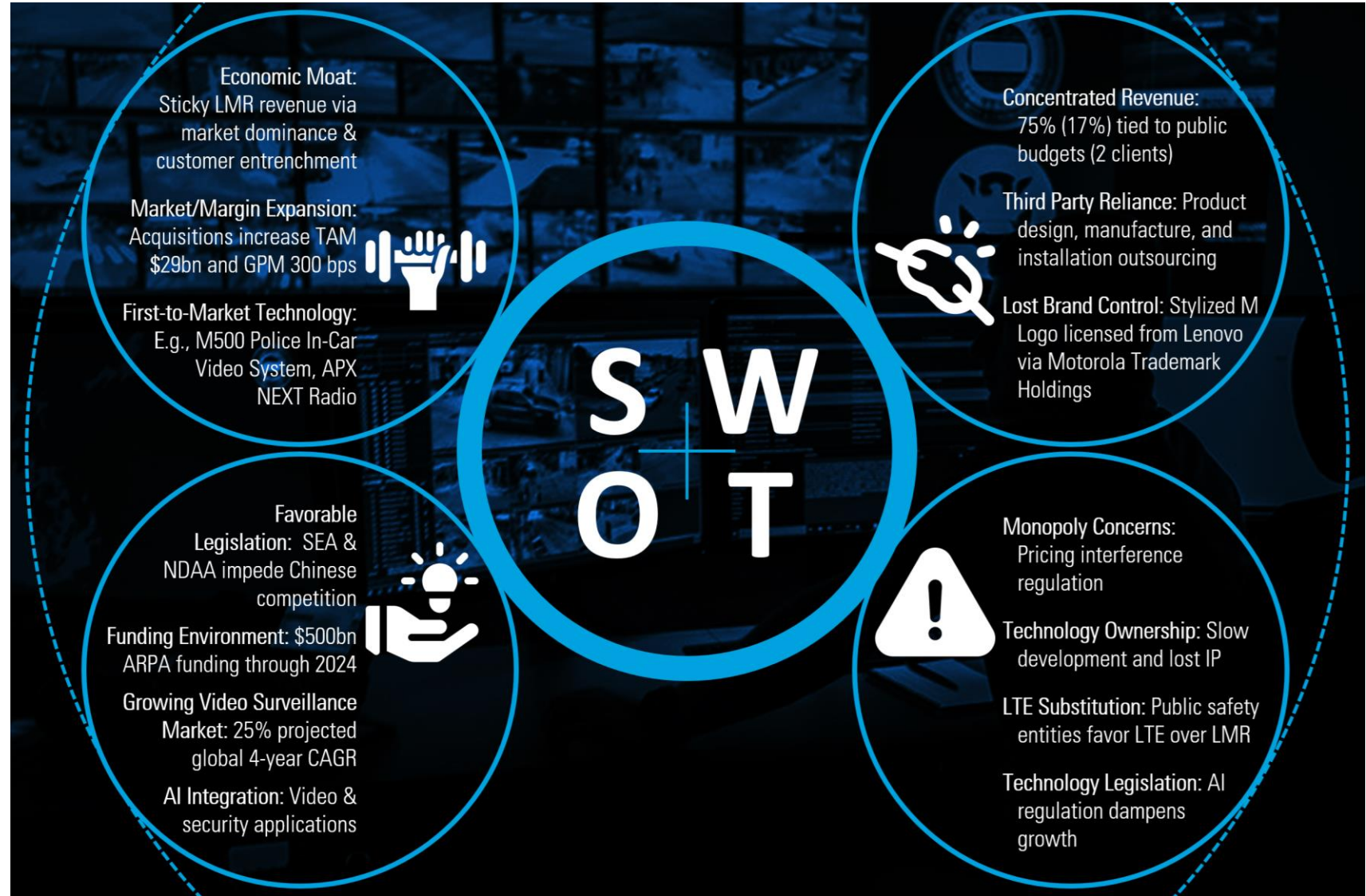
# COMPARATIVE ACQUISITIONS

Group ● Command Center ● LMR ● MSI ● Video





# SWOT





# PORTER'S 5 FORCES

## THREAT OF NEW ENTRANTS: 2.7

- Ⓜ **LMR: 1** Market saturation & significant switching costs
- Ⓜ **Video Security & Analytics: 4** Growing surveillance market, AI integration demand, & low barriers to entry
- Ⓜ **Command Center Software: 3** Low capital intensity & favorable revenue model

## THREAT OF SUBSTITUTES: 1.7

- Ⓜ **LMR: 3** Mission-critical nature short-term protection, but looming first-responder LTE network introduction
- Ⓜ **Video Security & Analytics: 1** Widespread adoption of public & enterprise safety video surveillance & police in-car & body-worn cameras

- Ⓜ **Command Center Software: 1** Critically integrated into most domestic call centers' emergency response & incident documentation

## CUSTOMER BARGAINING POWER: 2.7

- Ⓜ **LMR: 2** Public customer concentration partially offsets lack of alternatives
- Ⓜ **Video Security & Analytics: 4** Private demand for enhanced technology at affordable prices
- Ⓜ **Command Center Software: 2** Complex integration between software modules dissuades alternatives

## SUPPLIER BARGAINING POWER: 3.3

- Ⓜ **LMR: 5** Sustained supply chain constraints for key inputs
- Ⓜ **Video Security & Analytics: 3** Regulation deters foreign competition, internal manufacturing adoption (e.g., Richardson, TX facility)
- Ⓜ **Command Center Software: 2** Software IP generated internally or via acquisitions



## COMPETITIVE RIVALRY: 3.0

- Ⓜ **LMR: 1** Market dominance & entrenched customers
- Ⓜ **Video Security & Analytics: 5** Fixed & mobile video customer price sensitivity
- Ⓜ **Command Center Software: 3** Technological advances & low capital intensity, partially offset by switching costs



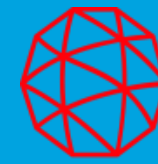


# PEER OFFICE LOCATIONS

Company ● AXON ● LHX ● MSI ● TYL



# L3 HARRIS (LHX)



**L3HARRIS**  
FAST. FORWARD.



## Chris Kubasik

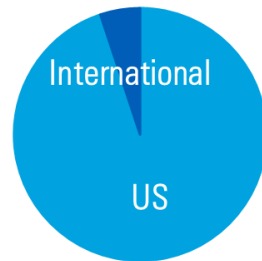
- 60 years
- CEO since June 2021
- LHX executive since 2015
- Vice Chair
- 36.80% TRA (14.90% peers)



## Focus Areas

- Airborne Radio Systems
- Ground Radio Systems
- Cybersecurity
- Defense Technologies

## Regional Revenue



## 5-Year CAGR

Sales	24.4%
Net Income	24.7%
Free Cash Flow	24.9%



## Financials

Market Cap	\$47.0 B
P/E Ratio (LTM)	24.70
Dividend Yield (LTM)	1.84%
Beta (2 yrs weekly)	0.84
EV/EBITDA (LTM)	17.7



## ESG Performance

Sustainalytics Score	30
Bloomberg Disclosure	51
ISS Quality Score	5
CDP Climate Score	B, A-
MSCI Rating	Average

**LHX**



# AXON ENTERPRISE (AXON)



## Patrick Smith

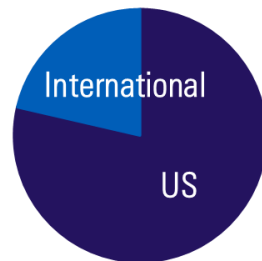
- 51 years
- CEO since April 2017
- Co-founder Axon
- Board Member
- 45.08% TRA (11.51% peers)



## Focus Areas

- Non-lethal Tasers
- Police Body Camera
- Cybersecurity
- Defense Technologies

## Regional Revenue



## 5-Year CAGR

Sales	26.3%
Net Income	-228.2%
Free Cash Flow	41.8%



## Financials

Market Cap	\$6.81 B
P/E Ratio (LTM)	N/A
Dividend Yield (LTM)	N/A
Beta (2 yrs weekly)	1.25
EV/EBITDA (LTM)	N/A



## ESG Performance

Sustainalytics Score	41
Bloomberg Disclosure	24
ISS Quality Score	5
CDP Climate Score	N/A
MSCI Rating	Leader

AXON





# TYLER TECHNOLOGIES (TYL)



## Lynn Moore

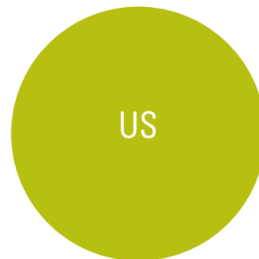
- 52 years
- CEO since May 2018
- Former General Counsel
- Board Member
- 17.25% TRA (4.91% peers)



## Focus Areas

- 911 Call Center Software
- Appraisal Software
- Court Filing Software
- Accounting Software

## Regional Revenue



## 5-Year CAGR

Sales	15.7%
Net Income	8.0%
Free Cash Flow	15.5%



## Financials

Market Cap	\$15.09 B
P/E Ratio (LTM)	83.25
Dividend Yield (LTM)	N/A
Beta (2 yrs weekly)	0.89
EV/EBITDA (LTM)	44.46



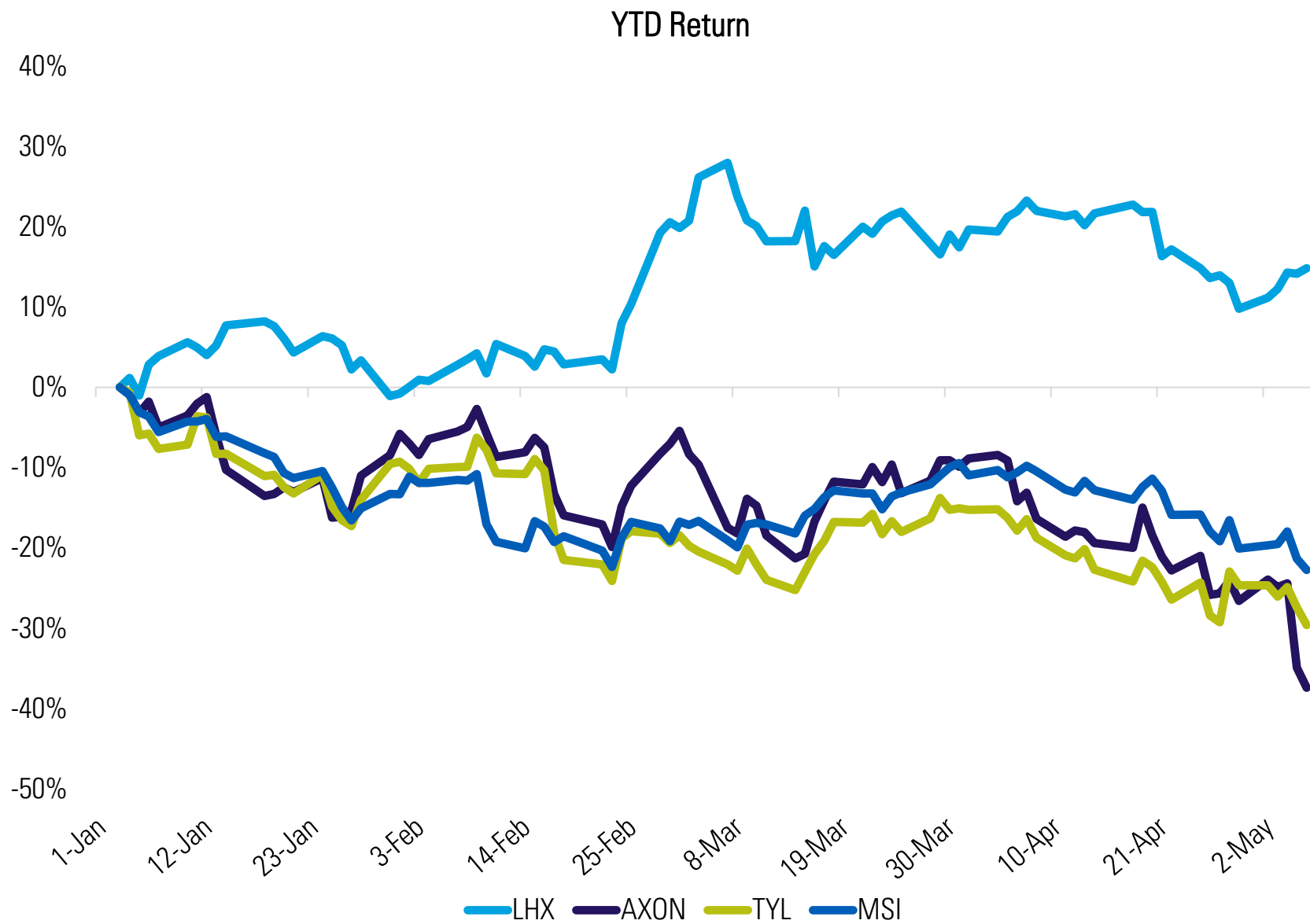
## ESG Performance

Sustainalytics Score	19
Bloomberg Disclosure	51
ISS Quality Score	9
CDP Climate Score	N/A
MSCI Rating	Average





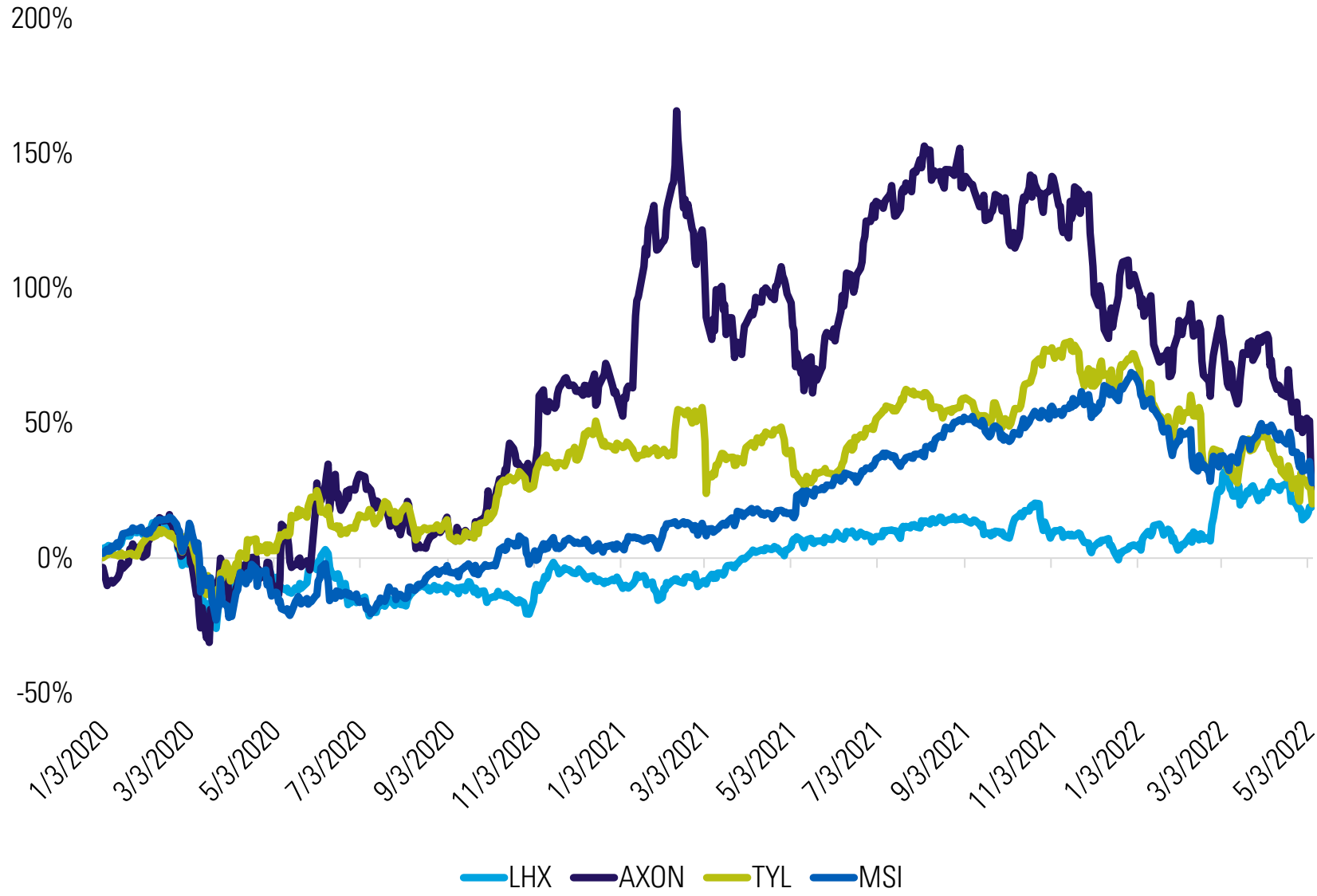
# YTD RETURN





# HOLDING PERIOD RETURNS

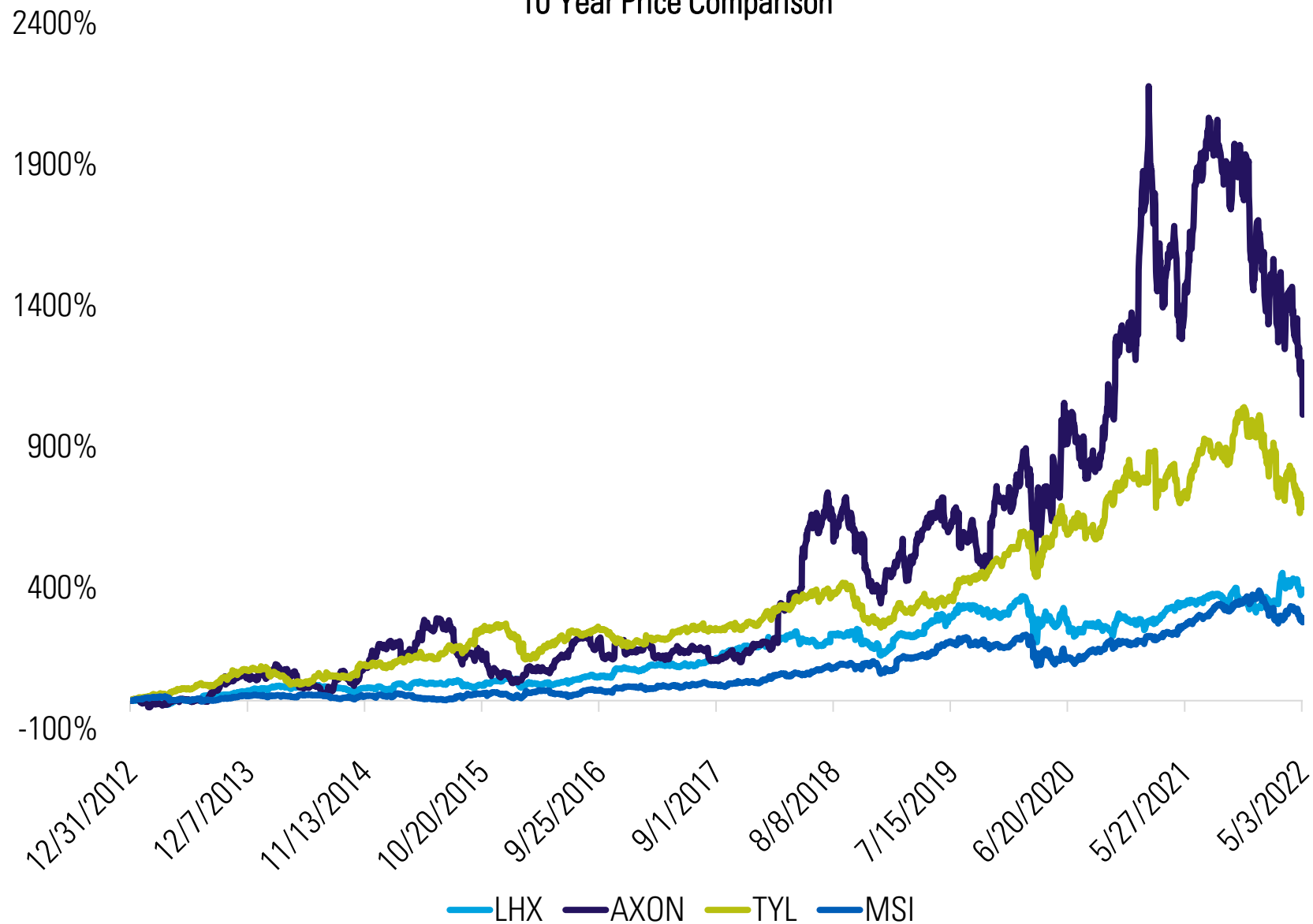
### Holding Period Return









# STOCK RETURN COMPARISON

## 10 Year Price Comparison





## ANALYST RECOMMENDATIONS

		 <b>L3HARRIS</b> FAST. FORWARD.		
Avg. Target Price	\$273.50	\$273.15	\$190.55	\$507.14
% Buys	69.2%	68.2%	100.0%	68.8%
1-Year Upside	32.4%	12.9%	94.9%	36.2%



# PRO FORMA ASSUMPTIONS

## Base Case DCF Scenario

Revenues are forecasted by segments (Products & Systems Integration, Software & Services). Initial segment-specific revenue is forecasted by regressing past segment revenue on segment-specific economic and market drivers and then pairing significant coefficients with driver estimates to project annual segment revenue. Drivers include: • Worldwide IT spending, • Terrorism in the US, • US public safety spending, • Canada public safety spending, • Products and Systems Integration backlog, • Federal government IT expenditures, • Size of the information security technology market, • Annual government expenditures on public order and safety in the US, • State and local construction for public safety, • Worldwide size of the LMR systems market, • Worldwide shipments of private LTE network nodes, • Total number of 911 calls in the US, • Size of the global surveillance market, • Worldwide spending on cybersecurity, • Worldwide information security spending, • Public sector expenditures on public order and safety in the United Kingdom, • Unit shipments of body-worn cameras worldwide, • Revenue from advanced persistent threat (APT) protection market worldwide, and • Revenue from corporate web security market. Initial service revenue is then boosted at a 2-year lag based upon relative percentage increase in annual acquisition spending.

Cost of revenue decreases 1% annually (following 2022 stagnation due to supply chain constraints) as Software & Services proportional revenue increases.

SG&A decreases at historic geometric average rate as MSI develops a more established customer base and distribution channels relating to its newer technologies.

R&D decreases at historic geometric average rate due to preference for technology acquisitions over in-housing.

Other operating expenses, income taxes, minority interest revenue, D&A, other current assets, long-term investments, other assets, goodwill, intangibles, accrued expenses, and other liabilities remain at eight-year historical average percent of sales.

Days receivable, days inventory, and days payable remain at historical averages.

Share repurchase percent of operating cash flow is 12.5% with remaining 37.5% of the 50% management guidance allocated towards acquisitions.

Based on management guidance, capital expenditures (dividends) equal 20% (30%) of operating cash flow.

Diluted shares outstanding and implied share price are simultaneously determined based on stock price and the strike price of all outstanding stock options, restricted stock units, and performance stock units.

Terminal growth rate (2.5%) equals weighted average of five-year projected annual GDP growth rate in firm's three major geographical markets (US, UK, Canada).

## Bull DCF Scenario

All assumptions remain the same except:

Segment revenue drivers associated with a positive funding environment are increased by 10%.

MSI resolved supply chain bottlenecks in 2022, restoring a 1% geometric average decay in COGS.

Increased (10%) reliance on acquisitions over share repurchases.

Increased (10%) reliance on dividends over capital expenditures.

Terminal growth rate (WACC) increased (decreased) by 25 bps.

## Bear DCF Scenario

All assumptions remain the same except:

Segment revenue drivers are decreased by 10%.

MSI fails to resolve supply chain bottlenecks and COGS stagnates at 50.2% through 2025.

Decreased (10%) reliance on acquisitions over repurchases.

Terminal growth rate decreased by 25 bps. WACC increased by 100 bps.

## Monte Carlo DCF Assumptions

All assumptions remain the same except:

The annual values of the following line items are randomly selected from normal distributions based on those line items' 9-year historical arithmetic averages and standard deviations: Cost of goods sold margin and SG&A margin, effective tax rate, days receivables, days payables, acquisitions as a percent of operating cash flow, and dividends as a percent of operating cash flow.

Segment revenue drivers relative to base case are randomly adjusted based on a normal distribution.

Terminal growth rate is randomly selected from a normal distribution based on the arithmetic average and standard deviation of 2021-2024 GDP forecasts in the firm's three major geographical markets.

WACC is randomly drawn from a normal distribution based on the arithmetic average and standard deviation of the firm's realized quarterly WACC.

## DDM Assumptions

10-year initial phase including MSI's 39.67% current payout ratio, 13.43% EPS growth (outside estimates), and 9.98% cost of equity (outside estimates).

10-year transition phase.

Perpetual payout of 45% (outside estimates), EPS growth of 5.39% (outside estimates), and 8.56% cost of equity (CAPM).





# MODEL UPDATES 2022

## Acquisitions

Video Security & Analytics

LMR



## Market Factors



## Q4 Earnings



Funding Environment



Ecosystem



Supply Chain



Cybersecurity



# BASE CASE INCOME STATEMENT

\$(in millions)	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Products & Systems Integration	5,329	4,634	5,033	5,499	5,639	5,784	5,983	6,129	6,327	6,473	6,671	6,817	6,967
Software & Services	2,558	2,780	3,138	3,369	3,592	4,755	5,208	5,504	5,830	6,164	6,493	6,828	7,217
<b>Total Revenues</b>	<b>7,887</b>	<b>7,414</b>	<b>8,171</b>	<b>8,868</b>	<b>9,231</b>	<b>10,539</b>	<b>11,191</b>	<b>11,632</b>	<b>12,157</b>	<b>12,636</b>	<b>13,164</b>	<b>13,644</b>	<b>14,183</b>
Cost of sales	3,860	3,713	4,099	4,448	4,538	5,078	5,284	5,382	5,512	5,615	5,733	5,823	5,932
<b>Gross Profit</b>	<b>4,027</b>	<b>3,701</b>	<b>4,072</b>	<b>4,419</b>	<b>4,693</b>	<b>5,462</b>	<b>5,907</b>	<b>6,250</b>	<b>6,644</b>	<b>7,021</b>	<b>7,431</b>	<b>7,821</b>	<b>8,251</b>
Selling & administrative expenses	1,403	1,251	1,327	1,343	1,304	1,389	1,375	1,333	1,299	1,260	1,224	1,183	1,147
Research & development expenses	687	686	734	743	721	768	761	737	719	697	677	655	635
Other operating expenses	(272)	273	258	155	161	184	195	203	212	220	230	238	247
<b>EBITDA</b>	<b>2,732</b>	<b>2,025</b>	<b>2,317</b>	<b>2,178</b>	<b>2,506</b>	<b>3,121</b>	<b>3,576</b>	<b>3,976</b>	<b>4,414</b>	<b>4,844</b>	<b>5,300</b>	<b>5,745</b>	<b>6,222</b>
<b>EBIT</b>	<b>2,209</b>	<b>1,491</b>	<b>1,753</b>	<b>1,793</b>	<b>2,105</b>	<b>2,663</b>	<b>3,089</b>	<b>3,470</b>	<b>3,885</b>	<b>4,294</b>	<b>4,728</b>	<b>5,152</b>	<b>5,605</b>
Interest expense, net	(220)	(220)	(208)	(205)	(199)	(180)	(166)	(162)	(162)	(160)	(138)	(112)	(88)
Other income (expense), net	(360)	11	0	(5)	(5)	(6)	(6)	(6)	(7)	(7)	(7)	(8)	(8)
Other unusual items	59	56	0	0	0	0	0	0	0	0	0	0	0
<b>Income before taxes (EBT)</b>	<b>1,688</b>	<b>1,338</b>	<b>1,663</b>	<b>1,582</b>	<b>1,901</b>	<b>2,477</b>	<b>2,917</b>	<b>3,302</b>	<b>3,717</b>	<b>4,128</b>	<b>4,582</b>	<b>5,032</b>	<b>5,509</b>
Tax expense	379	261	356	334	401	523	616	697	785	872	968	1,063	1,163
Effective tax rate	22.4%	19.5%	21.4%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%
<b>Net Income</b>	<b>868</b>	<b>949</b>	<b>1,245</b>	<b>1,244</b>	<b>1,495</b>	<b>1,949</b>	<b>2,296</b>	<b>2,599</b>	<b>2,926</b>	<b>3,250</b>	<b>3,608</b>	<b>3,962</b>	<b>4,339</b>





# BASE CASE INCOME STATEMENT COMMON - SIZE

	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Products & Systems Integration	67.6%	62.5%	61.6%	62.0%	61.1%	54.9%	53.5%	52.7%	52.0%	51.2%	50.7%	50.0%	49.1%
Software & Services	32.4%	37.5%	38.4%	38.0%	38.9%	45.1%	46.5%	47.3%	48.0%	48.8%	49.3%	50.0%	50.9%
<b>Total Revenues</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Cost of sales	48.9%	50.1%	50.2%	50.2%	49.2%	48.2%	47.2%	46.3%	45.3%	44.4%	43.5%	42.7%	41.8%
<b>Gross Profit</b>	<b>51.1%</b>	<b>49.9%</b>	<b>49.8%</b>	<b>49.8%</b>	<b>50.8%</b>	<b>51.8%</b>	<b>52.8%</b>	<b>53.7%</b>	<b>54.7%</b>	<b>55.6%</b>	<b>56.5%</b>	<b>57.3%</b>	<b>58.2%</b>
Selling & administrative expenses	17.8%	16.9%	16.2%	15.1%	14.1%	13.2%	12.3%	11.5%	10.7%	10.0%	9.3%	8.7%	8.1%
Research & development expenses	8.7%	9.3%	9.0%	8.4%	7.8%	7.3%	6.8%	6.3%	5.9%	5.5%	5.1%	4.8%	4.5%
Other operating expenses	-3.5%	3.7%	3.2%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
<b>EBITDA</b>	<b>34.6%</b>	<b>27.3%</b>	<b>28.4%</b>	<b>24.6%</b>	<b>27.2%</b>	<b>29.6%</b>	<b>32.0%</b>	<b>34.2%</b>	<b>36.3%</b>	<b>38.3%</b>	<b>40.3%</b>	<b>42.1%</b>	<b>43.9%</b>
<b>EBIT</b>	<b>28.0%</b>	<b>20.1%</b>	<b>21.5%</b>	<b>20.2%</b>	<b>22.8%</b>	<b>25.3%</b>	<b>27.6%</b>	<b>29.8%</b>	<b>32.0%</b>	<b>34.0%</b>	<b>35.9%</b>	<b>37.8%</b>	<b>39.5%</b>
Interest expense, net	-2.8%	-3.0%	-2.5%	-2.3%	-2.2%	-1.7%	-1.5%	-1.4%	-1.3%	-1.3%	-1.0%	-0.8%	-0.6%
Other income (expense), net	-4.6%	0.1%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Other unusual items	0.7%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Income before taxes (EBT)</b>	<b>21.4%</b>	<b>18.0%</b>	<b>20.4%</b>	<b>17.8%</b>	<b>20.6%</b>	<b>23.5%</b>	<b>26.1%</b>	<b>28.4%</b>	<b>30.6%</b>	<b>32.7%</b>	<b>34.8%</b>	<b>36.9%</b>	<b>38.8%</b>
Tax expense	4.8%	3.5%	4.4%	3.8%	4.3%	5.0%	5.5%	6.0%	6.5%	6.9%	7.4%	7.8%	8.2%
<b>Net Income</b>	<b>11.0%</b>	<b>12.8%</b>	<b>15.2%</b>	<b>14.0%</b>	<b>16.2%</b>	<b>18.5%</b>	<b>20.5%</b>	<b>22.3%</b>	<b>24.1%</b>	<b>25.7%</b>	<b>27.4%</b>	<b>29.0%</b>	<b>30.6%</b>





# BASE CASE BALANCE SHEET

\$ (in millions)	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
<b>Assets</b>										
Cash and cash equivalents	1,874	1,833	1,441	2,178	1,856	2,830	2,618	2,261	1,714	1,530
Accounts receivable	1,568	1,632	1,863	1,978	2,056	2,149	2,234	2,327	2,412	2,507
Inventory	579	591	661	688	701	718	731	747	758	773
Other current assets	1,456	1,516	1,730	1,837	1,910	1,996	2,075	2,161	2,240	2,329
<b>Total Current Assets</b>	<b>5,477</b>	<b>5,571</b>	<b>5,696</b>	<b>6,681</b>	<b>6,523</b>	<b>7,693</b>	<b>7,658</b>	<b>7,496</b>	<b>7,124</b>	<b>7,138</b>
Net PP&E	1,302	1,275	1,204	1,231	1,296	1,399	1,552	1,750	2,005	2,310
Goodwill	3,015	3,487	4,113	4,810	5,579	6,436	7,376	8,410	9,534	10,757
Other intangibles	1,347	1,601	1,938	2,313	2,727	3,188	3,693	4,250	4,854	5,513
Other assets	1,622	1,689	1,928	2,047	2,128	2,224	2,311	2,408	2,496	2,594
<b>Total Assets</b>	<b>12,960</b>	<b>13,830</b>	<b>15,114</b>	<b>17,332</b>	<b>18,513</b>	<b>21,211</b>	<b>22,873</b>	<b>24,608</b>	<b>26,318</b>	<b>28,629</b>
<b>Liabilities and Stockholders' Equity</b>										
Accounts payable	743	758	848	882	899	920	937	957	972	990
Accrued expenses	1,446	1,506	1,719	1,825	1,897	1,983	2,061	2,147	2,226	2,314
Other current liabilities	1,766	1,839	2,099	2,229	2,317	2,422	2,517	2,622	2,718	2,825
<b>Total Current Liabilities</b>	<b>3,955</b>	<b>4,102</b>	<b>4,666</b>	<b>4,937</b>	<b>5,113</b>	<b>5,325</b>	<b>5,516</b>	<b>5,727</b>	<b>5,916</b>	<b>6,129</b>
Total LT debt (excl. Working capital revolver)	5,854	5,731	4,555	4,925	4,418	5,127	4,491	3,650	2,641	1,949
Working capital revolver	0	41	433	616	616	657	869	1,111	1,342	1,596
Other liabilities	2,572	2,678	3,057	3,246	3,374	3,526	3,665	3,818	3,958	4,114
<b>Total Long-Term Liabilities</b>	<b>8,426</b>	<b>8,450</b>	<b>8,045</b>	<b>8,788</b>	<b>8,408</b>	<b>9,310</b>	<b>9,026</b>	<b>8,580</b>	<b>7,941</b>	<b>7,659</b>
<b>Total Liabilities</b>	<b>12,382</b>	<b>12,552</b>	<b>12,711</b>	<b>13,724</b>	<b>13,521</b>	<b>14,635</b>	<b>14,541</b>	<b>14,306</b>	<b>13,857</b>	<b>13,788</b>
<b>Stockholders' Equity</b>										
Preferred equity	0	0	0	0	0	0	0	0	0	0
Common stock	562	1,261	2,386	3,591	4,975	6,559	8,315	10,285	12,445	14,824
Minority interest	17	17	17	17	17	17	17	17	17	17
<b>Total Stockholders' Equity</b>	<b>579</b>	<b>1,278</b>	<b>2,403</b>	<b>3,608</b>	<b>4,992</b>	<b>6,576</b>	<b>8,332</b>	<b>10,302</b>	<b>12,462</b>	<b>14,841</b>
<b>Total Liabilities and Stockholders' Equity</b>	<b>12,960</b>	<b>13,830</b>	<b>15,114</b>	<b>17,332</b>	<b>18,513</b>	<b>21,211</b>	<b>22,873</b>	<b>24,608</b>	<b>26,318</b>	<b>28,629</b>



# BASE CASE BALANCE SHEET COMMON- SIZE

	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
<b>Assets</b>										
Cash and cash equivalents	14.5%	13.3%	9.5%	12.6%	10.0%	13.3%	11.4%	9.2%	6.5%	5.3%
Accounts receivable	12.1%	11.8%	12.3%	11.4%	11.1%	10.1%	9.8%	9.5%	9.2%	8.8%
Inventory	4.5%	4.3%	4.4%	4.0%	3.8%	3.4%	3.2%	3.0%	2.9%	2.7%
Other current assets	11.2%	11.0%	11.4%	10.6%	10.3%	9.4%	9.1%	8.8%	8.5%	8.1%
<b>Total Current Assets</b>	<b>42.3%</b>	<b>40.3%</b>	<b>37.7%</b>	<b>38.6%</b>	<b>35.2%</b>	<b>36.3%</b>	<b>33.5%</b>	<b>30.5%</b>	<b>27.1%</b>	<b>24.9%</b>
Net PP&E	10.0%	9.2%	8.0%	7.1%	7.0%	6.6%	6.8%	7.1%	7.6%	8.1%
Goodwill	23.3%	25.2%	27.2%	27.8%	30.1%	30.3%	32.2%	34.2%	36.2%	37.6%
Other intangibles	10.4%	11.6%	12.8%	13.3%	14.7%	15.0%	16.1%	17.3%	18.4%	19.3%
Other assets	12.5%	12.2%	12.8%	11.8%	11.5%	10.5%	10.1%	9.8%	9.5%	9.1%
<b>Total Assets</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>Liabilities and Stockholders' Equity</b>										
Accounts payable	5.7%	5.5%	5.6%	5.1%	4.9%	4.3%	4.1%	3.9%	3.7%	3.5%
Accrued expenses	11.2%	10.9%	11.4%	10.5%	10.2%	9.3%	9.0%	8.7%	8.5%	8.1%
Other current liabilities	13.6%	13.3%	13.9%	12.9%	12.5%	11.4%	11.0%	10.7%	10.3%	9.9%
<b>Total Current Liabilities</b>	<b>30.5%</b>	<b>29.7%</b>	<b>30.9%</b>	<b>28.5%</b>	<b>27.6%</b>	<b>25.1%</b>	<b>24.1%</b>	<b>23.3%</b>	<b>22.5%</b>	<b>21.4%</b>
Total LT debt (excl. Working capital revolver)	45.2%	41.4%	30.1%	28.4%	23.9%	24.2%	19.6%	14.8%	10.0%	6.8%
Working capital revolver	0.0%	0.3%	2.9%	3.6%	3.3%	3.1%	3.8%	4.5%	5.1%	5.6%
Other liabilities	19.8%	19.4%	20.2%	18.7%	18.2%	16.6%	16.0%	15.5%	15.0%	14.4%
<b>Total Long-Term Liabilities</b>	<b>65.0%</b>	<b>61.1%</b>	<b>53.2%</b>	<b>50.7%</b>	<b>45.4%</b>	<b>43.9%</b>	<b>39.5%</b>	<b>34.9%</b>	<b>30.2%</b>	<b>26.8%</b>
<b>Total Liabilities</b>	<b>95.5%</b>	<b>90.8%</b>	<b>84.1%</b>	<b>79.2%</b>	<b>73.0%</b>	<b>69.0%</b>	<b>63.6%</b>	<b>58.1%</b>	<b>52.6%</b>	<b>48.2%</b>
<b>Stockholders' Equity</b>										
Preferred equity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Common stock	4.3%	9.1%	15.8%	20.7%	26.9%	30.9%	36.4%	41.8%	47.3%	51.8%
Minority interest	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
<b>Total Stockholders' Equity</b>	<b>4.5%</b>	<b>9.2%</b>	<b>15.9%</b>	<b>20.8%</b>	<b>27.0%</b>	<b>31.0%</b>	<b>36.4%</b>	<b>41.9%</b>	<b>47.4%</b>	<b>51.8%</b>
<b>Total Liabilities and Stockholders' Equity</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



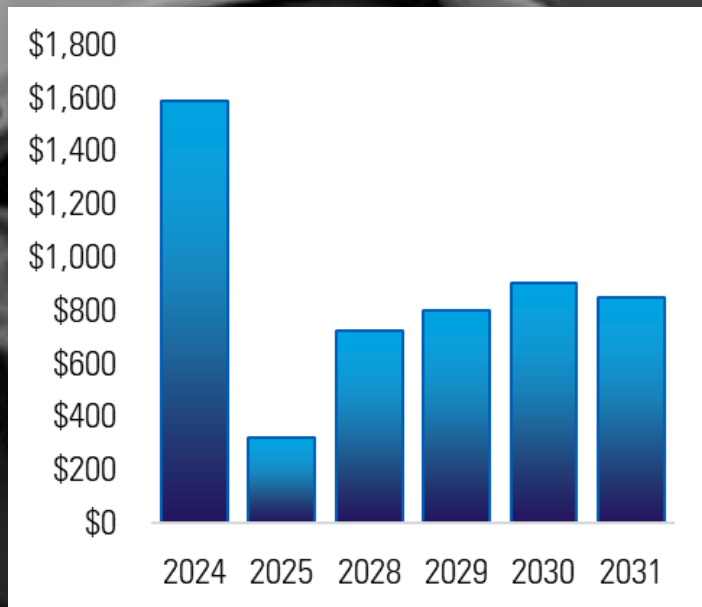


# BASE CASE SHARES OUTSTANDING

(in millions)	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Beginning shares outstanding	173.6	173.0	171.8	170.7	169.2	167.5	165.6	163.5	161.2	158.7
Shares issued	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shares repurchased	(0.6)	(1.1)	(1.2)	(1.5)	(1.7)	(1.9)	(2.1)	(2.3)	(2.5)	(2.7)
<b>Ending Shares Outstanding</b>	<b>173.0</b>	<b>171.8</b>	<b>170.7</b>	<b>169.2</b>	<b>167.5</b>	<b>165.6</b>	<b>163.5</b>	<b>161.2</b>	<b>158.7</b>	<b>156.0</b>



## Debt Schedule (in Millions of \$)



# BASE CASE DEBT SCHEDULE

\$ (in millions)	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Beginning revolver balance	0.0	0.0	40.9	433.0	616.4	616.4	657.3	869.2	1,111.1	1,341.9
Draw/(Paydown)	0.0	40.9	392.1	183.4	0.0	40.9	211.9	241.8	230.8	254.1
Revolver balance interest expense	0.0	0.3	3.2	7.0	8.3	8.5	10.2	13.3	16.4	19.7
Ending revolver balance	0.0	40.9	433.0	616.4	616.4	657.3	869.2	1,111.1	1,341.9	1,596.0
<b>Undrawn Revolver</b>	<b>2,346.6</b>	<b>2,305.7</b>	<b>1,913.6</b>	<b>1,730.2</b>	<b>1,730.2</b>	<b>1,689.3</b>	<b>1,477.4</b>	<b>1,235.5</b>	<b>1,004.7</b>	<b>750.6</b>
<b>2024 Term loan beginning balance</b>	<b>1,588.4</b>	<b>1,312.5</b>	<b>1,230.7</b>	<b>446.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Draw/(Paydown)	(275.9)	(81.8)	(784.2)	(446.5)	0.0	0.0	0.0	0.0	0.0	0.0
Interest expense	37.5	32.9	21.7	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Term loan ending balance	1,312.5	1,230.7	446.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>2025 Term loan beginning balance</b>	<b>322.1</b>	<b>322.1</b>	<b>322.1</b>	<b>322.1</b>	<b>322.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Draw/(Paydown)	0.0	0.0	0.0	0.0	(322.1)	0.0	0.0	0.0	0.0	0.0
Interest expense	23.5	23.5	23.5	23.5	11.7	0.0	0.0	0.0	0.0	0.0
Term loan ending balance	322.1	322.1	322.1	322.1	0.0	0.0	0.0	0.0	0.0	0.0
<b>2028 Term loan beginning balance</b>	<b>724.4</b>	<b>724.4</b>	<b>724.4</b>	<b>724.4</b>	<b>724.4</b>	<b>539.1</b>	<b>539.1</b>	<b>115.3</b>	<b>0.0</b>	<b>0.0</b>
Draw/(Paydown)	0.0	0.0	0.0	0.0	(185.3)	0.0	(423.8)	(115.3)	0.0	0.0
Interest expense	33.8	33.8	33.8	33.8	29.5	25.1	15.3	2.7	0.0	0.0
Term loan ending balance	724.4	724.4	724.4	724.4	539.1	539.1	115.3	0.0	0.0	0.0
<b>2029 Term loan beginning balance</b>	<b>800.0</b>	<b>800.0</b>	<b>800.0</b>	<b>800.0</b>	<b>800.0</b>	<b>800.0</b>	<b>800.0</b>	<b>800.0</b>	<b>316.3</b>	<b>0.0</b>
Draw/(Paydown)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(483.7)	(316.3)	0.0
Interest expense	36.8	36.8	36.8	36.8	36.8	36.8	36.8	25.7	7.3	0.0
Term loan ending balance	800.0	800.0	800.0	800.0	800.0	800.0	800.0	316.3	0.0	0.0
<b>2030 Term loan beginning balance</b>	<b>900.0</b>	<b>900.0</b>	<b>900.0</b>	<b>900.0</b>	<b>900.0</b>	<b>900.0</b>	<b>900.0</b>	<b>900.0</b>	<b>900.0</b>	<b>438.3</b>
Draw/(Paydown)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(461.7)	(438.3)
Interest expense	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	15.4	5.0
Term loan ending balance	900.0	900.0	900.0	900.0	900.0	900.0	900.0	900.0	438.3	0.0
<b>Other long term debt</b>	<b>1,795.0</b>	<b>1,754.1</b>	<b>1,362.0</b>	<b>1,178.7</b>	<b>2,178.7</b>	<b>2,137.7</b>	<b>2,675.8</b>	<b>2,434.0</b>	<b>2,203.2</b>	<b>1,949.0</b>
Draw/(Paydown)	0.0	(40.9)	(433.0)	383.6	(616.4)	92.7	(869.2)	(1,111.1)	(1,341.9)	(1,596.0)
Interest expense	63.1	60.6	48.4	49.8	69.2	88.9	100.1	97.2	90.4	77.4
Term loan ending balance	1,795.0	1,713.2	929.0	1,562.3	1,562.3	2,230.4	1,806.6	1,322.9	861.3	353.0
<b>Ending Loan Balance</b>	<b>5,854.1</b>	<b>5,731.4</b>	<b>4,555.0</b>	<b>4,925.2</b>	<b>4,417.8</b>	<b>5,126.9</b>	<b>4,491.1</b>	<b>3,650.3</b>	<b>2,641.5</b>	<b>1,949.0</b>



# BASE CASE CASHFLOW STATEMENT

\$(in millions)	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
<b>Cash flows from Operating Activities:</b>													
Net income	868	949	1,245	1,244	1,495	1,949	2,296	2,599	2,926	3,250	3,608	3,962	4,339
Depreciation	394	409	438	386	402	458	487	506	529	550	573	594	617
Other non-cash items	467	128	62	287	31	111	55	37	44	41	45	41	46
Change in net operating assets	94	127	92	(43)	11	48	21	13	16	14	16	14	16
<b>Net cash flows from operating activities</b>	<b>1,823</b>	<b>1,613</b>	<b>1,837</b>	<b>1,873</b>	<b>1,938</b>	<b>2,566</b>	<b>2,859</b>	<b>3,156</b>	<b>3,515</b>	<b>3,854</b>	<b>4,241</b>	<b>4,610</b>	<b>5,017</b>
<b>Cash flows from investing activities:</b>													
Capital expenditures	(248)	(217)	(243)	(264)	(375)	(388)	(513)	(572)	(631)	(703)	(771)	(848)	(922)
Sale of PP&E	7	56	6	0	0	0	0	0	0	0	0	0	0
Intangibles acquisitions	0	0	0	0	0	0	0	0	0	0	0	0	0
Intangibles divestitures	0	0	0	0	0	0	0	0	0	0	0	0	0
Investments in marketable securities	0	0	0	0	0	0	0	0	0	0	0	0	0
Acquisitions	(693)	(276)	(505)	(692)	(727)	(962)	(1,072)	(1,183)	(1,318)	(1,445)	(1,590)	(1,729)	(1,881)
<b>Net cash used in investing activities</b>	<b>(934)</b>	<b>(437)</b>	<b>(742)</b>	<b>(955)</b>	<b>(1,101)</b>	<b>(1,350)</b>	<b>(1,585)</b>	<b>(1,755)</b>	<b>(1,949)</b>	<b>(2,148)</b>	<b>(2,361)</b>	<b>(2,577)</b>	<b>(2,803)</b>
<b>Cash flows from financing activities:</b>													
Total cash dividends paid	(379)	(436)	(482)	(507)	(562)	(582)	(770)	(858)	(947)	(1,054)	(1,156)	(1,272)	(1,383)
Issue/(Retire) debt	(561)	(914)	(353)	(276)	(82)	(784)	554	(507)	750	(424)	(599)	(778)	(438)
Issue/(Retire) of common equity	(201)	(504)	(426)	(135)	(234)	(242)	(321)	(357)	(394)	(439)	(482)	(530)	(576)
Other financing activities	(3)	888	832	0	0	0	0	0	0	0	0	0	0
<b>Net cash used in financing activities</b>	<b>(1,144)</b>	<b>(966)</b>	<b>(429)</b>	<b>(918)</b>	<b>(878)</b>	<b>(1,608)</b>	<b>(537)</b>	<b>(1,723)</b>	<b>(591)</b>	<b>(1,918)</b>	<b>(2,237)</b>	<b>(2,580)</b>	<b>(2,398)</b>
Net increase (decrease) in cash and cash equivalents	(256)	253	620	0	(41)	(392)	737	(322)	975	(212)	(357)	(547)	(184)
Cash and cash equivalents – beginning of period	1,257	1,001	1,254	1,874	1,874	1,833	1,441	2,178	1,856	2,830	2,618	2,261	1,714
Cash and cash equivalents – end of period	1,001	1,254	1,874	1,874	1,833	1,441	2,178	1,856	2,830	2,618	2,261	1,714	1,530





# BASE CASE RATIOS & KEY PERFORMANCE INDICATORS

	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
<b>Profitability</b>													
Sales Growth (YoY)	7.4%	-6.0%	10.2%	8.5%	4.1%	14.2%	6.2%	3.9%	4.5%	3.9%	4.2%	3.6%	4.0%
Gross Margin	51.1%	49.9%	49.8%	49.8%	50.8%	51.8%	52.8%	53.7%	54.7%	55.6%	56.5%	57.3%	58.2%
EBITDA Margin	34.6%	27.3%	28.4%	24.6%	27.2%	29.6%	32.0%	34.2%	36.3%	38.3%	40.3%	42.1%	43.9%
Operating Margin	28.0%	20.1%	21.5%	20.2%	22.8%	25.3%	27.6%	29.8%	32.0%	34.0%	35.9%	37.8%	39.5%
Net Profit Margin	11.0%	12.8%	15.2%	14.0%	16.2%	18.5%	20.5%	22.3%	24.1%	25.7%	27.4%	29.0%	30.6%
Net Profit Growth (YoY)	27.5%	-17.9%	21.3%	-4.5%	20.2%	30.3%	17.8%	13.2%	12.6%	11.1%	11.0%	9.8%	9.5%
Return on Assets	8.2%	8.7%	10.2%	9.6%	10.8%	12.9%	13.2%	14.0%	13.8%	14.2%	14.7%	15.1%	15.2%
Return on Equity	-	-	-	214.9%	117.0%	81.1%	63.6%	52.1%	44.5%	39.0%	35.0%	31.8%	29.2%
EPS	\$6.96	\$6.18	\$9.15	\$7.19	\$8.70	\$11.42	\$13.57	\$15.52	\$17.67	\$19.87	\$22.38	\$24.97	\$27.82
<b>Activity</b>													
Receivables Days	62.6	69.0	62.0	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
Inventory Days	38.0	46.9	57.7	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
Payables Days	57.2	60.5	65.1	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
<b>Liquidity</b>													
Current Ratio	1.3	1.3	1.4	1.4	1.4	1.2	1.4	1.3	1.4	1.4	1.3	1.2	1.2
Quick Ratio	1.1	1.1	1.2	1.2	1.2	1.1	1.2	1.1	1.3	1.3	1.2	1.1	1.0
Cash Ratio	0.3	0.4	0.5	0.5	0.4	0.3	0.4	0.4	0.5	0.5	0.4	0.3	0.2
<b>Financial Leverage</b>													
Long-term Debt/Equity	-8.4	-10.5	-266.5	10.1	4.5	1.9	1.4	0.9	0.8	0.5	0.4	0.2	0.1
Long-term Debt/Assets	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1
Total Debt/Equity	-16.6	-21.1	-531.0	21.4	9.8	5.3	3.8	2.7	2.2	1.7	1.4	1.1	0.9
CFO/Liabilities	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4
Interest Coverage	10.0	6.8	8.4	8.7	10.6	14.8	18.7	21.5	24.0	26.9	34.2	45.9	63.8
<b>Other</b>													
Dividends per Share	\$2.35	\$2.63	\$2.92	\$2.92	\$3.25	\$3.38	\$4.51	\$5.07	\$5.65	\$6.37	\$7.07	\$7.89	\$8.71
Payout Ratio	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CapEx/Sales (%)	-3.1%	-2.9%	-3.0%	-3.0%	-4.1%	-3.7%	-4.6%	-4.9%	-5.2%	-5.6%	-5.9%	-6.2%	-6.5%



# COST OF CAPITAL

Component	Methodology
Risk-free rate	Revenue weighted average of 10-year yields in MSI's 3 main markets (US, UK, Canada)
Equity risk premium	Excess return of the S&P 500 above the US Treasury yield
Beta	Mean-reversion adjusted beta using ESG calculated factor (raw is average of 2-year weekly & 3-year monthly regressions)
Cost of equity	Calculated via CAPM
Pre-tax cost of debt	ST & LT Treasury yields, weighted by MSI's current STD & LTD weights, adjusted to corporate levels
Tax rate	MSI's Q3 2021 Trailing 12-month effective tax rate
WACC	Calculated using a market value D/E ratio of 0.13x

Weighted Average Cost of Capital		Peer Group
<b>Cost of Equity</b>		
Risk-Free Rate (10-Year Treasury Bond)	3.1%	
Country Risk Premium	0.7%	
Equity Risk Premium	6.6%	
Raw Beta	0.96	
ESG Factor	0.99	
ESG Adjusted Beta	0.96	
Mean-Reversion Adjusted Beta	0.97	
CAPM	9.5%	
Adjusted CAPM	10.2%	11.0%
<b>Cost of Debt</b>		
Pre-Tax Debt Cost	6.8%	3.9%
Weighted Average Pre-Tax Bond (Loan) Yield	3.6%	3.0%
Credit Rating Average Pre-Tax Yield	4.8%	
Effective Tax Rate	21.4%	
<b>WACC</b>		
Market Capitalization (millions)	\$45,835.79	
Total Long-Term Debt (millions)	\$6,130.00	
Weight of Equity	88.2%	
Weight of Long-Term Debt	11.8%	
Five-Year Historic WACC Average	7.4%	
<b>WACC</b>	<b>9.7%</b>	<b>9.2%</b>







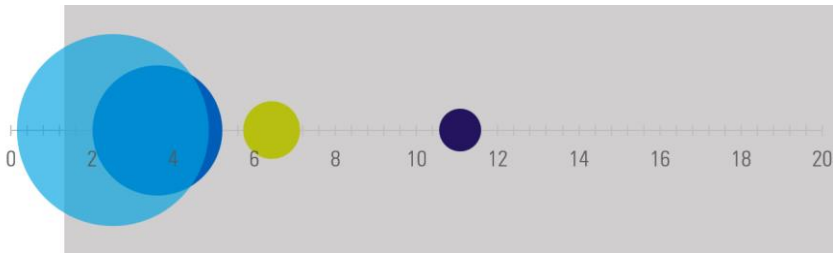
# ESG FACTOR

	MSI	Median Peers	Best	Factor
<b>Environmental</b>				<b>0.40</b>
GHG/Revenue	10	19.7	Lower	0.51
Energy/Revenue	24.8	49.8	Lower	0.50
Water/Revenue	16.9	69.2	Lower	0.24
Waste/Revenue	0.2	0.6	Lower	0.33
<b>Social</b>				<b>1.07</b>
Lost Time Incident Rate	0.14	0.26	Lower	0.54
Total Incident Rate	0.14	0.45	Lower	0.31
Women Employees %	25	36	Higher	1.44
Controversy Level	3	1.5	Lower	2.00
<b>Governance</b>				<b>1.51</b>
Independent Directors %	85.7	80	Higher	0.93
Women Board Members %	25	26.7	Higher	1.07
Board Age Range	27	21	Higher	0.78
Director Meeting Attendance %	100	75	Higher	0.75
Total CEO Compensation	23	5.7	Lower	4.04
<b>ESG Factor</b>				<b>0.99</b>



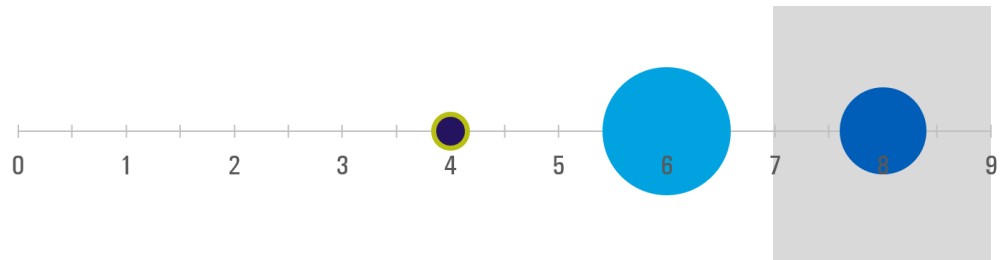


# ALPHABET SCORES



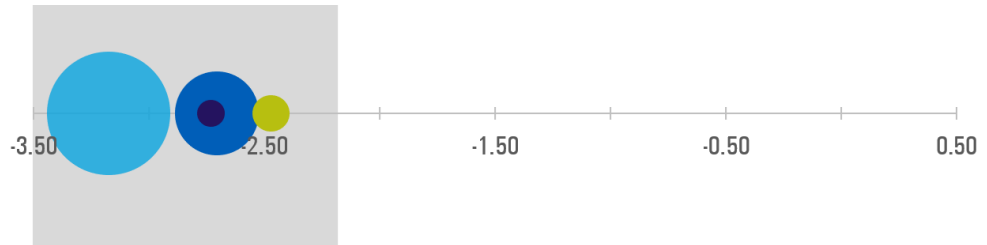
### Altman Z-Score

- MSI
- LHX
- AXON
- TYL



### Piotroski F-Score

- MSI
- LHX
- AXON
- TYL



### Beneish M-Score

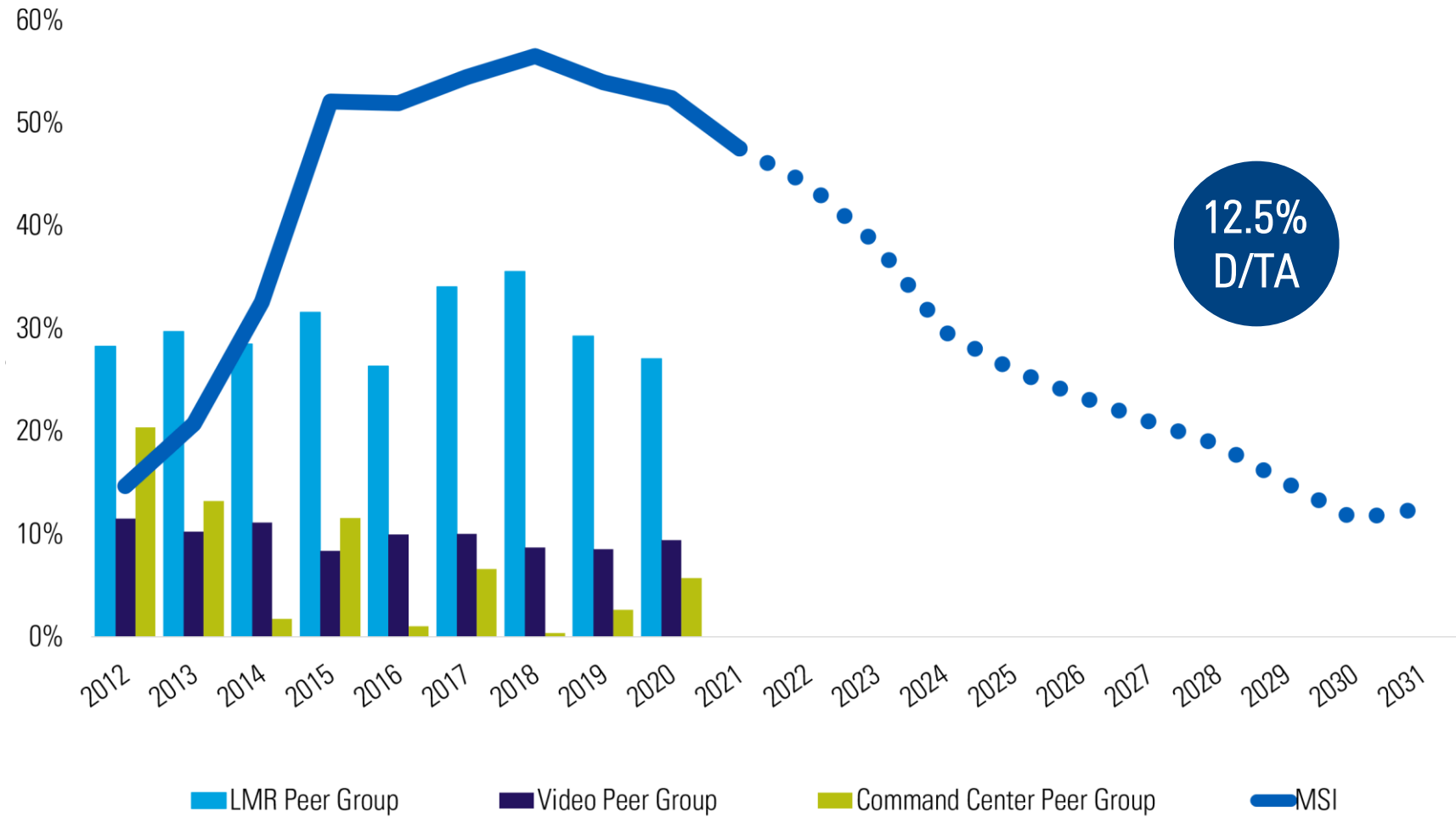
- MSI
- LHX
- AXON
- TYL





# FORECASTED D/TA

### Forecasted D/TA Ratio Among Peers



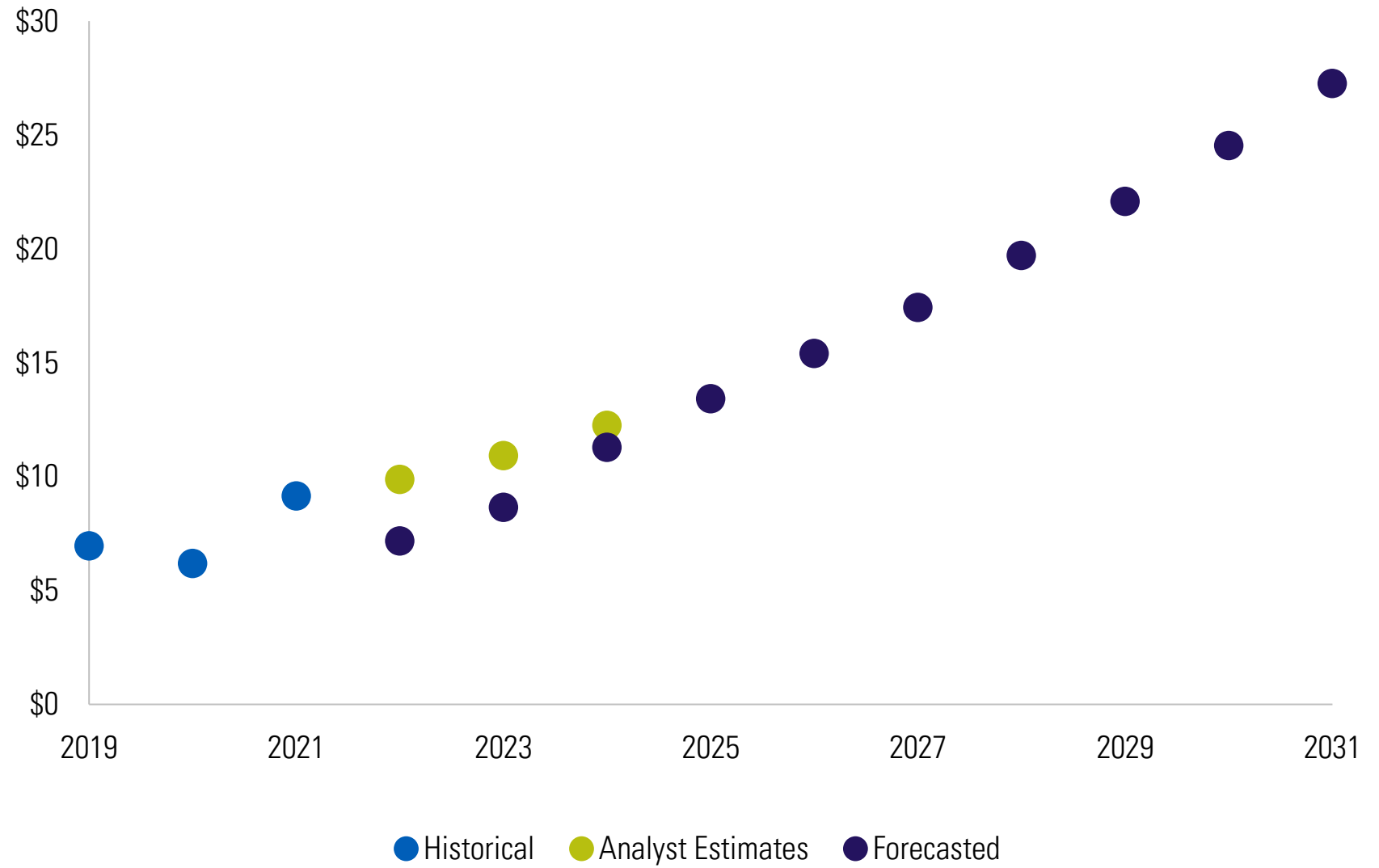
12.5%  
D/TA





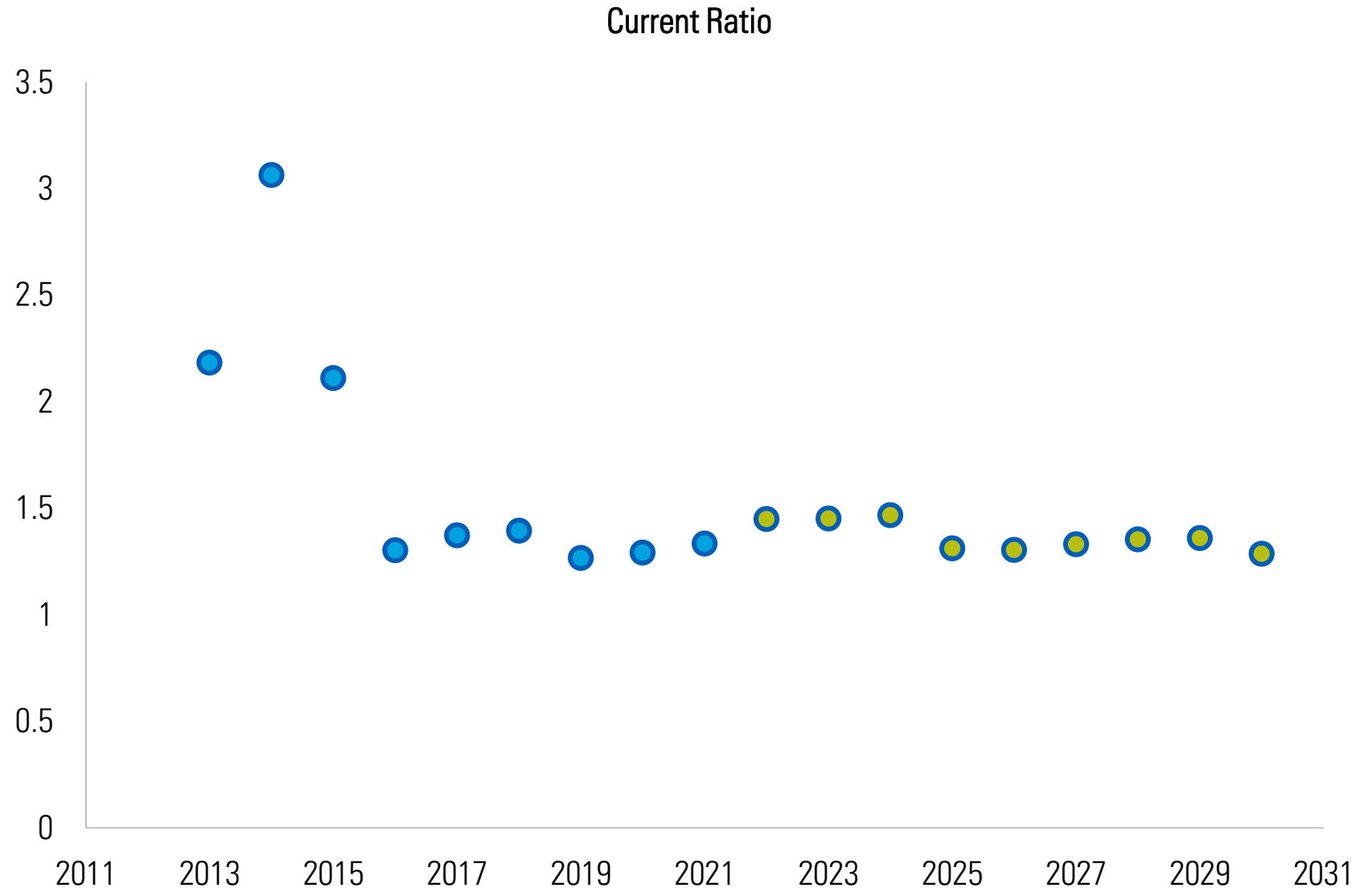
# EPS

## Earnings Per Share



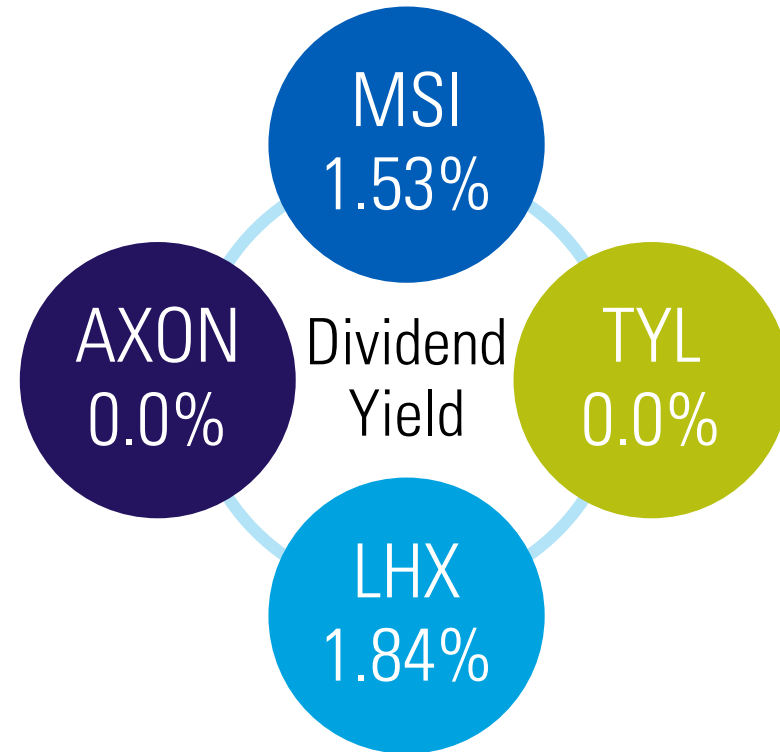


# CURRENT RATIO





# COMPARATIVE DIVIDEND YIELD





# HISTORIC VS. FORECASTED INCOME

## Income Statement Metrics

CAGR	Historical	Model	Model vs. Historical
Total Revenue	3.45% (8-YR)	5.36%	↑
Products & Systems Revenue	2.94% (7-YR)	2.66%	↓
Software & Services Revenue	5.78% (7-YR)	8.83%	↑
Gross Profit Margin	5.33% (8-YR)	7.18%	↑
Net Income	12.66% (8-YR)	14.90%	↑
Operating Income	6.83% (8-YR)	13.50%	↑
EPS	9.77% (8-YR)	16.22%	↑
EBITDA	8.67% (8-YR)	12.37%	↑





# HISTORIC VS. FORECASTED BALANCE SHEET

## Balance Sheet Metrics

	Historical	Model	Model vs. Historical
Cash CAGR	-6.56% (8-YR)	-2.23%	↑
CCC assumption	51.12 (8-YR)	51.12	→
DSO	62 (most recent)	64.5	↑
Debt CAGR	11.80% (8-YR)	-11.50%	↓
Inventory CAGR	10.80% (8-YR)	3.25%	↓
Debt/Total Assets	11.41% (8-YR)	-18.96%	↓







# HISTORIC VS. FORECASTED CASH FLOWS

## Statement of Cash Flow Metrics

CAGR	Historical	Model	Model vs. Historical
OCF	16.14% (8-YR)	11.57%	↓
CAPEX	4.64% (8-YR)	14.92%	↑
Dividends	12.48% (8-YR)	11.80%	↑
Acquisition Spending	6.00% (6-YR)	11.76%	↑





# TEXTUAL ANALYSIS

## Sentiment Dictionaries



Loughran and McDonald (2011)



Henry (2008)

## Sources



2021 10 K



2021 Q4 Earnings Call

## Word Count



330 positive



292 negative

Polarity


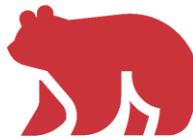


















6%





# DCF ASSUMPTIONS

		
Funding Environment		
Acquisitions/Repurchases		
OCF (Dividends vs. CAPEX)		
Supply Chain Risk		
Inflation Risk		
Political Disruptions		
Terminal Growth Rate	 25 bps	 25 bps
WACC	 25 bps	 25 bps



# RELATIVE VALUATION

Category	Company	Market Cap (mn)	Enterprise Value (mn)	EV/EBITDA			EV/EBIT			EV/Sales			P/E		
				2021	2022	2023F	2021	2022	2023F	2021	2022	2023F	2021	2022	2023F
LMR	L3Harris Technologies Inc*	\$46,790	\$54,331	19.3x	14.9x	16.4x	39.2x	22.9x	25.2x	21.7x	21.1x	17.4x	2.5x	2.7x	3.0x
LMR	Hytera Communications	\$1,288	\$1,848	17.4x	46.2x	NA	46.1x	-46.9x	NA	122.8x	NA	NA	2.4x	2.4x	2.0x
LMR	JVCKenwood Corp	\$254	\$465	2.3x	2.1x	2.0x	10.6x	5.8x	6.6x	16.7x	5.0x	7.7x	.2x	.2x	.2x
Average				13.0x	21.0x	9.2x	31.9x	-6.1x	15.9x	53.7x	13.0x	12.6x	1.7x	1.8x	1.7x
Median				17.4x	14.9x	9.2x	39.2x	5.8x	15.9x	21.7x	22.4x	12.6x	2.4x	2.4x	2.0x
Video	Axon Enterprise Inc*	\$6,932	\$6,516	1,447.3x	33.3x	25.7x	NA	112.6x	83.6x	NA	49.3x	49.9x	10.7x	12.4x	5.3x
Video	Hangzhou Hikvision Digital	\$50,611	\$48,358	26.4x	24.3x	11.8x	27.7x	25.6x	11.7x	33.6x	28.9x	16.7x	6.7x	5.7x	2.7x
Video	Genetec Technology	\$335	\$349	26.6x	22.4x	15.9x	NA	26.0x	16.1x	NA	NA	25.8x	.6x	1.8x	4.6x
Average				500.1x	26.6x	17.8x	27.7x	54.7x	37.1x	33.6x	39.1x	30.8x	6.0x	6.6x	4.2x
Median				26.6x	24.3x	15.9x	27.7x	26.0x	16.1x	33.6x	28.9x	25.8x	6.7x	5.7x	4.6x
Comm. Center	Tyler Technologies Inc*	\$15,427	\$16,511	65.3x	44.8x	33.8x	98.6x	128.7x	36.9x	93.0x	123.4x	48.4x	15.3x	14.6x	8.8x
Comm. Center	Mercury Systems Inc	\$3,280	\$3,713	28.2x	23.9x	17.2x	46.5x	47.1x	78.0x	52.7x	51.3x	24.3x	5.3x	4.1x	3.7x
Comm. Center	Arista Networks Inc	\$34,516	\$31,150	25.2x	41.0x	31.3x	27.7x	44.2x	33.8x	35.9x	62.7x	29.7x	8.3x	13.9x	10.6x
Average				39.6x	36.5x	27.4x	57.6x	73.3x	49.6x	60.5x	79.1x	34.1x	9.6x	10.9x	7.7x
Median				28.2x	41.0x	31.3x	46.5x	47.1x	36.9x	52.7x	62.7x	29.7x	8.3x	13.9x	8.8x

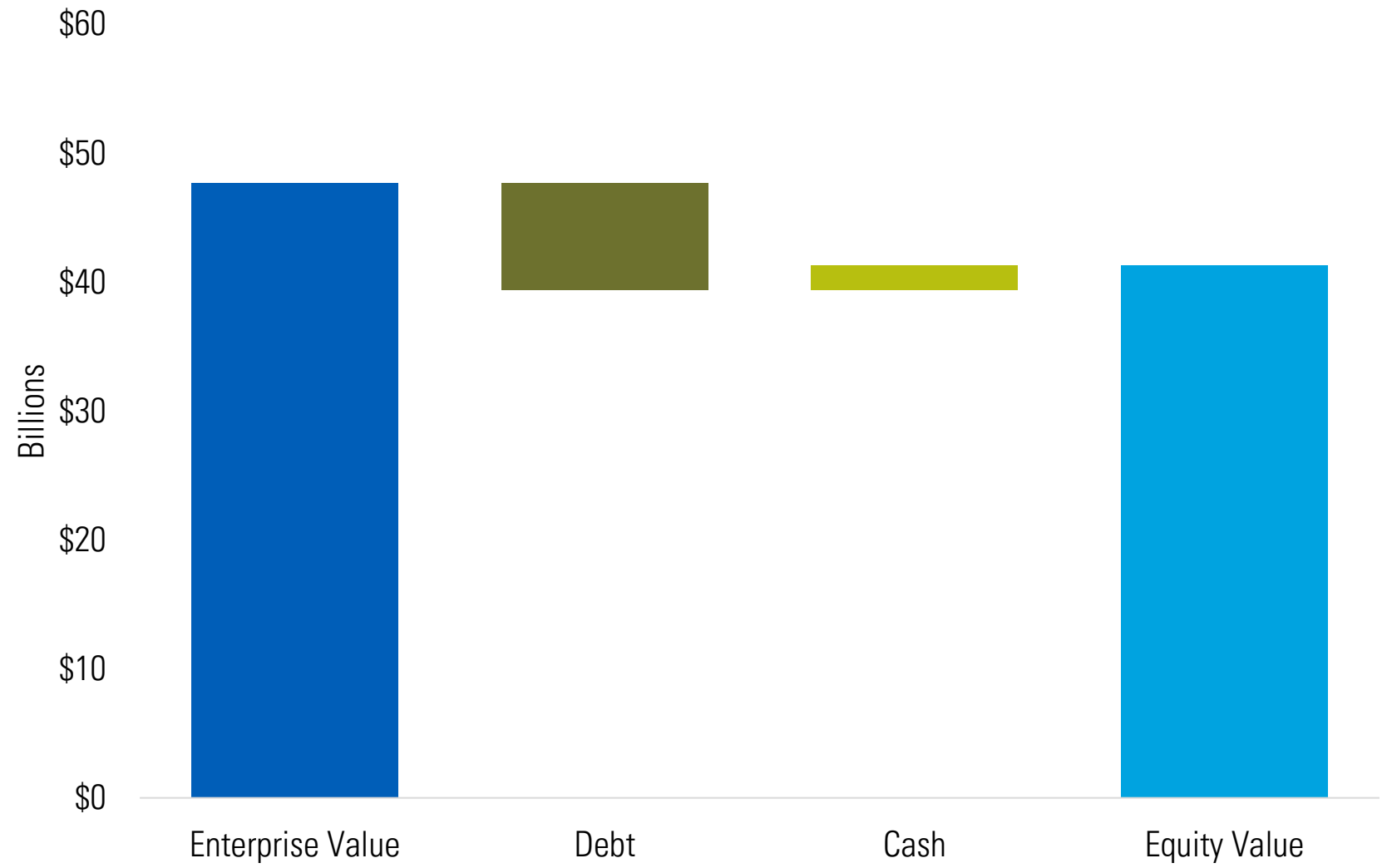
Relative Valuation	EV/EBITDA	P/E
2022 Multiple	20.48x	35.80x
2022 Metric	\$2,506	\$1,244
Enterprise Value	\$51,335	
Market Cap	\$44,931	\$44,518
Implied Share Price	\$258	\$256
Upside	24.1%	22.9%





# BASE CASE WATERFALL

Base Case Waterfall





# BASE CASE DDM

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
EPS Growth	33.9%	12.1%	11.2%	14.6%	14.6%	14.6%	14.6%	14.6%	14.6%	14.6%
Payout Rate	31.2%	31.2%	31.2%	31.2%	31.2%	31.2%	31.2%	31.2%	31.2%	31.2%
EPS	\$9.86	\$11.05	\$12.29	\$14.08	\$16.13	\$18.48	\$21.17	\$24.25	\$27.78	\$31.83
DPS	\$3.07	\$3.44	\$3.83	\$4.39	\$5.03	\$5.76	\$6.60	\$7.56	\$8.66	\$9.92
Cost of Equity	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
EPS Growth	13.8%	13.0%	12.2%	11.4%	10.6%	9.8%	9.0%	8.2%	7.4%	6.6%
Payout Ratio	32.4%	33.7%	34.9%	36.2%	37.5%	38.7%	40.0%	41.2%	42.5%	45.0%
EPS	\$36.21	\$40.91	\$45.89	\$51.12	\$56.53	\$62.07	\$67.65	\$73.21	\$78.64	\$83.84
DPS	\$11.74	\$13.78	\$16.03	\$18.50	\$21.17	\$24.03	\$27.04	\$30.18	\$33.41	\$37.73
Cost of Equity	9.7%	9.6%	9.6%	9.6%	9.5%	9.5%	9.5%	9.5%	9.4%	9.4%

Implied value of the stock = **\$266**  
Upside 27.7%





# DDM SUPPORT

DDM DCF	Bull	Base	Bear
Initial Phase (years)	10	10	10
Initial Payout	31.2%	31.2%	31.2%
Initial EPS Growth	15.1%	14.6%	14.0%
Initial Cost of Equity	9.6%	9.7%	10.5%
Transition Phase (years)	10	10	10
Perpetual Payout	45.0%	45.0%	45.0%
Perpetual EPS Growth	6.1%	5.8%	5.6%
Perpetual Cost of Equity	9.2%	9.4%	10.1%
Stock Price	<b>\$310</b>	<b>\$266</b>	<b>\$191</b>
Upside (Downside)	48.9%	27.7%	-7.7%





# BASE CASE DISCOUNTED CASH FLOW

\$ (in millions)	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Total Revenues	7,887.0	7,414.0	8,171.0	8,867.5	9,231.0	10,539.3	11,190.8	11,632.4	12,156.5	12,636.3	13,164.0	13,644.2	14,183.3
Cost Of Sales	3,859.7	3,713.0	4,099.0	4,448.4	4,538.1	5,077.7	5,283.8	5,382.4	5,512.4	5,615.4	5,732.9	5,823.1	5,932.2
Gross Profit	4,027.3	3,701.0	4,072.0	4,419.1	4,692.9	5,461.6	5,907.1	6,250.0	6,644.1	7,020.9	7,431.1	7,821.0	8,251.1
Operating Expenses	1,817.9	2,210.0	2,319.0	2,240.7	2,186.4	2,340.5	2,331.0	2,273.5	2,230.3	2,177.1	2,130.7	2,075.8	2,029.2
EBITDA	2,732.5	2,025.0	2,317.0	2,178.4	2,506.5	3,121.1	3,576.0	3,976.4	4,413.8	4,843.9	5,300.4	5,745.2	6,221.9
EBIT	2,209.5	1,491.0	1,753.0	1,792.6	2,104.9	2,662.6	3,089.2	3,470.4	3,885.0	4,294.2	4,727.8	5,151.7	5,605.0
Tax Rate	22.4%	19.5%	21.4%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%
EBIAT	1,713.6	1,200.2	1,377.7	1,414.1	1,660.4	2,100.3	2,436.8	2,737.5	3,064.5	3,387.3	3,729.3	4,063.7	4,421.3
D&A	394.0	409.0	438.0	385.7	401.5	458.5	486.8	506.0	528.8	549.7	572.6	593.5	617.0
Capital Expenditures	(248.0)	(217.0)	(243.0)	(263.7)	(374.6)	(387.7)	(513.1)	(571.8)	(631.1)	(703.0)	(770.8)	(848.2)	(922.0)
Change In NWC	94.0	127.0	92.0	(43.3)	11.1	47.8	21.5	13.1	16.0	14.0	15.6	13.6	15.5
FCFF	1,953.6	1,519.2	1,664.7	1,492.8	1,698.4	2,218.8	2,431.9	2,684.8	2,978.2	3,248.1	3,546.8	3,822.7	4,131.7
Enterprise Value	47,703.9												
Net Debt	6,404.0												
Minority Interest	17.0												
Market Value Of Equity	41,282.9												
Diluted Shares Outstanding	176.2												
12 Mo Equity Share Price	\$258												







# TWO-WAY SENSITIVITY PRICE & UPSIDE

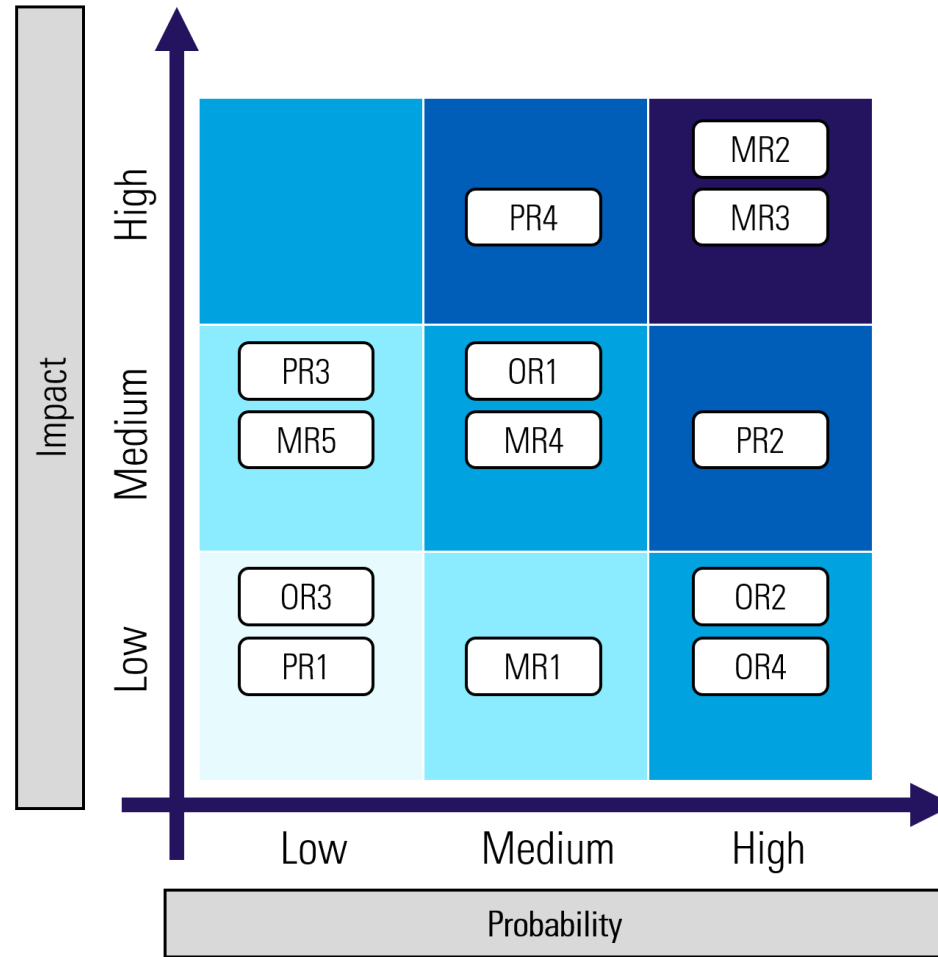
		Terminal Growth				
		2.00%	2.25%	2.50%	2.75%	3.00%
WACC	8.7%	\$254	\$261	\$269	\$277	\$286
	9.2%	\$249	\$256	\$263	\$271	\$280
	9.7%	\$244	\$251	<b>\$258</b>	\$266	\$275
	10.2%	\$240	\$246	\$253	\$261	\$269
	10.7%	\$235	\$241	\$248	\$256	\$264

		Terminal Growth				
		2.00%	2.25%	2.50%	2.75%	3.00%
WACC	8.7%	22%	25%	29%	32%	37%
	9.2%	19%	22%	26%	30%	34%
	9.7%	17%	20%	<b>24%</b>	27%	31%
	10.2%	15%	18%	21%	25%	29%
	10.7%	12%	15%	19%	22%	26%





# INVESTMENT RISKS



## Operational Risks

OR1	Integration Risk
OR2	High Dividends
OR3	Aggressive Research and Development
OR4	Labor Environment

## Market Risks

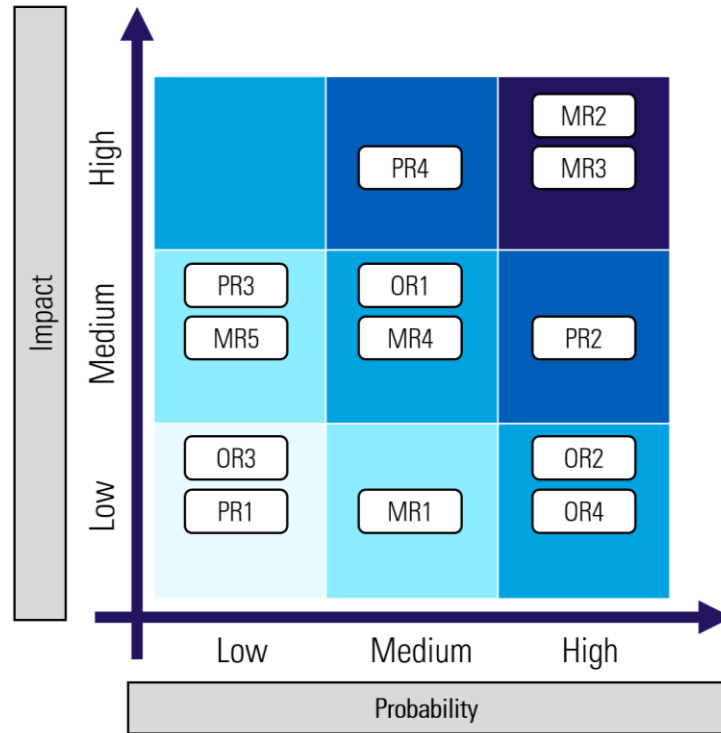
MR1	Threat of New Entrants
MR2	Inflation
MR3	Supply Chain and Backlog
MR4	Technological Advancement
MR5	Volatility

## Political Risks

PR1	UK CMA Investigation
PR2	Tax Environment
PR3	Government Funding
PR4	Regulation



# OPERATIONAL RISKS



**OR1: Integration Risk.** MSI may experience headwinds integrating acquisitions. **Valuation Impact:** Decreasing acquisition revenues by 50% lowers our valuation by 5.18%. **Mitigation:** MSI monitors acquisition success; it has completed three divestments since 2018.

**OR2: High Dividends.** MSI may constrain cash by excessively increasing dividends. **Valuation Impact:** 20% dividend increase, offset from decline in acquisitions lowered the target price by <1%. **Mitigation:** Our model assumes a 13% DPS CAGR, rendering the potential impact minimal.

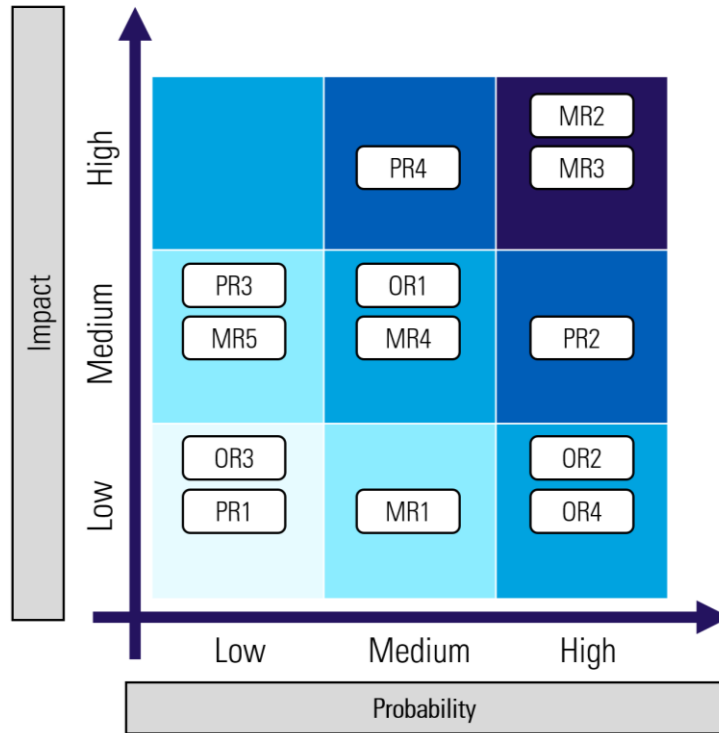
**OR3: Aggressive Research and Development.** R&D could overly tax profits. **Valuation Impact:** 10% R&D spend increase lowers our valuation by 2.25%. **Mitigation:** MSI adequately monitors their return on investments for R&D, focusing on sustainable advances in target technologies.

**OR4: Labor Environment.** The global workforce shortage is negatively affecting manufacturing-heavy firms and producing talent acquisition issues. **Valuation Impact:** 10% increase in SG&A expense results in a 2.28% valuation decrease. **Mitigation:** MSI invests heavily in retention and work-life programs resulting in low turnover (seven-year average employee tenure).





# MARKET RISKS



**MR1: Threat of New Entrants.** The Video Security and Command Center industries are more competitive than LMR. **Valuation Impact:** Decreasing non-LMR sales by 10% leads to a 2.43% target decrease. **Mitigation:** Earmarked OCF towards acquisitions in competitors with attractive technologies.

**MR2: Inflation.** Current inflation decreases MSI's bottom line. **Valuation Impact:** Increase in WACC by 45 bps and increasing COGS by 6% lowers are target by 14.42%. **Mitigation:** Inflation is expected to fall, additionally this acts as a systematic risk.

**MR3: Supply Chain and Backlog.** Global supply chain disruptions have increased backlogs. **Valuation Impact:** 10% increase in DSO and decreasing LMR revenues by 10% decreases our valuation by 10.10%. **Mitigation:** Diverse supplier base, revenue mix shift.

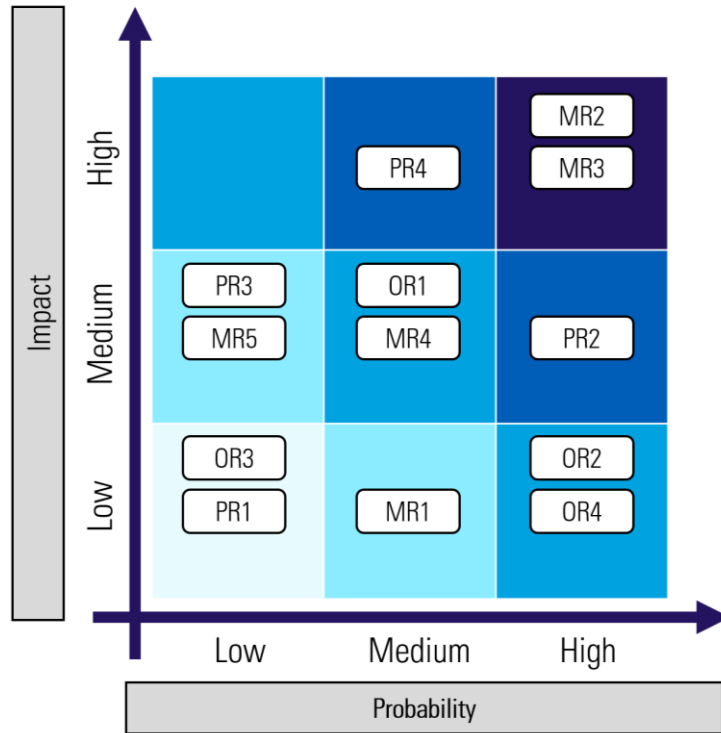
**MR4: Technological Advancement towards LTE.** LTE advancements could suppress LMR growth. **Valuation Impact:** 5% decrease in LMR revenues result in a 5.01% valuation decrease. **Mitigation:** LXN 6000 Mobile LTE network, and revenue shift towards service market.

**MR5: Volatility.** 2020-2021 experienced highest VIX levels in a decade. **Valuation Impact:** Our Value-at-Risk analysis find that MSI shareholders experience the least downside risk compared to peers. **Mitigation:** MSI investors experienced more hedging towards risk than peer investors.





# POLITICAL RISKS



**PR1: UK CMA Investigation.** UK has threatened to replace MSI's Airwave network. **Valuation Impact:** A 10% decrease in UK LMR revenue decreases our valuation by <1%. **Mitigation:** European diversification and Airwave contract renewal.

**PR2: Tax Environment.** Increasing tax rates will shrink net income. **Valuation Impact:** Raising taxes to 26.5% decreases our valuation by 8.24%. **Mitigation:** Leveraging foreign tax credits, systematic risk.

**PR3: Government Funding.** Less government spending decreases sales. **Valuation Impact:** A 5% decrease in government related sales leads to a 4.97% valuation decrease. **Mitigation:** Sticky contracts, increased emphasis on non-governmental agencies, international presence.

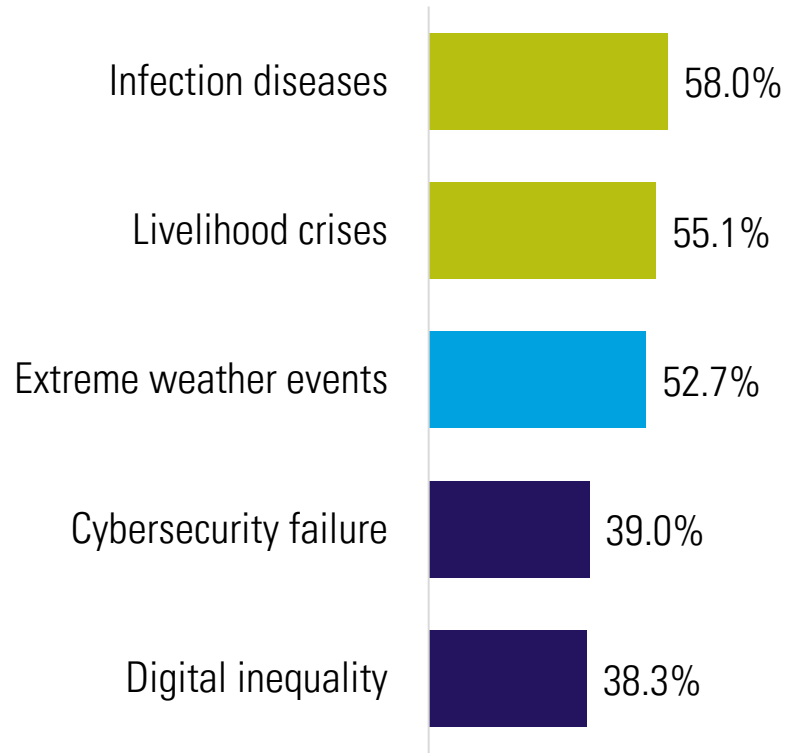
**PR4: Regulation.** Increased regulation results in increased compliance costs and decreases competitiveness. **Valuation Impact:** A 10% increase in SG&A expense while decreasing LMR revenue by 10% causes a valuation decrease of 12.53%. **Mitigation:** Political Action Committee raised \$1,055,614, contributing \$260,500 to federal political candidates 2019-2020 (64% Republican, 36% Democrat).



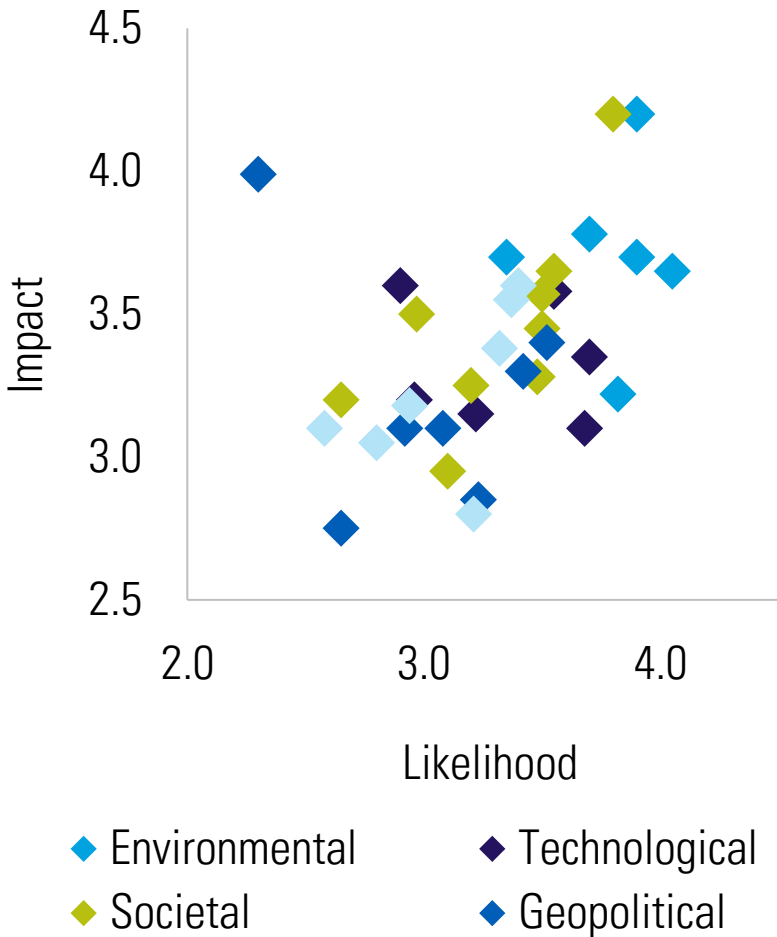


# GLOBAL RISK REPORT

## Clear and Present Dangers

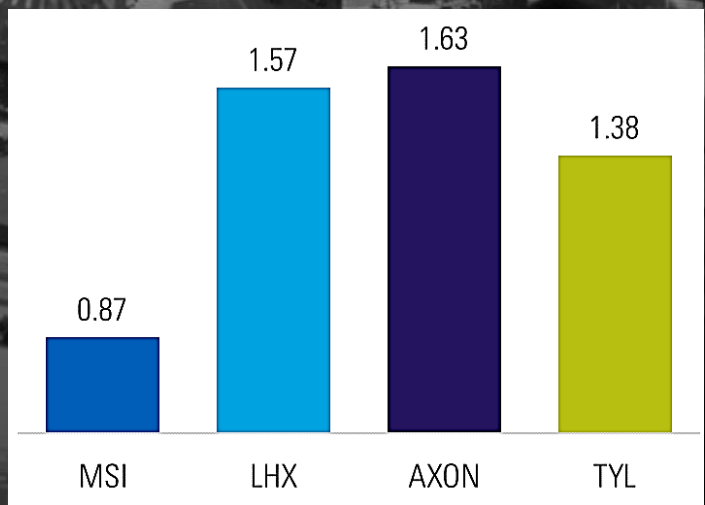


## Global Risk Plot





Beta During Crimean Annexation



# RUSSIAN INVASION OF UKRAINE

## European Locations

### West



Berlin, Germany



Saint-Aubin, France



Arsta, Sweden

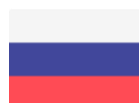
### East



Krakow, Poland



Kyiv, Ukraine



Moscow, Russia



Motorola has suspended orders placed in Russia, including all offerings



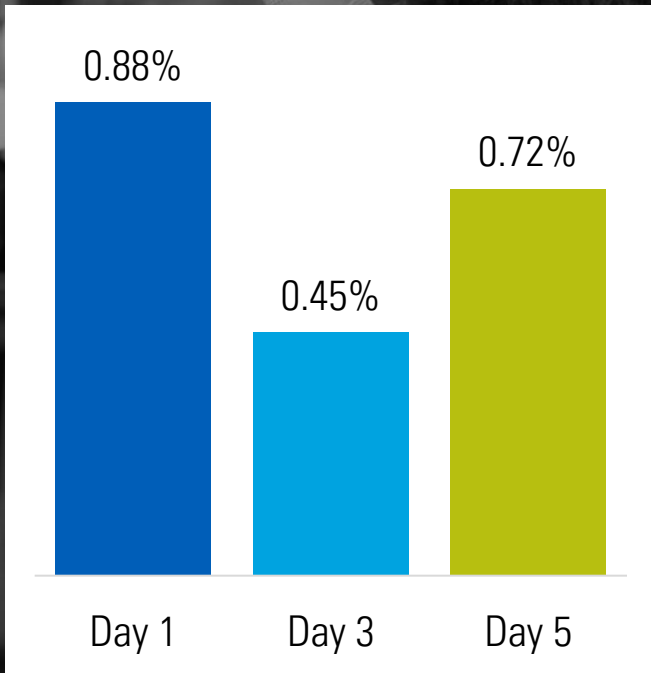
Motorola supplies DP4801e radios to Ukrainian Mobile TeleSystems LLC













45% reduction in global supply of semiconductor grade neon



### Announcement Returns



# ANNOUNCEMENT RETURNS

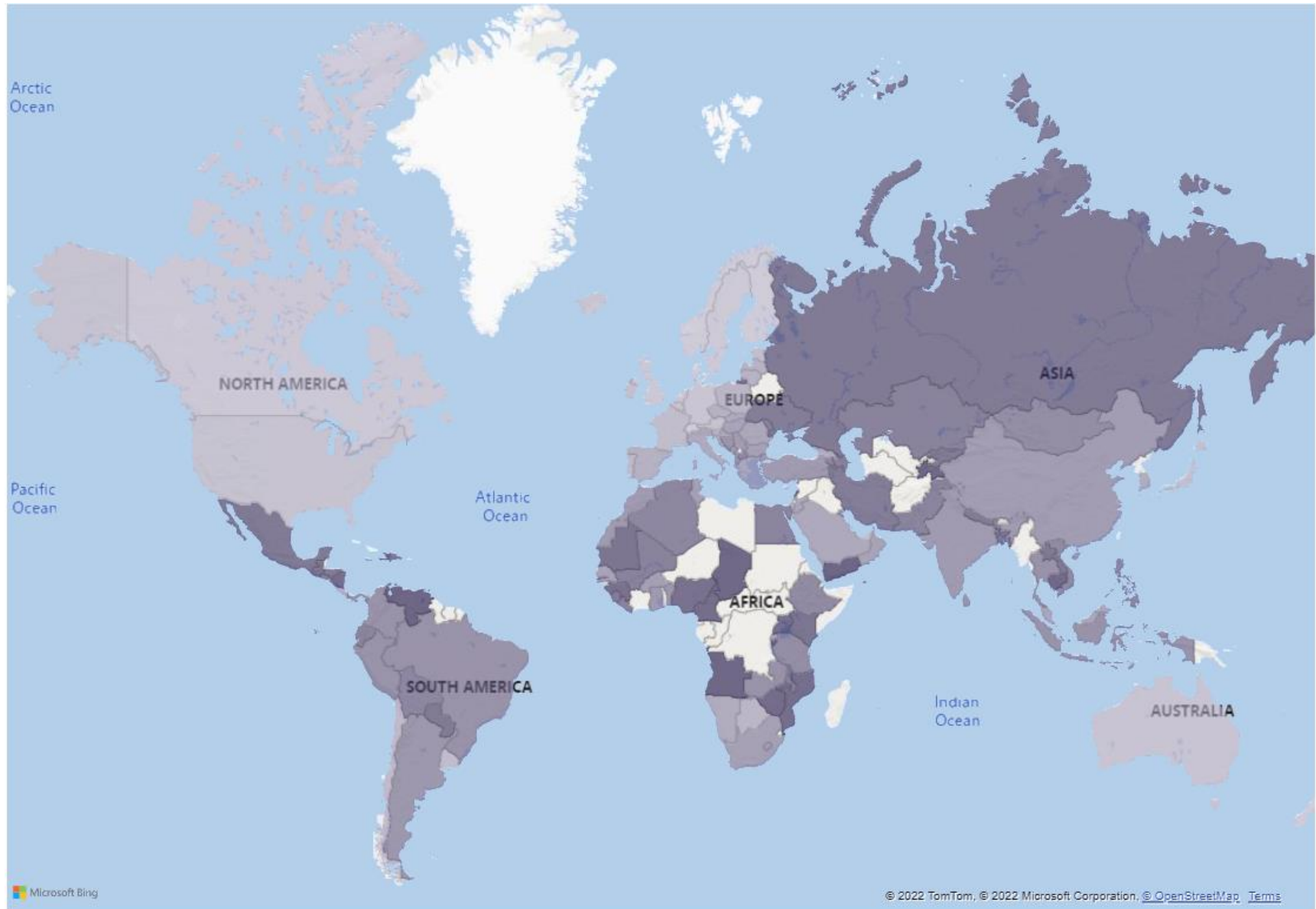
Company	Announcement Date	Day 1	Day 3	Day 5
 Calipsa	4/19/2022	1.18%	-3.97%	-2.14%
 TETRA IRELAND	3/23/2022	1.88%	3.68%	6.17%
 AVA Unified Security	3/3/2022	-0.50%	-2.89%	3.54%
 Envysion	11/2/2021	2.24%	0.58%	1.39%
 callyo	8/31/2020	1.12%	0.31%	-0.36%
 PELCO	8/3/2020	-2.21%	2.40%	1.12%
 IndigoVision	3/17/2020	0.63%	-7.94%	-11.85%
 WatchGuard	7/11/2019	0.05%	0.32%	0.31%
 AVTEC	3/11/2019	2.32%	1.34%	1.63%
 VaaS VIDEO ANALYSIS AS SERVICE ADVANCED AI	1/7/2019	0.52%	1.78%	-0.33%





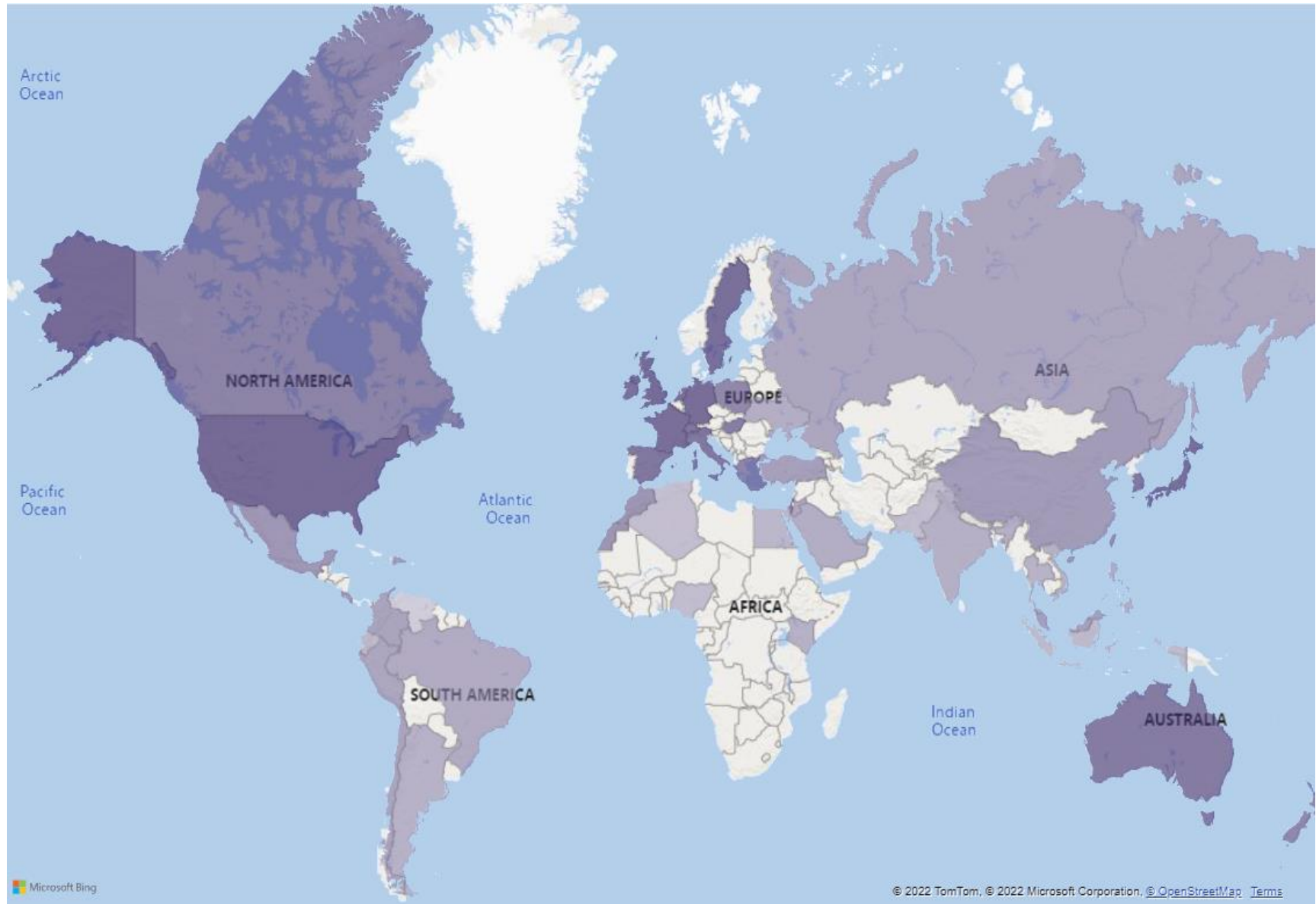


# REGULATORY BURDEN





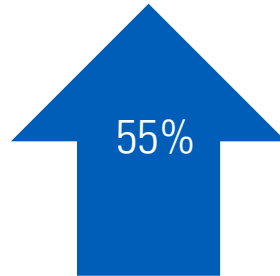
# INTELLECTUAL PROPERTY PROTECTION



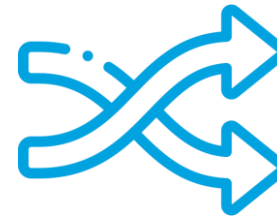


# SUPPLY CHAIN MITIGATION

Increase in Inventory



Product Redesign



Evaluating and Exploring Substitutes

Flexible and Geographically Diverse Supplier Base



Shift Towards Services





# VALUE-AT-RISK ANALYSIS

Peers	VaR	ES
LHX	7.1%	10.9%
AXON	15.4%	20.9%
TYL	8.2%	12.0%
MSI	6.8%	10.2%

Holding period 10

Valuation Date 5/5/2022

First Price Date 5/5/2012

Historic 10-Day Return Distribution

