



The State of Aerospace & Defense Supply Chains

How the ramp up of armament, energy volatility,
and current conflict is impacting critical
defense supply chains



Executive Summary

RapidRatings conducted a stress test on the Aerospace & Defense supply chain modeling a rapid defense production ramp scenario against a simultaneous cost inflation shock - 3% across COGS, staff, and operating expenses, with costs scaling faster than revenue. The scenario reflects two concurrent pressures: a demand-side surge driven by accelerated defense spending, and a cost-side shock driven by a major Middle East conflict causing uncertainty for critical shipping in the Strait of Hormuz and triggering broader energy market volatility.

Key Findings

- Overall High and Very High Risk rises from 17.6% to 20.3% post-stress — a net +2.7 percentage point deterioration across the 4,309-company universe.
- Privates are significantly more stressed than publics, with HR+VHR increasing from 22.1% to 26.7% (+4.6%), versus publics moving from 15.9% to 17.9% (+2.0%).
- Energy-intensive and materials-dependent sectors bear the heaviest stress: Petroleum & Coal (+21.9%), Iron & Steel (+26.1%), and Nonresidential Construction (+30.8%) show catastrophic HR+VHR escalation.
- The Aerospace sector (the largest tracked) shows meaningful deterioration (+6.1%), making it a priority focus for ongoing supplier health monitoring.



US Military Ramps Up Armature While Energy Markets Remain Volatile

Foreword

The U.S.-Iran conflict has significantly disrupted global markets. As the situation evolves every day, industries from automotive to logistics are feeling heavy impacts, driven in large part by the fact that nearly one-fifth of the world's oil supply sits at the center of the conflict zone.

The Strait of Hormuz, one of the world's most critical energy shipping routes, is adding further volatility, with changing situations causing energy prices to swing wildly and impacting consumers, suppliers, and businesses alike.

At the same time, the U.S. military is accelerating the buildup of armaments and critical defense capabilities. This rapid scaling places increasing pressure on domestic suppliers to maintain operational readiness, with the resources, materials, and financial strength required to meet rising defense demand.

Yet suppliers are navigating a challenging environment marked by tariffs, volatile energy costs, high capital expenses, and restrictive trade policies. These pressures raise a critical question: can U.S. suppliers scale at the pace required? And how will critical energy intensive suppliers be impacted by the continued blockage of crucial shipping routes?

The risk is particularly acute among private companies, which represent roughly 75% of most supply chains and are often more vulnerable to external shocks.

As the leading provider of supply chain financial health analytics, RapidRatings maintains more than 500,000 ratings across 150 countries, sourced directly from public and private company financial statements. Leveraging this proprietary data, we stress-tested more than 4,309 critical suppliers in the Aerospace & Defense sectors to evaluate their ability to scale in line with projected demand.

The findings show a growing disconnect between rapid scale and supplier financial readiness.

The Stress Test

We modeled a realistic 20% revenue growth scenario across 4,309 critical Aerospace & Defense public and private suppliers.

Why these assumptions?

Supply chain professionals understand that a stress test is only as credible as its underlying assumptions. The 20% revenue growth figure reflects the Trump administration’s signal to quadruple defense production. The findings show a growing disconnect between rapid scale and supplier financial readiness.

Assumptions

Scope	with Full FY24, FY25, 26 results
Revenue Increase	20%
COGS Variable	110%
Inflation to Operating Expense	3%
Operating Expense Variable	110%
Increase Fixed Assets (only if Revenue increase) ~ Capex	10%
Interest on New Debt - add to interest exp	7%

The 7% interest rate on new debt reflects current borrowing conditions for mid-market private companies, which is the segment bearing the greatest risk in this analysis. The COGS variable of 110% captures a well- documented supply chain reality: when suppliers scale rapidly, input costs rise faster than output prices. Labor tightens, raw material premiums emerge, and pricing power rarely materializes fast enough to compensate. Any supply chain professional who has managed a rapid ramp cycle recognizes this pattern. Together, these assumptions model what scaling actually costs; not what it costs under ideal conditions.

Demographics

We applied the stress test on 3,112 public and 1,197 private suppliers across 30 NAICS, spanning Aerospace Manufacturing, Semiconductor and Other Electronic Component Manufacturing, Computer Systems Design and Related Services, Bolt Manufacturing, and more.

PRE-STRESS: Risk Was Already Elevated Before Growth

Before applying the growth scenario:

- Nearly 18% of all suppliers were already high risk or very high risk
- Private companies, which make up the bulk of supply chains on average, showed the greatest vulnerability, with 22% in the highest risk categories

This means critical supply base is not starting from a position of financial strength.

Pre-Stress

	Very Low Risk	Low Risk	Medium Risk	High Risk	Very High Risk
Public	16.29%	34.31%	33.68%	14.94%	0.96%
Private	35.34%	25.31%	17.29%	19.55%	2.51%
Overall	21.58%	31.68%	29.13%	16.22%	1.39%

Understanding Why Private Suppliers Carry Greater Risk

The data consistently shows private suppliers as the more financially vulnerable segment. For procurement professionals, understanding the structural reasons behind this is as important as the numbers; because it directly shapes how risk should be managed at the contracting and sourcing level.

Private suppliers in construction, specialty manufacturing, and systems integration operate on thin margins with limited financial buffers. They cannot access equity capital markets to fund rapid growth. When a large contract arrives, their options are retained earnings; often insufficient at the required scale, or debt at significant cost.

Increasingly, that debt is sourced from private credit markets. While private credit has expanded access to capital for mid-market firms, it has also reduced transparency. Recent situations involving privately financed companies such as Market Financial Solutions and Tricolor demonstrate how leverage within private credit structures can become visible only once restructuring emerges. The practical consequence for procurement teams is reduced visibility into balance sheet strain; and in turn reduced warning time before a supplier situation becomes critical.

Working capital compounds the problem. Many of these firms are subcontractors where payment terms are dictated from above. When asked to ramp ahead of payment cycles, they are effectively self-financing the growth of the organizations above them. Under 50% growth scenarios with simultaneous cost inflation, this becomes financially untenable.

The risk here is structural, not operational. Many of these private suppliers are highly capable and strategically irreplaceable. That distinction matters for procurement teams: financial fragility in a critical supplier is a sourcing problem, not just a vendor management problem.

On average, private firms make up 75% of supply chains in several critical industries. This imbalance creates significant disruption risk.

POST STRESS: Growth Drives Risk Convergence

After applying the stress test:

- Overall high-risk and very high-risk suppliers increased to 20% - a 15% increase
- The share of private suppliers in high or very high risk rises from 22% to nearly 27%
- Among public companies, high-risk suppliers increased by over 12%

Our nation’s defense relies heavily on US private companies. These are the firms experiencing the most severe financial strain under growth conditions. In other words, the very companies required to scale defense productions are the least equipped to sustain that scale.

Post-Stress

	Very Low Risk	Low Risk	Medium Risk	High Risk	Very High Risk
Public	23.46%	32.39%	26.29%	16.84%	1.03%
% Change	+44%	-5%	-21%	+13%	+7%
Private	37.18%	17.29%	18.80%	23.22%	3.51%
% Change	+5%	-32%	+9%	+19%	+40%
Overall	27.27%	28.20%	24.21%	18.61%	1.72%
% Change	+26%	-11%	-17%	+15%	+24%

+/- X% Desirable Change
 +/- X% Undesirable Cahnge

PRE-STRESS Across NAICS

Prior to stress testing, risk was largely spread across categories.

All Companies	Very Low Risk	Low Risk	Medium Risk	High Risk	Very High Risk
Aerospace Product and Parts Manufacturing	22.54%	32.79%	21.31%	18.85%	4.51%
Semiconductor and Other Electronic Component Manufacturing	17.31%	35.10%	27.40%	18.27%	1.92%
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	25.25%	30.81%	31.31%	12.63%	0.00%
Computer Systems Design and Related Services	33.33%	32.28%	22.75%	11.64%	0.00%
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	32.43%	28.83%	17.12%	18.92%	2.70%
Architectural, Engineering, and Related Services	37.76%	27.55%	20.41%	13.27%	1.02%
Electric Power Generation, Transmission & Distribution	1.16%	20.93%	68.60%	9.30%	0.00%
Communications Equipment Manufacturing	25.64%	26.92%	26.92%	16.67%	3.85%
Other Electrical Equip. and Component Manufacturing	8.33%	33.33%	30.56%	26.39%	1.39%
Industrial Machinery Manufacturing	26.87%	29.85%	29.85%	11.94%	1.49%
Other General Purpose Machinery Manufacturing	37.50%	31.25%	20.31%	10.94%	0.00%
Computer and Peripheral Equipment Manufacturing	18.75%	29.69%	37.50%	14.06%	0.00%
Other Fabricated Metal Product Manufacturing	36.21%	31.03%	18.97%	13.79%	0.00%
Motor Vehicle Parts Manufacturing	32.73%	30.91%	27.27%	9.09%	0.00%
Scheduled Air Transportation	28.57%	30.61%	14.29%	26.53%	0.00%
Metalworking Machinery Manufacturing	22.73%	34.09%	34.09%	6.82%	2.27%
Mgmt, Scientific, and Technical Consulting Services	19.05%	47.62%	19.05%	14.29%	0.00%
Basic Chemical Manufacturing	7.50%	22.50%	60.00%	10.00%	0.00%
Nonresidential Building Construction	30.77%	43.59%	20.51%	5.13%	0.00%
Machinery, Equip., and Supplies Merchant Wholesalers	23.08%	28.21%	20.51%	25.64%	2.56%
Plastics Product Manufacturing	8.57%	28.57%	28.57%	31.43%	2.86%
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	18.75%	37.50%	31.25%	12.50%	0.00%
Petroleum and Coal Products Manufacturing	15.63%	43.75%	34.38%	6.25%	0.00%
Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing	13.33%	26.67%	43.33%	16.67%	0.00%
Engine, Turbine, and Power Transmission Equipment Manufacturing	6.67%	46.67%	36.67%	6.67%	3.33%

POST-STRESS Across NAICS

Following the stress test, risk greatly increased across sectors.

All Companies	Very Low Risk	Low Risk	Medium Risk	High Risk	Very High Risk
Aerospace Product and Parts Manufacturing	25.82%	26.64%	18.03%	24.59%	4.92%
Semiconductor and Other Electronic Component Manufacturing	19.23%	32.21%	24.04%	22.60%	1.92%
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	30.81%	31.31%	25.25%	12.12%	0.51%
Computer Systems Design and Related Services	40.21%	26.46%	17.46%	15.87%	0.00%
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	33.33%	23.42%	21.62%	18.92%	2.70%
Architectural, Engineering, and Related Services	47.96%	18.37%	16.33%	16.33%	1.02%
Electric Power Generation, Transmission & Distribution	3.49%	58.14%	33.72%	4.65%	0.00%
Communications Equipment Manufacturing	34.62%	23.08%	20.51%	17.95%	3.85%
Other Electrical Equip. and Component Manufacturing	12.50%	31.94%	26.39%	26.39%	2.78%
Industrial Machinery Manufacturing	31.34%	32.84%	22.39%	11.94%	1.49%
Other General Purpose Machinery Manufacturing	39.06%	32.81%	15.63%	10.94%	1.56%
Computer and Peripheral Equipment Manufacturing	15.63%	32.81%	28.13%	21.88%	1.56%
Other Fabricated Metal Product Manufacturing	39.66%	31.03%	13.79%	13.79%	1.72%
Motor Vehicle Parts Manufacturing	32.73%	23.64%	30.91%	12.73%	0.00%
Scheduled Air Transportation	51.02%	16.33%	16.33%	16.33%	0.00%
Metalworking Machinery Manufacturing	25.00%	34.09%	31.82%	9.09%	0.00%
Mgmt, Scientific, and Technical Consulting Services	26.19%	35.71%	14.29%	23.81%	0.00%
Basic Chemical Manufacturing	12.50%	17.50%	55.00%	15.00%	0.00%
Nonresidential Building Construction	20.51%	12.82%	30.77%	35.90%	0.00%
Machinery, Equip., and Supplies Merchant Wholesalers	17.95%	33.33%	12.82%	33.33%	2.56%
Plastics Product Manufacturing	11.43%	22.86%	22.86%	40.00%	2.86%
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	18.75%	37.50%	31.25%	12.50%	0.00%
Petroleum and Coal Products Manufacturing	25.00%	12.50%	34.38%	28.13%	0.00%
Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing	16.67%	23.33%	30.00%	30.00%	0.00%
Engine, Turbine, and Power Transmission Equipment Manufacturing	10.00%	36.67%	40.00%	10.00%	3.33%

A Closer Look at Sector-Level Stress

5a. Most Stressed Sectors — Highest HR+VHR Deterioration

The following sectors show the largest increase in High + Very High Risk concentration post-stress, driven primarily by energy cost passthrough from the Iran war oil/gas shock:

NAICS Sector	ΔHR+VHR	Iran War Impact Driver
Nonresidential Building Construction	+30.8%	Steel/cement cost spike, materials inflation, supply chain disruption
Iron & Steel Mills & Ferroalloy Mfg	+26.1%	Energy-intensive; surging electricity and natural gas costs crushing margins
Petroleum & Coal Products Mfg	+21.9%	Direct crude oil feedstock; Brent up 25–40%; immediate margin collapse
Plastics Product Manufacturing	+11.4%	Petrochemical feedstocks, crude-linked; energy costs for extrusion/molding
Resin, Synthetic Rubber & Fibers	+13.3%	Qatari LNG/ethylene chain disrupted; key A&D composite material
Machinery, Equipment & Supplies Whsls	+7.7%	Freight/shipping costs surging; logistics disruption from Hormuz closure

5c. Critical NAICS Sector Comparison

The table below provides pre/post HR+VHR rates and delta for all key NAICS sectors with Iran War impact classification:

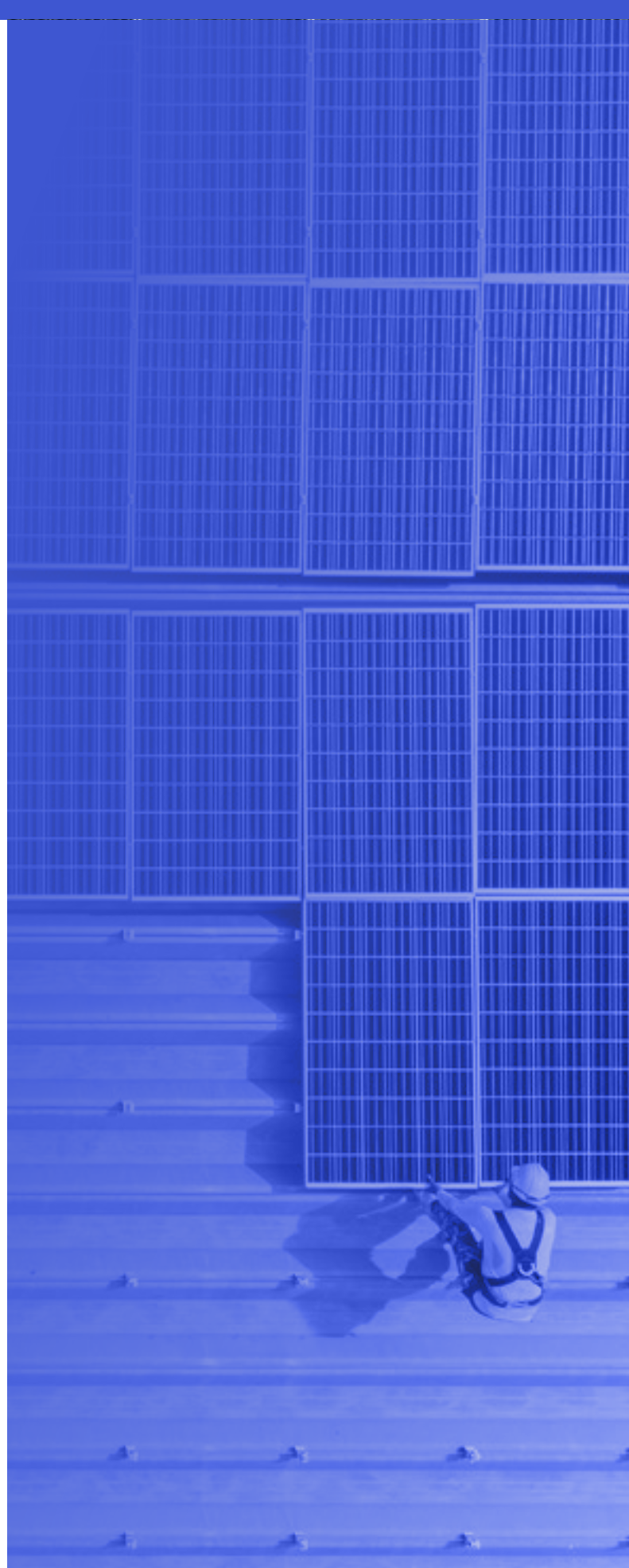
NAICS Sector	Pre HR+VHR	Post HR+VHR	Delta	Iran Impact
Petroleum & Coal Products Mfg	6.30%	28.10%	+21.9pp	CRITICAL
Plastics Product Manufacturing	34.30%	42.90%	+11.4pp	CRITICAL
Iron & Steel Mills & Ferroalloy Mfg	17.40%	43.50%	+26.1pp	CRITICAL
Nonresidential Building Construction	5.10%	35.90%	+30.8pp	HIGH
Aerospace Product & Parts Mfg	23.40%	29.50%	+6.1pp	HIGH
Machine Shops; Screw, Nut & Bolt Mfg	21.60%	21.60%	+0.0pp	STABLE
Machinery, Equipment & Supplies Whls	28.20%	35.90%	+7.7pp	HIGH
Semiconductor & Electronic Component Mfg	20.20%	24.50%	+4.3pp	MODERATE
Basic Chemical Manufacturing	10.00%	15.00%	+5.0pp	HIGH
Resin, Synthetic Rubber & Fibers Mfg	16.70%	30.00%	+13.3pp	HIGH
Engine, Turbine & Power Trans. Equip Mfg	10.00%	13.30%	+3.3pp	MODERATE
Computer Systems Design & Related Svcs	11.60%	15.90%	+4.2pp	MODERATE
Navigational, Measuring & Control Instr Mfg	12.60%	13.10%	+0.5pp	STABLE
Arch., Engineering & Related Svcs	14.30%	17.30%	+3.1pp	LOW

The Energy Crisis: A Risk Factor That Amplifies These Findings

The foreword identifies energy volatility as a pressure on the supply chain, but it deserves more direct treatment. For supply chain professionals, tariff exposure is not background noise; it is an active risk that intersects directly with the financial stress findings here.

The IEA has described this as the largest oil supply disruption in history. Tanker traffic through Hormuz has collapsed, shipping war-risk premiums are surging, and Gulf producers have curtailed output as storage fills. This disrupts raw material supply for energy-intensive manufacturers across the A&D supply chain, most critically metals, chemicals, and specialty materials.

As energy volatility persists, it can severely compress margins, restrict production flexibility, and heighten financial strain across already vulnerable suppliers.



Implications for A&D Supply Chains

The Aerospace & Defense sector must move beyond traditional procurement and project planning. Given that Nonresidential Construction showed a +30.8pp HR+VHR increase, single-source dependencies in facilities and infrastructure buildout represent the highest-urgency re-sourcing priority.

The findings in this report point to specific actions that supply chain and procurement leaders should prioritize.

- **Monitor supplier financial health continuously, not just at contract award.** Risk profiles shift rapidly under growth conditions, particularly for private suppliers in manufacturing and systems integration.
- **Tier suppliers by financial risk and replaceability simultaneously.** A high-risk supplier that can be dual-sourced is a manageable problem. A high-risk single-source supplier for a specialized capability is a program risk. These require fundamentally different mitigation strategies.
- **Stress test supplier financial capacity before awarding large contracts.** Awarding a contract to a supplier who cannot execute it doesn't transfer the risk; it concentrates it. Financial capacity assessment should be a prerequisite for critical scope awards.
- **Engage proactively with at-risk but strategically critical vendors.** Supply chain finance programs, adjusted payment terms, and contract structures that reduce working capital burden can preserve supplier viability. The cost of proactive support is almost always lower than the cost of a mid-project default.

Growth alone does not strengthen suppliers. In many cases, it weakens them.

Conclusion: Armament Production Requires Financial Visibility

U.S. defense is only as strong as the suppliers backing it. It is critical that defense suppliers are not only operationally capable, but financially equipped to sustain the demands placed on them.

This analysis makes clear that growth alone does not create resilience. In many cases, it exposes underlying fragility, particularly among the private suppliers that form the backbone of the defense industrial base.

Without clear, continuous visibility into supplier financial health, organizations risk scaling production on an unstable foundation. The consequences are not theoretical. They manifest as delays, disruptions, and, in extreme cases, supplier failure at the exact moment performance is most critical.

To meet the demands of this environment, supply chain leaders must move beyond traditional metrics and incorporate financial health as a core pillar of execution.



Learn how RapidRatings helps the world's largest supply chains and vendor networks **mitigate risk.**

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