



Private Equity and the Future of Manufacturing

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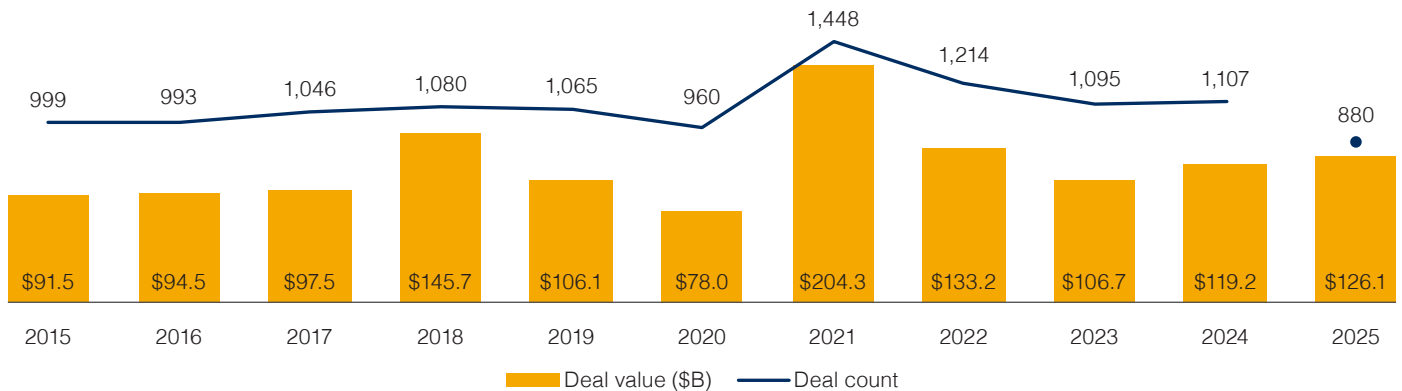
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Executive summary

Manufacturing PE deal activity



Source: PitchBook • Geography: US • As of December 10, 2025

- 2025 saw manufacturing deal flow recover to healthy levels. Manufacturing private equity (PE) closed 880 deals for a total of \$126.1 billion in 2025, with aggregate value rising even as counts lagged prior peaks—reflecting higher underwriting bars and competition for premium assets. The median buyout size reached a record \$601.2 million, and deals of \$2.5 billion or more totaled eight, creating a barbell distribution alongside steady sub-\$25 million consolidation. Buyout value reached \$120 billion, while growth deals fell below 200 at an average value of \$6.1 billion, consistent with cautious growth underwriting.
- Pricing signaled a flight to quality. Overall M&A in manufacturing printed 11.5x EV/EBITDA and 1.9x EV/revenue in 2025, with buyout revenue multiples at 2x the trailing-12-month total, underscoring buyer preference for earnings durability, aftermarket exposure, and qualified supply chains. Strategics re-engaged selectively, lifting competitive tension in well-positioned processes and pushing sponsors toward earnouts, rollover equity, and larger equity checks.
- Digitalization and tech stack investment became an even more intensive focus area. The AI/advanced-manufacturing wave broadened: 214 PE deals for AI manufacturing tech closed in 2025, while advanced-manufacturing M&A reached 42 deals and a total of \$15 billion—often indicating that firms were engaged in “buy not build” strategies for deploying inspection, scheduling, simulation/digital twins,

and autonomous mobile robots on the plant floor. Execution focus shifted to throughput, scrap reduction, and maintenance predictability with near-term to midterm thresholds for returns on spending.

- Macroeconomic trends remain as headwinds, but no longer resemble a stop sign. The Manufacturing Purchasing Managers' Index (PMI) released by the Institute for Supply Management registered 48.2 in November 2025, with the new orders segment at 47.4 and the backlog segment at 44, confirming late-cycle softness. Production came in at 51.4 in a slight expansion, and easing financial conditions could signal gradual normalization into 2026.¹
- Especially following the pandemic and in the era of new tariffs, inventory and supply-chain posture favors resilience over just-in-time strategies, and government incentives continue to localize semiconductor-related ecosystems around leading fabrication plants. According to the Federal Reserve, industrial production is holding steady at an index read of 97,² but capacity utilization is trending lower than longer-run averages, suggesting a drag of market uncertainty.³
- Sponsors should expect steady control-deal cadence, disciplined add-ons, and an exit mix skewed to sponsor-to-sponsor and recapitalization pathways—while IPO optionality remains a function of rate visibility and earnings stabilization.

1: “ISM® PMI® Reports Roundup: November Manufacturing,” Institute for Supply Management, Dan Zeiger, December 1, 2025.

2: “Industrial Production: Manufacturing (NAICS) (IPMAN),” Federal Reserve Bank of St. Louis, n.d., accessed December 17, 2026.

3 “Industrial Production and Capacity Utilization – G.17,” Board of Governors of the Federal Reserve System, December 3, 2025.

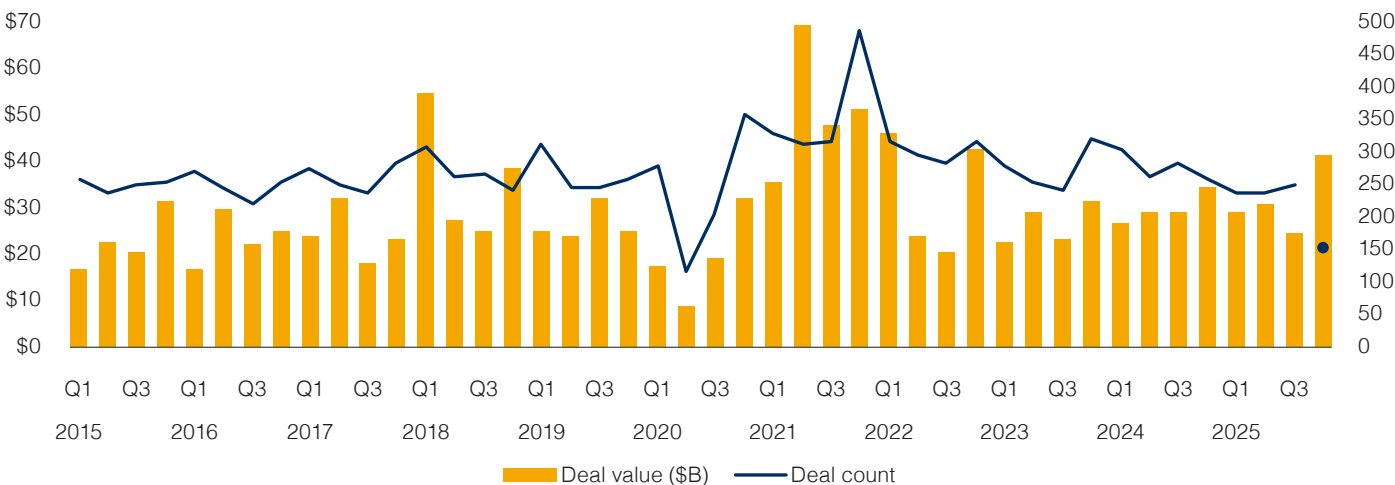
Trend analysis

Dealmaking picks back up, with signs of competition and volatility still exerting impact

PE activity in manufacturing has been built back to a robust level. 880 deals for an aggregate of \$126.1 billion in 2025 represent growth in total deal value, albeit with the count of deals occurring at a slower pace. However, that is likely due to overall economic uncertainty and competition for well-positioned

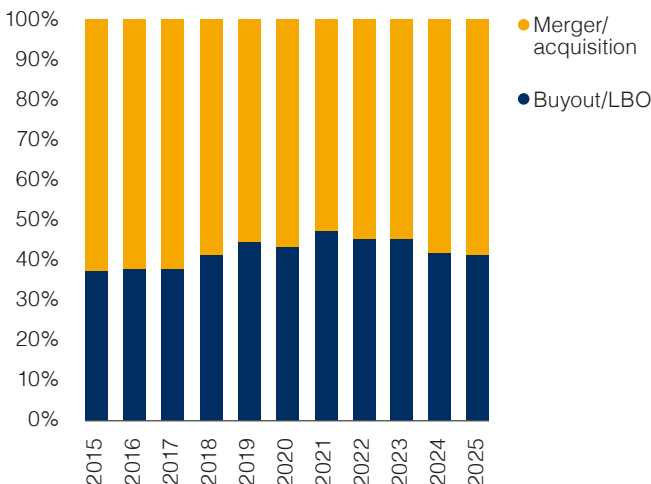
targets coming to market, as strategic M&A has seen its share of overall deal counts grow after diminishing somewhat throughout the late 2010s. There are perhaps other factors at play, but a key driver in the slight moderation of PE sponsors' relative volume is most likely the rising cost of debt, leading to elevation in underwriting thresholds, with a heightened focus on pricing power, more durable earnings quality, and defensible end markets, amid other variables.

Manufacturing PE deal activity by quarter



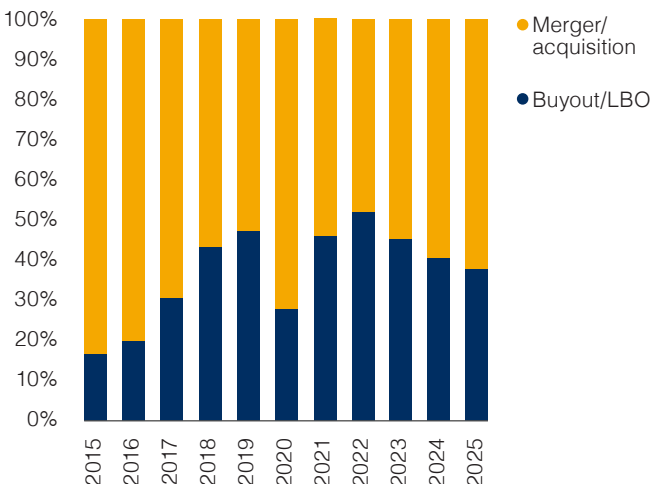
Source: PitchBook • Geography: US • As of December 10, 2025

Share of manufacturing M&A deal count by type



Source: PitchBook • Geography: US • As of December 10, 2025

Share of manufacturing M&A deal value by type



Source: PitchBook • Geography: US • As of December 10, 2025

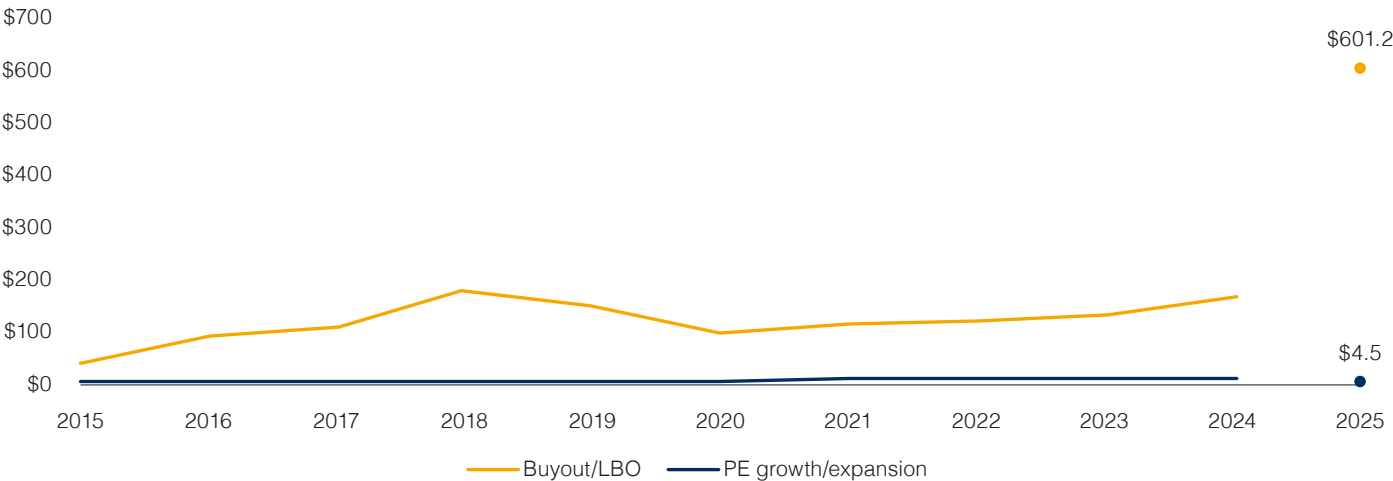
Transaction metrics suggest a confluence of ample capital and competition

Buyout multiples are sparse in count but align with broader M&A EV/EBITDA and EV/revenue figures. 2025 has seen a surge to an 11.5x EV/EBITDA multiple in M&A overall, while EV/revenue multiples hit 1.9x—the buyout counterpart to that latter figure for the trailing 12 months jumped to 2x. More variability in revenue multiples is to be expected given broader economic and market conditions, as sponsors and strategic acquirers alike are somewhat more cautious of growth prospects; conversely, the surge to a record EBITDA figure for overall M&A underlines buyers’ emphasis on well-established businesses

with consistent financial strength and stable economics on maintained capital bases. In turn, these levels of multiples juxtaposed against dealmaking health suggest the impact of elevated PE capital overhangs and a coterie of strategic acquirers with robust balance sheets that are willing and able to strike deals at lucrative valuations. The record median buyout value of \$601.2 million observed in 2025 supports that analysis.

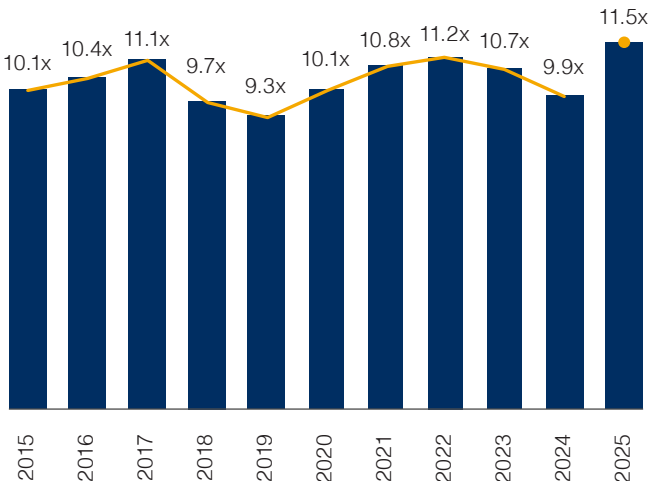
M&A services have increased due to heightened PE activity, particularly among PE-owned manufacturers pursuing acquisitions, restructuring, and exit readiness, as they are not putting ideal cash to work.

Median manufacturing PE deal value (\$M) by type



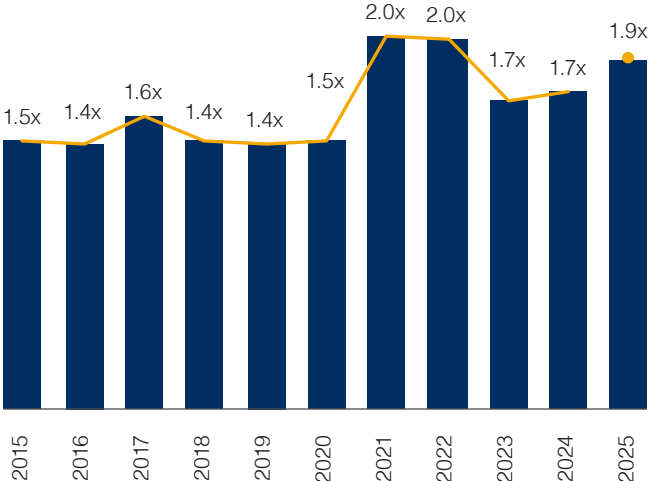
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Median manufacturing M&A EV/EBITDA multiples



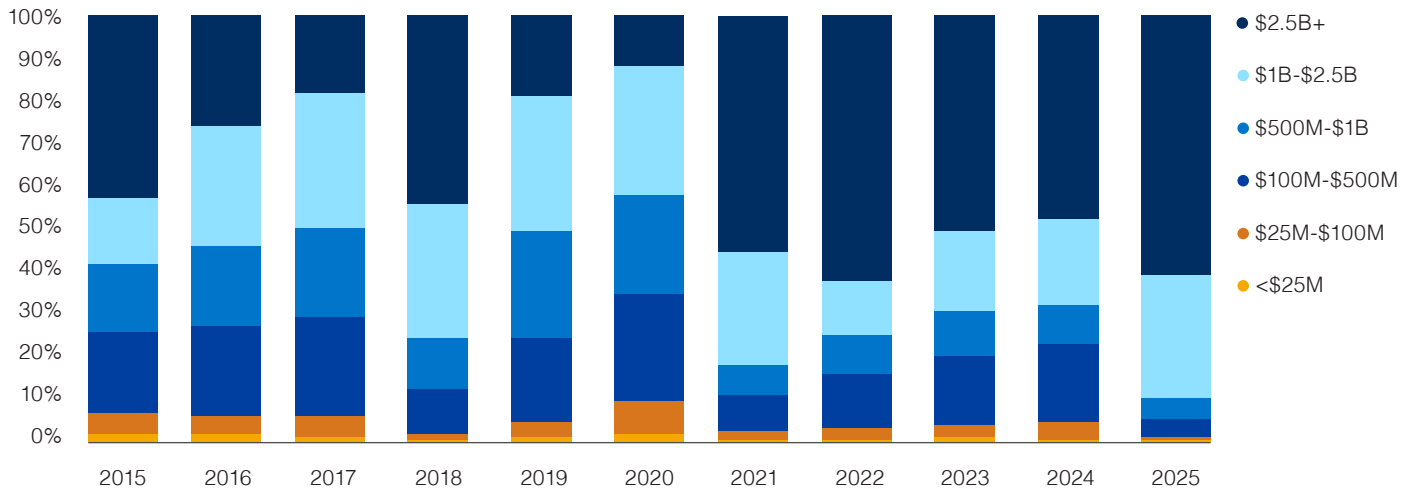
Source: PitchBook • Geography: US • As of December 10, 2025

Median manufacturing M&A EV/revenue multiples



Source: PitchBook • Geography: US • As of December 10, 2025

Share of manufacturing PE deal value by size bucket



Source: PitchBook • Geography: US • As of December 10, 2025

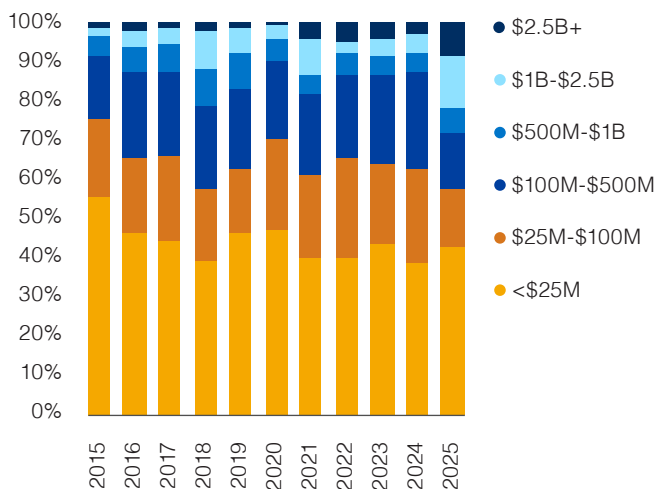
The bifurcation in deal value suggests a barbell effect

Dealmaking conditions propelled buyouts worth \$2.5 billion or more to match the highs of 2021-2022 by count, at eight, while the proportion of deals under \$25 million stayed roughly similar to totals from the previous several years. However, the middle of the market contracted significantly in terms of deal count as well as by proportion of overall PE deal value. Such a barbell effect is a testament to a nuanced uncertainty on the part of buyers, wherein the largest transactions still pencil, as does a steady stream of consolidation among smaller enterprises, but overall enthusiasm is muted. Notably, after a record \$14.8 billion in PE growth deals in 2024, such investments have contracted

to below 200 in count and \$6.1 billion in value, while buyout value has surged to the fourth-highest tally on record at \$120 billion. Proportionally, growth investment volume is still healthy. Often utilized in environments tinged with market uncertainty or volatility, growth-equity transactions allow sponsors to deploy capital and garner exposure. Thus, the strategy's continued popularity—if not record usage—is likely to continue.

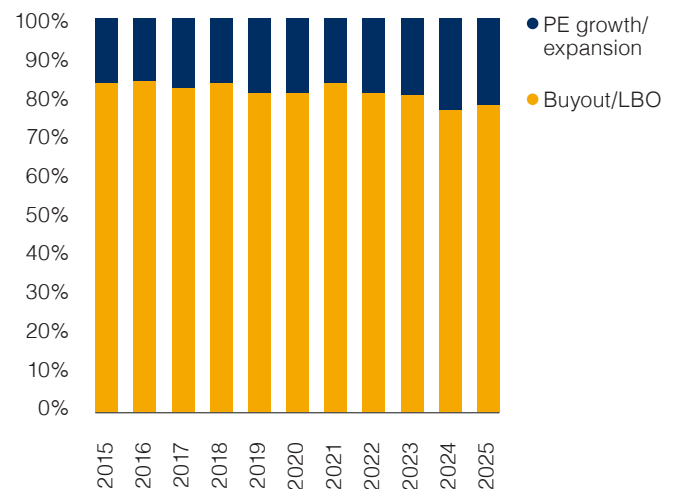
Effective tariff management begins with a comprehensive impact assessment that evaluates all available levers to establish a clear and prioritized plan. This must be coupled with disciplined execution, with proper resourcing that must be sponsored by company executives to overcome departmental biases.

Share of manufacturing PE deal count by size bucket



Source: PitchBook • Geography: US • As of December 10, 2025

Share of manufacturing PE deal count by type



Source: PitchBook • Geography: US • As of December 10, 2025

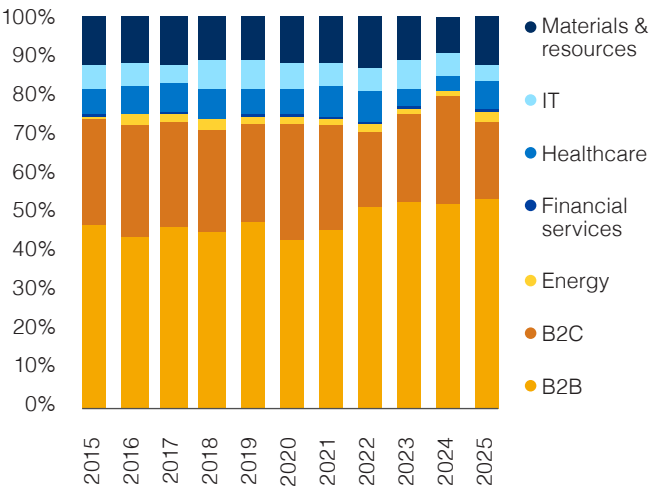
Dealmaking hews ever more closely to B2B/enterprise transactions, as uncertainty impacts consumers and transportation supply chains

Between breakouts by size, transaction metrics, and deal types, it is clear that assets with automation moats, sticky aftermarket revenues, and compliant supply chains, among other factors, commanded resilient pricing. Commodity-tethered or labor-intensive segments faced rerating within the market unless offset by clear automation road maps. Significant build-out across energy distribution and grids is still being skewed by government incentive schema, plus utility capital-expenditure cycles, especially in light of the overarching AI construction boom. Moreover, given tariff-related volatility, transportation transactions are tending to concentrate around agnostic platforms and consolidation to better weather growing economic pressures. Hence, deal volume has seen proportions grow modestly in US regions such as the southeast, where concentrations of nondomestic automotive and electric vehicle assembly plants could be contributing to consolidation by PE firms among surrounding service-provider and supplier ecosystems, for example, electrical and maintenance businesses and specialized trucking.

In 2026, we expect AI-related work will grow, but it needs to be grounded in clear return on investment (ROI), as well as foundational technology and procedural improvements, to

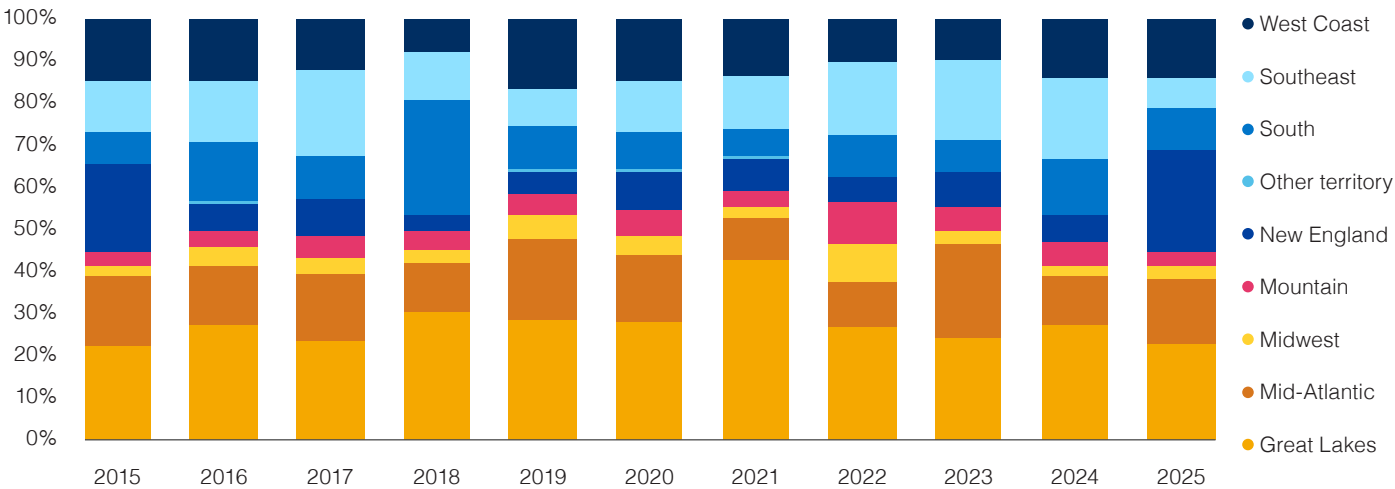
make a difference for organizations. Discussions about how to best deploy and leverage AI have been the most instructive as AI evolves from an aspirational initiative into a much more pragmatic set of solutions that span systems, data, and general improvements in technology utilization. Clients are recognizing that fragmented systems, weak data foundations, and underdefined use-case expectations limit the near-term value of AI, so we expect only a small percentage of the solutions will be grounded in pure AI moving forward.

Share of manufacturing PE deal count by sector



Source: PitchBook • Geography: US • As of December 10, 2025

Share of manufacturing PE deal value by region



Source: PitchBook • Geography: US • As of December 10, 2025

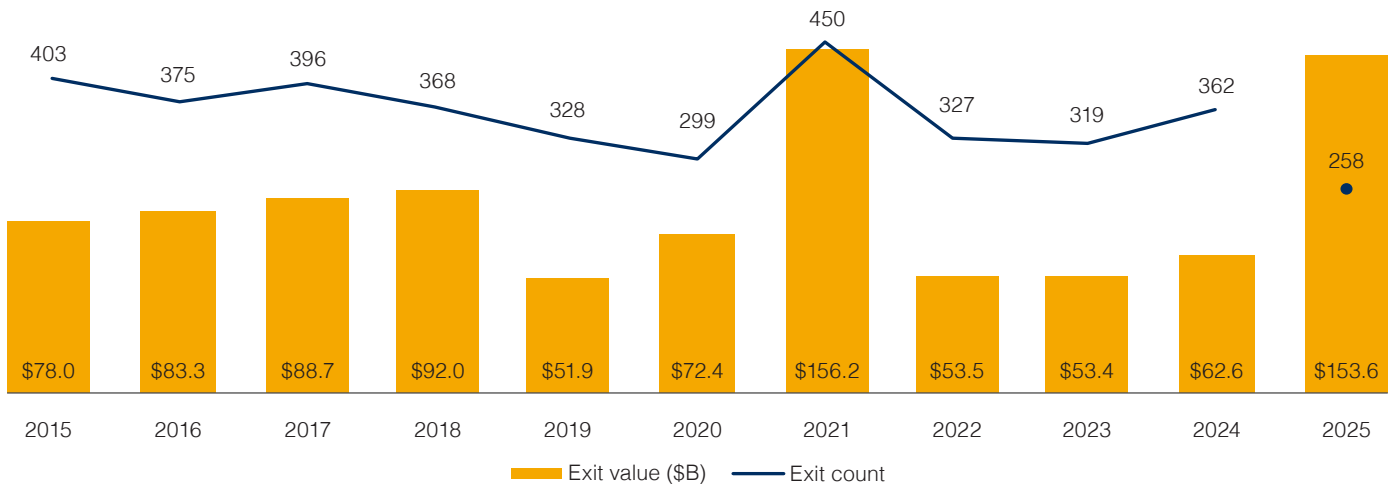
Aggregate exit value soared, providing liquidity relief—but exits remain a priority

Given the spate of investment in the early 2020s, a subsequent slowdown in exits for PE firms produced pressure on liquidity overall and also led to significant growth in private credit deployment. For manufacturing, exit values resurged to a near-record tally borne of a slew of public listings, such as those of Alliance Laundry Systems, services-giant Legence, and defense company Karman Holdings. The count of exits remained lower than the highs of the mid-2010s or even the resurgence to 362 in 2024, however. PitchBook’s recent US PE Outlook noted that across all sectors, PE fund managers’ top priority was achieving exits for portfolio companies, as firms look to finally clear off backlogs of businesses bought during previous

market highs.⁴ For manufacturers, that will remain a priority as well, especially as PE firms look to capitalize on any entry points into technological infrastructure build-outs, including but also beyond datacenters.

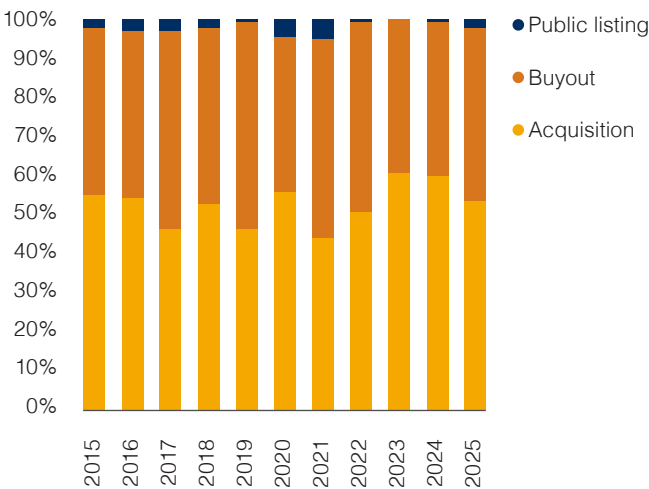
Another strategy we use to help mitigate tariff exposure for our clients is to design and conduct audits of import transactions, especially for 2025, to validate customs compliance and uncover potential tariff refunds arising from inaccurate data reported to customs. These refund opportunities are largely driven by the complexity of tariff stacking rules, incomplete import data, and conservative customs broker practices, as multiple tariffs introduced in 2025 often overlap, with the application of one tariff potentially negating another.

Manufacturing PE exit activity



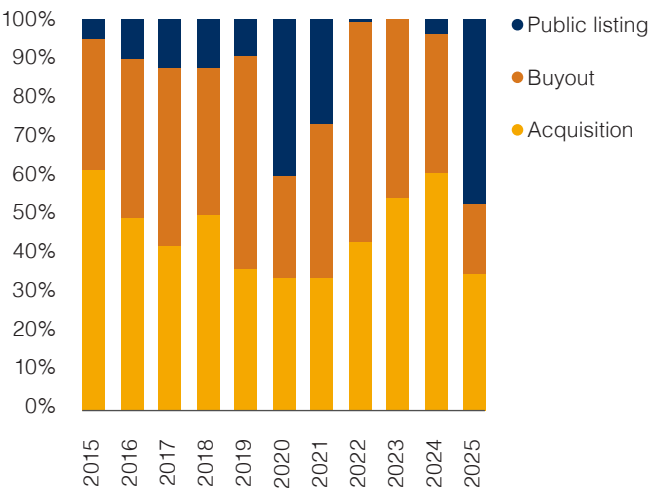
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Share of manufacturing PE exit count by type



Source: PitchBook • Geography: US • As of December 10, 2025

Share of manufacturing PE exit value by type



Source: PitchBook • Geography: US • As of December 10, 2025

4: "PE Survey Signals Positive Outlook for 2026, With AI Bringing Risks, Rewards," PitchBook, Marina Lukatsky, December 8, 2025.

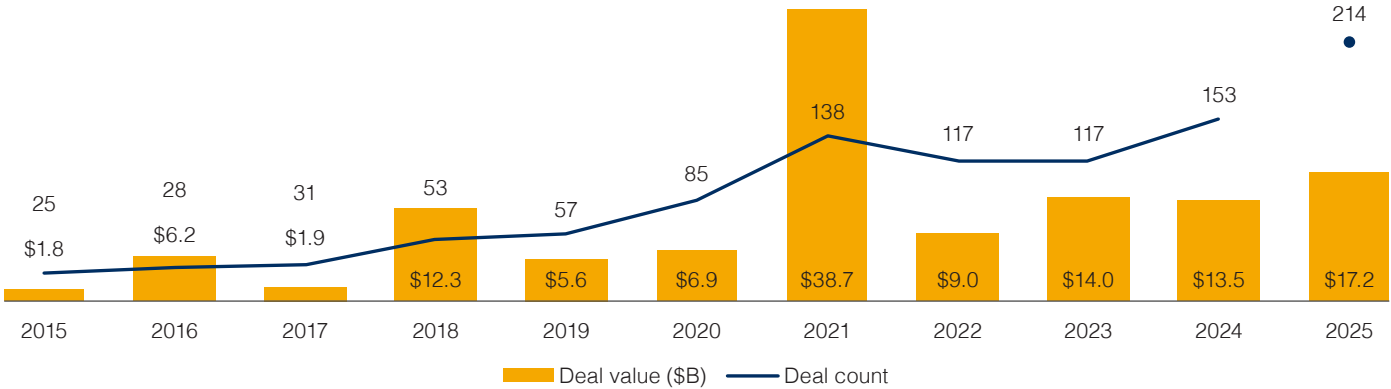
Spotlight

The allure of advanced manufacturing and the deployment of AI has long beckoned, but as of late, the various challenges previously discussed have combined to encourage significant adoption by manufacturers to increase efficiency, decrease costs, alleviate any delays in production, and shift segments of production to different geographies as needed. Such capabilities have prompted three related waves of investment: first, a massive surge in venture financing across advanced manufacturing for multiple end-use cases since 2020; second, an uptick in M&A among advanced-manufacturing enterprises, culminating in 42 deals for \$15 billion in 2025 (skewed by outlier deals); and third, a record 214 PE deals in 2025 across AI in manufacturing. These surges in dealmaking reflect the confluence of multiple types of adoption of AI and other forms of

automated processing across select manufacturing tasks by PE-backed, middle-market companies, plus the acquisition of such capabilities by larger corporates that opt to buy rather than build.

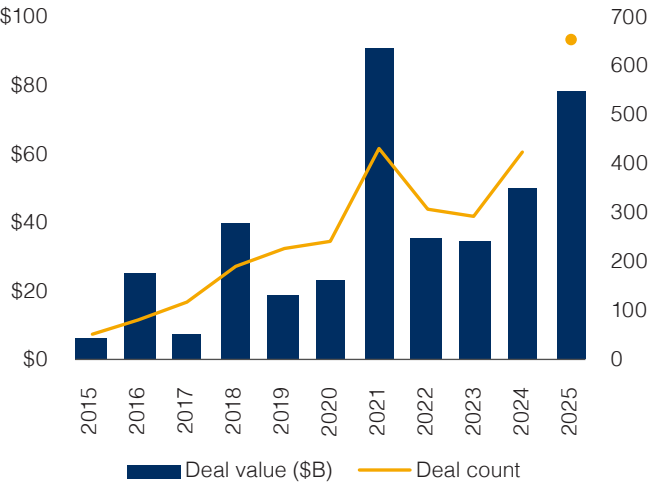
Early examples of advanced manufacturing and AI implementation include the simulation of production lines prior to the construction of specific machines along points in manufacturing chains, digital twins for products, agents to shift delivery windows for suppliers, and the deployment of autonomous mobile robots with AI image-processing capabilities on factory floors. It is likely that as labor costs continue to rise, the relative expense of such tech stack deployment and robotics installation will decline, encouraging significant adoption and further acquisitions of companies within this segment.

PE deal activity in AI and manufacturing



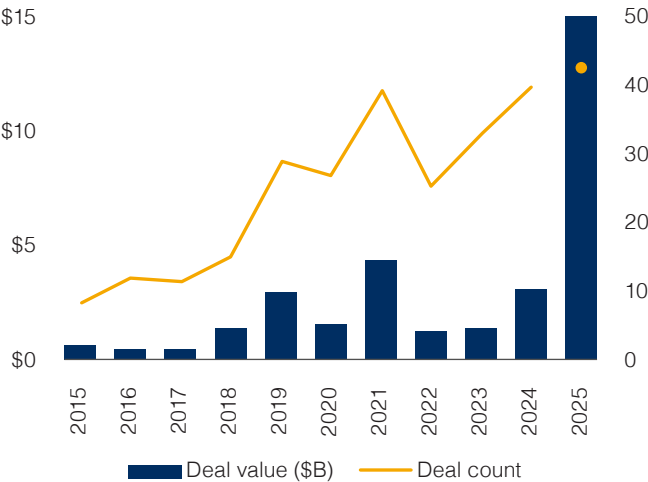
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M&A deal activity in AI and manufacturing



Source: PitchBook • Geography: US • As of December 10, 2025

M&A deal activity in advanced manufacturing



Source: PitchBook • Geography: US • As of December 10, 2025

Q&A

Crowe specialists weigh in



Andrea M. Meinardi
*Managing Partner,
Manufacturing*



Stephen Wiley
*Principal,
Advisory*



Matt Redente
*Managing Partner,
Private Equity*



Brandon Skinner
*Performance
Improvement
Senior Manager*



Wil Knibloe III, CSCM
*Managing Principal,
Supply Chain*

Which practice areas that Crowe utilizes to serve manufacturers have seen the greatest uptick in engagement in the past year and why?

At Crowe, we've seen the strongest growth in tax, M&A-related services, supply chain and performance improvement, and technology/IT advisory—all driven by margin pressure, policy uncertainty, and operational complexity. Within tax, engagement growth is being driven by state nexus and audit activity tied to remote workforces, interest expense limitation planning under Internal Revenue Code Section 163(j), international tax and transfer pricing scrutiny, customs and tariff advisory amid policy uncertainty, and tax planning tied to recent and anticipated federal policy changes.

Our performance improvement and supply chain practices are seeing strong growth as PE-backed manufacturers continue to focus on protecting and expanding margins (via operations-focused and organizational-overhead rationalization initiatives) and working capital and inventory optimization. They are also enhancing supply chain resilience and cost-competitiveness tactics to generate cash for technological investments and to offset interest expenses from the higher-for-longer interest rate environment.

On the technology side, companies continue to age out of current systems as providers stop supporting legacy platforms, so demand continues to rise for major enterprise resource planning and customer relationship management implementations (such as Microsoft, Salesforce, and NetSuite). Our team works with a variety of clients through this process, specializing in subindustries and clients with multiple businesses or sites. These implementations, alongside an uptick in IT advisory and data management services, are the underpinnings of being able to leverage organizational scale. While they're expensive,

they form the basis for utilizing AI, which will grow in importance in 2026 as companies realize they can't effectively implement AI if their systems and data are not well organized. We're seeing approaches to AI shift from organizational cost-cutting to be grounded in the reality of AI's actual capability given the fragmented nature of organizational systems and data. For that reason, current PI/AI engagements are focused on scalable data foundations rather than implementing AI in isolation.

Which client hurdles were the most instructive in 2025? How do you expect that to change in 2026?

Key challenges in 2025 included liquidity strain from tax payments, tariff uncertainty, and unrealistic expectations around the immediate cost and performance benefits related to AI. Interest expense limitations constrained cash flow, though anticipated One Big Beautiful Bill Act (OBBBA) provisions may provide relief in 2026. Tariff uncertainty has driven cautious, analytical approaches to supply chain decisions rather than reactive shifts. However, due to instability in policies, we expect the tariff management discussion to be less important in 2026, as many businesses have already addressed the areas where they are most heavily affected.

Which headwinds will be the most important for different manufacturing and/or infrastructure segments over the next year?

The most significant headwinds include labor availability and cost pressures, supply chain resilience, margin management, and integration challenges for acquisitive companies. Labor shortages, especially for skilled trades, remain acute and are compounded by demographic and policy pressures. Supply chain disruptions continue to drive demand for operational resilience and vendor performance improvement.

Ongoing margin pressures are pushing organizations toward implementing strategic pricing initiatives and optimizing selling, general, and administrative costs, often with expectations and board pressure around AI enablement. For acquisitive companies, integration and synergy realization remain critical risks.

What have been the most successful tactics that clients have utilized to manage any ripple effects from tariff changes?

While US customs regulations governing customs value can be complex and burdensome, their detailed and prescriptive nature also creates opportunities to exclude costs that are not required

under the regulations. Many clients leverage this unbundling of costs to appropriately reduce the dutiable value of imported goods, thereby lowering the tariff base while remaining fully compliant with customs requirements.

We have implemented a variety of successful tactics with our clients, including duty drawback programs to reduce duty exposure and support broader tariff mitigation strategies, Harmonized Tariff Schedule code optimization, supplier contract renegotiation, diversified sourcing, restructuring of global supply chains with selective reshoring or nearshoring, transfer pricing alignment, and agile customer pricing strategies. We've seen the most success with organizations that evaluate all available levers holistically and secure executive sponsorship.

We also help clients with feasibility analysis and operational support for the use of foreign-trade zones. This program provides importers with significant flexibility in managing tariff obligations by allowing the deferral, reduction, or elimination of duties and related fees based on whether goods are ultimately consumed in the US or exported abroad. These specially designated facilities enable imported merchandise to be stored, assembled, manipulated, or manufactured under favorable customs treatment, improving cash flow, reducing overall duty exposure, and enhancing supply chain efficiency. While many impacts have been absorbed, the ripple effects of tariffs continue to emerge, and outcomes vary based on the execution quality of the aforementioned strategies.

Which supply chain segments—and which set of domestic manufacturing companies—remain most vulnerable and why?

The most vulnerable segments include middle-market manufacturers with heavy import dependence, limited customs and transfer pricing infrastructure, and concentrated supplier or customer relationships.

With tariffs and 2026 uncertainties accelerating “China + X” diversification strategies to Vietnam, Thailand, Cambodia, India, or Mexico, full reshoring remains constrained by scale, cost, and materials access in the US. Any manufacturer dependent on international supply chains or customers remains exposed to policy, labor, energy, and geopolitical risks. Rare earths and high-volume plastics also resist due to material dominance. Diversification can help, but full reassurance requires subsidies and technological advancements that have not yet scaled in the US.

Upstream sourcing (raw materials, components, and suppliers) and fixed-price customer contracts are the most vulnerable segments to tariff volatility. China's advantages stem from low

labor costs, massive scale, supply chain clusters, and subsidies, making full US replication costly—often 20% to 50% higher without them. The raw material and product categories commonly sourced from China by US manufacturers that face the steepest challenges include: 1) labor-intensive assemblies; 2) metal castings and forgings; 3) electronics, semiconductors, and rare-earth-dependent tech parts; and 4) textiles and apparel.

Upstream sourcing is exposed as tariffs are applied at import, immediately increasing input costs with limited short-term ability to shift suppliers. Fixed-price customer contracts intensify this exposure, as tariff-driven cost increases cannot be passed through, resulting in margin compression. Together, these segments create a cost/price imbalance amplifying financial risk.

Vulnerability is heightened where manufacturers have limited flexibility to reconfigure sourcing, adjust pricing, or shift production in response to expanded or reduced tariffs implemented under the International Emergency Economic Powers Act (IEEPA). Pending US Supreme Court review of the administration's use of the IEEPA further compounds risk, as a ruling could either validate continued executive discretion or significantly alter the tariff landscape, complicating long-term sourcing, pricing, and investment decisions.

Which regulatory and/or policy shifts are you watching most closely?

Tax policy remains the primary driver of manufacturing investment decisions, with an emphasis on timing certainty rather than rate reform. The OBBBA reinforces a policy favoring front-loaded investment incentives, including immediate expensing for qualifying domestic research & development and accelerated cost recovery for capital assets. These provisions materially shorten payback periods, improve early-year cash flow, and increase distributable cash during PE holding periods. The administration's shift toward front-loaded incentives reflects a broader policy objective of encouraging onshoring, supply chain localization, and long-term industrial growth rather than short-term tax arbitrage. The administration's preference for regulatory simplification is viewed as reducing execution risk by accelerating timelines and improving operational predictability. Investors are closely monitoring policy durability, as predictability is critical for capital-intensive assets with long useful lives.

From a PE perspective, these timing benefits reshape deals. Improved near-term cash generation enhances debt service capacity, supports more aggressive capital deployment after closing, and improves visibility into early-stage returns. This is particularly relevant for platform strategies focused on operational upgrades, capacity expansion, and technology-enabled manufacturing improvements.

Market outlook

Manufacturing enters 2026 in a stabilizing phase.

Purchasing-manager data shows ongoing contraction, with the Manufacturing PMI at 48.2 as of November 2025, while production ticked up to 51.4; this mix indicates an environment of soft demand but improving throughput discipline.⁵ Industrial production and the related manufacturing subindex remain below prior peaks, consistent with a goods slowdown even as services keep headline growth resilient, as noted above. The US Census Bureau's Manufacturers' Shipments, Inventories, and Orders survey shows shipments and orders normalizing, with inventory-to-sales ratios still elevated versus pre-2020 totals, reinforcing cautious restocking and working-capital discipline at higher carrying costs.⁶ Players are waiting to see how the tariff regimen may adjust, with potential pockets of demand surfacing only to revert, as seen in the Cass Freight Index falling again in October 2025.⁷

Cost dynamics are skewed as the shift to even greater automation and capital expenditure exerts pressures against a constrained workforce. Metals and energy volatility, tariff pass-through frictions, and wage pressure in skilled trades continue to squeeze smaller suppliers with less pricing power as larger platforms lean on automation, procurement, and network redesign. Manufacturing employment has cooled from the 2022-2023 pace but remains historically tight, consistent with "labor hoarding" and persistent wage pressure despite slower hiring.⁸

Policy and capital expenditure are key variables that may induce changes by mid-2026. As projects funded by the CHIPS and Science Act move from construction toward implementation, pulling in upstream suppliers, such as those offering substrates, chemicals, and tools, as well as reinforcing domestic computing clusters in Arizona, Ohio, and Texas. As policy rates ease, equipment orders typically follow with a lag; expect a K-shaped rebound—larger, well-capitalized manufacturers will likely move first while smaller job shops contend with tighter credit and compliance costs. All in all, a gradual demand stabilization with margin outcomes driven by pricing governance, input-cost relief, and execution on automation programs are to be expected. As the manufacturing industry enters 2026, the broad and powerful, if slower-moving, drivers of reshoring/nearshoring, labor retention, significant automation capital expenditure, and infrastructure construction will help moderate cyclicity going forward.

Underrated risks we're seeing in the market include:

- Inadequate documentation for tax credits and transfer pricing
- State tax nexus creep
- Labor supply constraints and weak recruiting/retention strategies
- Weak pricing and sales force effectiveness
- Poor working capital management
- Underdeveloped supply chain and supplier performance management
- Suboptimal use of existing systems to solve issues and not root causes
- Lack of enterprise risk management until events/crises
- Insufficient IT road maps and strategies
- Weak data governance, management, and utilization strategies

Overrated risks we're seeing in the market include:

- Expectations of immediate reshoring without rigorous analysis
- Assumptions of short-term tariff relief
- Reliance on AI or technology as a standalone fix (without addressing underlying root causes)
- Near-term disruption from AI and robotics (though these represent longer-term risks)

Trade policy has emerged as a critical variable influencing corporate decision-making and deals. Under the current administration, tariffs are no longer a standalone regulatory issue; rather, they are a core strategic factor shaping deals and value creation, as well as investment priorities, operating models, supply chain design, pricing strategies, cost structures, and margin sustainability.

Business leaders should plan for a sustained environment of elevated US tariffs under the current administration, even if a US Supreme Court decision constrains elements of President Donald Trump's trade authority. Tariffs imposed under the IEEPA represent the most consequential recent trade law development and remain a central source of uncertainty in the US tariff outlook.

5: "ISM® PMI® Reports Roundup: November Manufacturing," Institute for Supply Management, Dan Zeiger, December 1, 2025.

6: "Monthly Advance Report on Durable Goods Manufacturers' Shipments Inventories and Orders," United States Census Bureau, November 26, 2025.

7: "Cass Transportation Index Report: October 2025," Cass Information Systems, October 2025.

8: "Employment, Hours, and Earnings From the Current Employment Statistics Survey (National)," U.S. Bureau of Labor Statistics, n.d., accessed December 17, 2025.

Methodology

Reports are prepared in accordance with PitchBook's methodology, which is described in detail on the [PitchBook report methodologies](#) page.

