

## Key Electronic Manufacturing Services Industry Trends Shaping the Next 12 Months

### Key Takeaways

- The electronic manufacturing services (EMS) industry is undergoing significant regionalization, with 30%-40% of China-destined production migrating to alternative locations like Mexico and Southeast Asia by 2025, driven by geopolitical tensions and supply chain resilience priorities.
- We forecast High-Performance Computing manufacturing to reach \$68.4 billion in 2026 (11.3%-13% CAGR), becoming the fastest-growing EMS segment.
- We see AI-driven predictive inventory management replacing reactive approaches, enabling manufacturers to foresee component shortages months in advance.
- We project original equipment manufacturers (OEMs) to increase outsourcing by 7%-10% in key verticals as manufacturing complexity and time-to-market pressures favor specialized EMS partners.
- We believe electric vehicle (EV) components and 5G infrastructure will create significant new revenue streams for specialized EMS providers.
- Our top EMS picks include **TEL**, **JBL**, and **FLEX**.

Positive (+) or Negative (-) Implications
(+) Flex Ltd. (FLEX)
(+) IPG Photonics Corporation (IPGP)
(+) Jabil Inc. (JBL)
(+) Sanmina Corporation (SANM)
(+) TE Connectivity Ltd. (TEL)

### Fundamental Context

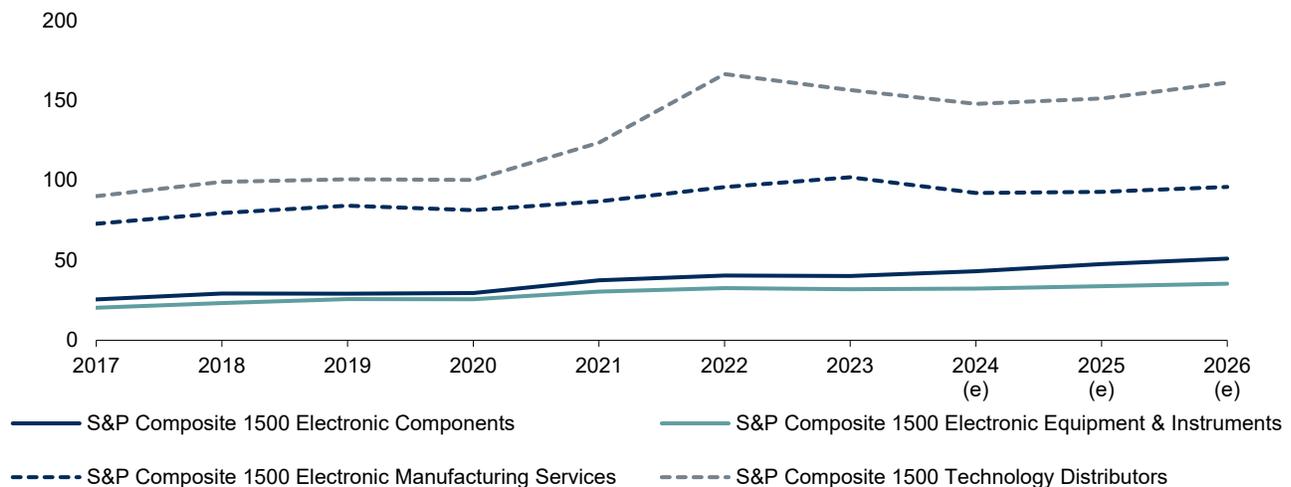
**We have a neutral outlook on the technology supply chain, which MSCI/S&P’s Global Industry Classification Standard (GICS) calls Electronic Equipment, Instruments, & Components.** Industry sentiment has marginally improved from recent lows, driven by strengthening demand and cost optimizations. However, the sector faces ongoing challenges, including potential bottlenecks in strategic components and geopolitical tensions that introduce supply uncertainties, on top of Trump’s tariff policies. Demand patterns show a stark contrast – enterprise and cloud spending demonstrate resilience, while consumer markets struggle amid inflationary pressures and high interest rates. This complex landscape, characterized by gradual improvements offset by persistent headwinds, results in our neutral outlook.

We highlight our top 10 predictions for the year ahead:

1. **We expect EMS to outperform most of the broader electronics sector over the next year, with S&P Composite 1500 EMS companies projected to grow 3% in 2026, after flat growth in 2025.** This return to growth stems from increasing EV adoption with higher electronic content per vehicle, healthy 5G infrastructure demand, IoT expansion, and growing AI-related manufacturing requirements. EMS providers are capturing an expanding share of the electronics manufacturing value chain as factory utilization improves and supply chains normalize following the recent correction. Near-term risks remain, particularly from U.S. tariff implementation that could disrupt global production networks. However, the sector’s projected outperformance validates strategic initiatives undertaken by leading EMS players to diversify their customer base and build specialized manufacturing competencies. EMS companies demonstrate greater resilience to cyclical downturns compared to other electronics segments, making them attractive as manufacturing complexity and time-to-market pressures increase OEM reliance on specialized partners. We believe investors should focus on EMS providers with established regional manufacturing diversity, which provides both tariff mitigation options and proximity to end markets during this period of supply chain reconfiguration.

**Figure 1: S&P Composite 1500 Electronics Sector Industry Total Revenue**

(\$, in billions)



Source: S&P Capital IQ.

**2. We project 30%-40% of China-destined EMS production to migrate to nearshore and friendly-shore locations through 2025 as escalating trade tensions force supply chain restructuring.**

Trump's tariff regime – including 20% on Chinese imports, a potential 25% tariffs on Canada/Mexico, and 25% global tariffs on steel and aluminum – is driving aggressive inventory build of critical components, boosting first-quarter revenues, but potentially creating an inventory overhang by late 2025. Despite capex growth deceleration, we project 100-150 basis points of margin expansion through 2026 as companies accelerate automation investments and supply chain reconfiguration. The EMS landscape is undergoing its most significant transformation since China's WTO entry, with semiconductor equipment manufacturers facing the greatest pressure, while manufacturers with facilities in Vietnam, Malaysia, and Mexico positioned to outperform. Companies are modeling 3%-5% component cost inflation with 20%-30% pass-through to customers. For investors, this creates clear winners and losers – companies with diversified manufacturing networks and strong capital positions will navigate these disruptions successfully, while those overleveraged to single geographies face margin compression and market share losses. Key monitoring factors include April's reciprocal tariff specifics, China's retaliatory measures, and Mexico/Canada negotiations progress.

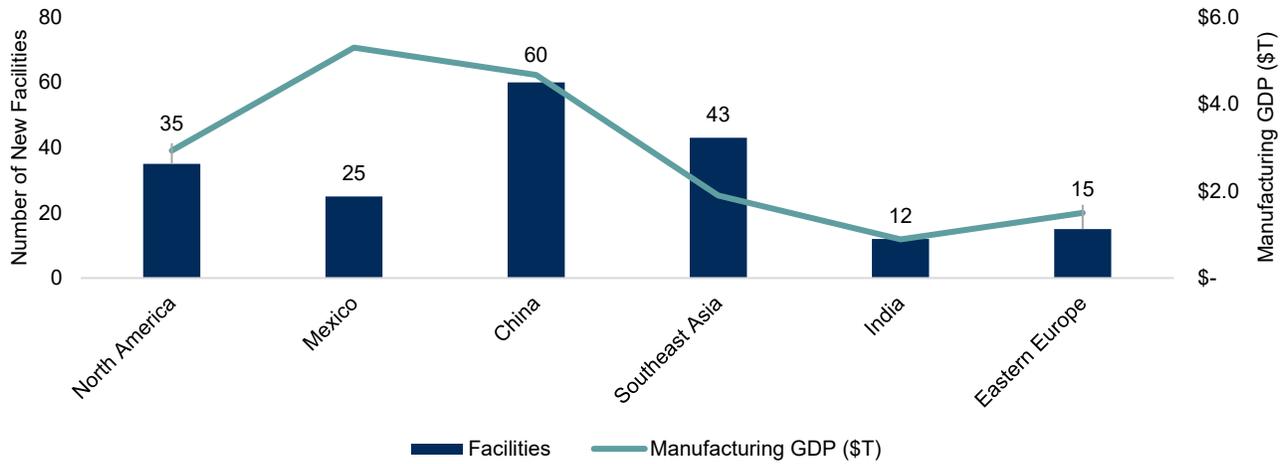
**3. We expect the EMS industry to undergo significant regionalization over the next 12 months as manufacturers pivot away from a China-centric model toward a more distributed network of regional manufacturing hubs, driven by supply chain resilience demands and geopolitical pressures.** Our analysis of global EMS manufacturing facilities highlights this shift, with China maintaining leadership in facility count (60 facilities). Mexico has also emerged as a manufacturing powerhouse, with the highest manufacturing GDP (\$5.3 trillion) despite having only 25 facilities. The contrast between facility numbers and manufacturing GDP reveals the evolving complexity of global electronics manufacturing, where Southeast Asia has established a significant presence, with 43 facilities and \$1.9 trillion in manufacturing GDP, positioning itself as a key alternative to China. Meanwhile, India's relatively low facility count (12) suggests substantial room for growth given its \$0.9 trillion manufacturing GDP. This regionalization trend is accelerating due to three key factors:

- Increasing geopolitical tensions necessitating supply chain diversification.
- The growing importance of speed-to-market requiring proximity to end consumers.
- Government incentives for local manufacturing capabilities.

Mexico's high manufacturing GDP relative to its facility count suggests a model for efficient, concentrated manufacturing hubs that other regions may follow. This shift is likely to benefit regions with strong infrastructure and business-friendly policies, with Mexico, Southeast Asia, and potentially India positioned

as major beneficiaries. However, successful execution of this regional diversification will require significant investment in automation, workforce development, and local supply chain ecosystems to maintain efficiency and competitiveness.

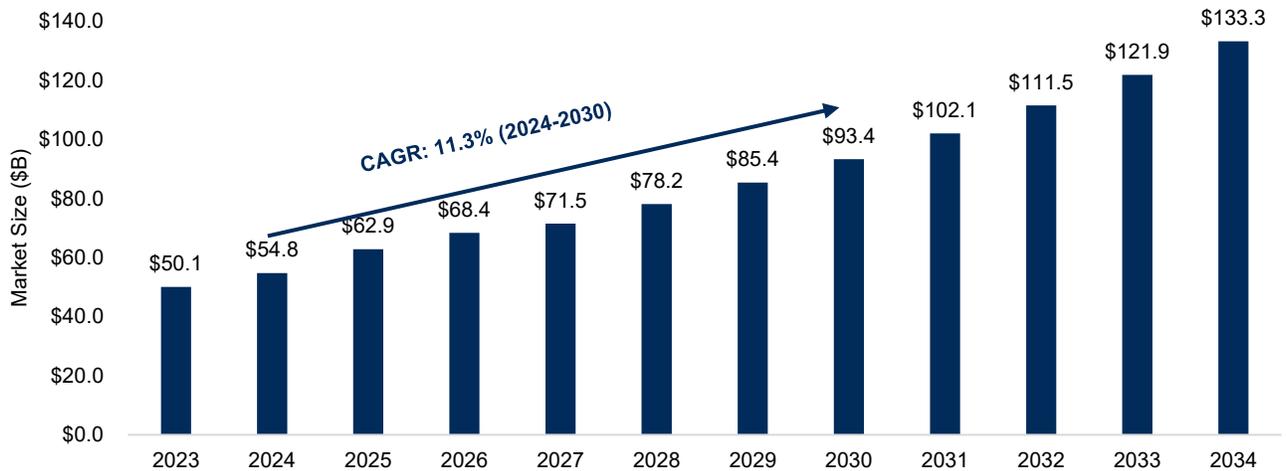
**Figure 2: EMS New Facilities & Manufacturing GDP by Region (2024)**



Source: Government filings.

- We expect the High-Performance Computing (HPC) manufacturing segment to reach \$68.4 billion in 2026, representing a strong CAGR of 16.8% from 2023 levels.** Our analysis reveals an inflection point between 2024 and 2026, where annual dollar growth accelerates from \$4.7 billion to \$8.1 billion as commercial AI infrastructure scales and hyperscale computing environments expand. We think this growth trajectory will continue in the long term, with the market more than doubling to \$133.3 billion by 2034, significantly outpacing the broader EMS sector and creating a strategic imperative for manufacturers to develop specialized HPC capabilities. This exceptional growth is driven by three converging factors: (1) increasing AI workloads requiring specialized hardware, (2) global data center expansion demanding advanced cooling and power management solutions, and (3) edge computing deployments requiring distributed high-performance processing. For EMS providers, HPC manufacturing offers premium margins compared to traditional electronics assembly, with specialized capabilities in thermal management and precision manufacturing creating competitive advantages. As the market expands by approximately \$8 billion in 2025 alone, we anticipate intensified competition among EMS players to secure partnerships with leading HPC system designers, likely driving increased capital expenditure and targeted acquisitions to strengthen positioning in this high-growth segment.

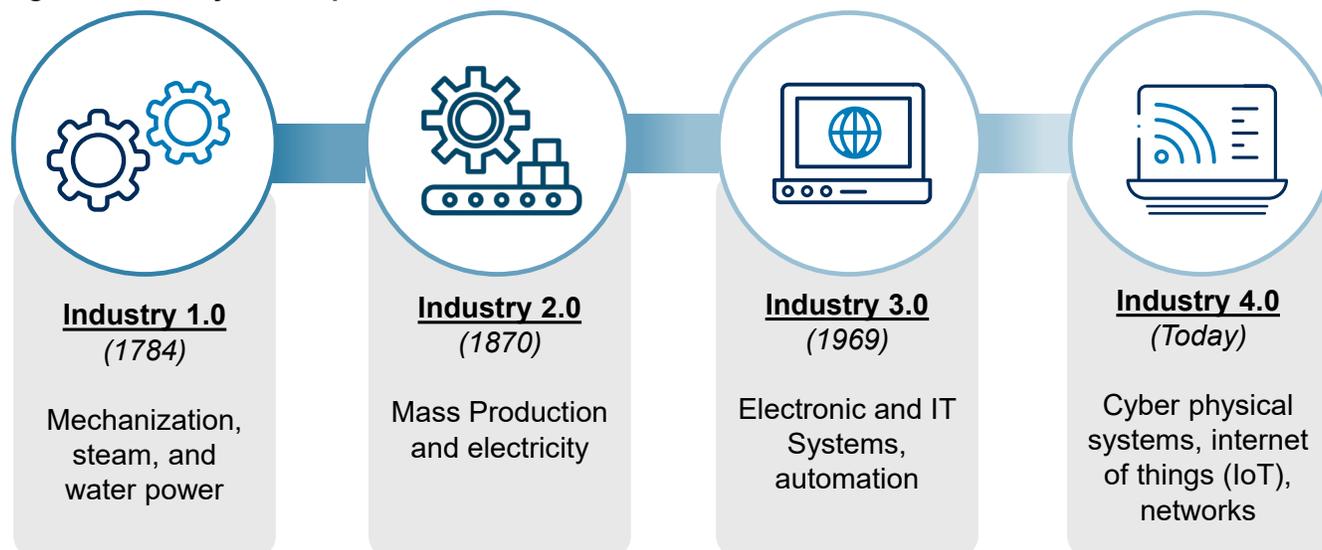
**Figure 3: High Performance Computing Market Size and Growth (2024-2034)**



Source: CFRA, Precedence Research.

5. **We anticipate Industry 4.0 technologies will renovate the EMS sector in the next year, with manufacturers investing 15%-20% of capital expenditure in smart factory initiatives to achieve 30%-40% improvements in operational efficiency.** The evolution from mechanization (Industry 1.0) through mass production (Industry 2.0) and electronic automation (Industry 3.0) has set the stage for today's fourth industrial revolution – characterized by cyber-physical systems and IoT networks that create intelligent, interconnected manufacturing environments. This transformation is particularly relevant for EMS providers, which must balance increasing product complexity with margin pressures and shorter production cycles. For the EMS industry, Industry 4.0 adoption is creating competitive differentiation through three primary avenues: (1) predictive quality systems that reduce defect rates by 50%-70% through real-time monitoring and AI-driven analytics, (2) digital twin technologies enabling virtual factory simulations that cut new product introduction times by 30%-45%, and (3) autonomous material handling systems reducing labor costs by 20%-25%, while increasing throughput. Leading EMS providers are implementing integrated smart factory platforms that connect equipment, workforce, and systems through industrial IoT networks, generating actionable insights from previously siloed production data. Through 2025 and beyond, we expect Industry 4.0 capabilities to become a critical customer requirement, with OEMs increasingly selecting manufacturing partners based on digital maturity rather than just cost considerations. EMS companies that fail to make strategic investments in these technologies risk losing market share in higher-margin segments where production flexibility and quality assurance command premium pricing.

**Figure 4: Industry 4.0 Adoption Timeline**

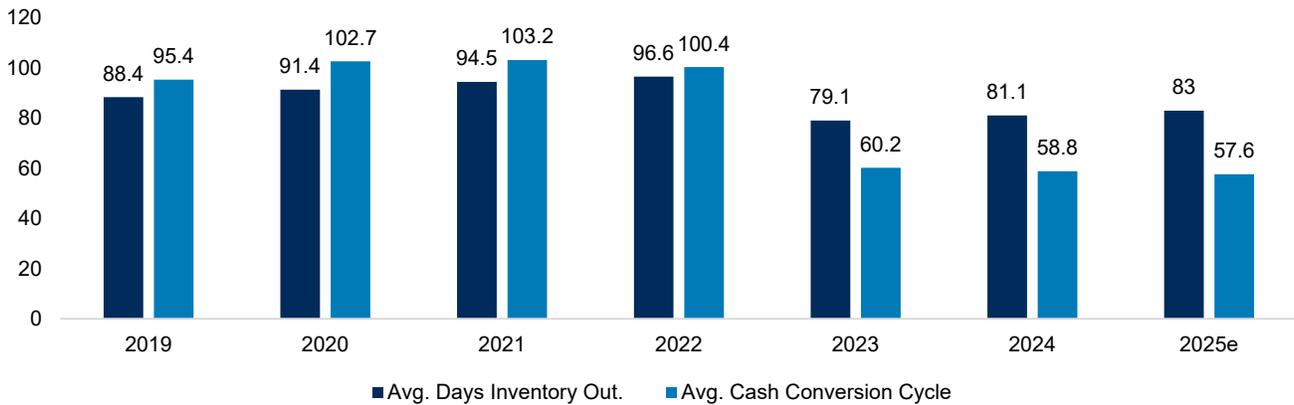


Source: CFRA.

6. **We predict EMS providers will embrace AI-driven predictive inventory management, moving beyond reactive approaches to anticipate component shortages months before they materialize.** We see component shortage management evolving from a cost center to a competitive advantage, with leading manufacturers implementing data analytics platforms that identify potential disruptions well before they impact production. We think the industry has already begun this transition, successfully maintaining elevated inventory levels for critical components, while simultaneously improving cash conversion cycles. This seems to be evidence that sophisticated shortage management doesn't necessarily penalize working capital efficiency. The projected stabilization of inventory days, coupled with continued improvement in cash cycles, supports our thesis that EMS providers are finding more rational ways to ensure supply resilience. We expect the industry's approach to permanently shift from broad buffer inventories to targeted strategies focused on high-risk components. This includes developing deeper relationships with key suppliers, qualifying alternative parts, and selectively bringing critical component production in-house. Our analysis shows companies with sophisticated shortage management capabilities achieve both better cash efficiency and higher margins by avoiding emergency purchases and production delays. We believe these capabilities now represent a key factor for investors evaluating EMS stocks, with the most

advanced players commanding valuation premiums. This is a trend we see strengthening in 2025 as supply chains face continued geopolitical and market uncertainties.

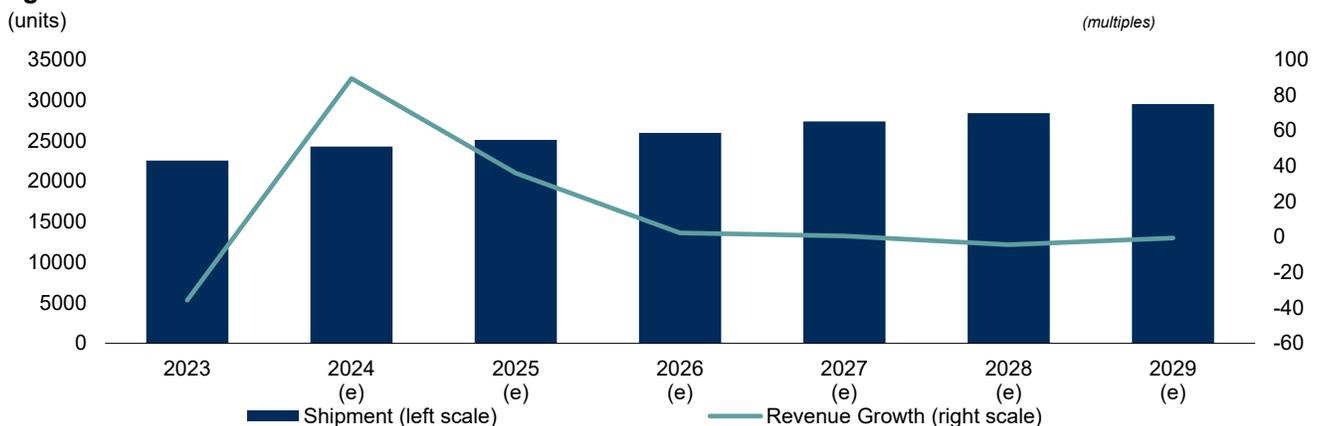
**Figure 5: Average Days Inventory Out & Average Cash Conversion Cycle for EMS Sub Sector**



Source: CFRA, S&P Capital IQ.

**7. We forecast a significant DRAM market correction in 2025, with oversupply conditions emerging from Q4 2024 and persisting through 1H 2025 despite overall revenue growth of 36% year-over-year.** IDC data indicates DRAM shipments will increase just 3.4% in 2025, dramatically slowing from 2024's exceptional growth as multiple headwinds converge. We think demand softness in China, ongoing trade tensions, and inventory corrections in mobile and PC segments will drive downward pricing pressure across most memory categories. Memory manufacturers will likely respond with aggressive cost optimization measures and production adjustments to protect profitability as the market rebalances. We expect competitive pressures to intensify, particularly from Chinese suppliers gaining share in legacy products, forcing established players to accelerate their shift toward advanced nodes. Despite broader market weakness, we see AI-related memory demand creating a significant bright spot, particularly for high-bandwidth memory (HBM). The shift toward HBM, which requires triple the wafer supply of standard DDR5, should begin tightening the supply-demand balance by mid-2025. Leading suppliers are already reallocating capital expenditures toward HBM capacity, with SK Hynix increasing investment while Samsung maintains steady spending levels. This strategic pivot toward higher-value memory products represents a favorable mix shift that should help support average selling prices even amid oversupply conditions in mainstream segments. While enterprise servers will likely maintain stable pricing throughout this period, we anticipate market normalization in 2H 2025 as seasonal demand strengthens and AI infrastructure buildouts accelerate, before reaching the peak of the current upcycle in 2027, according to IDC forecasts.

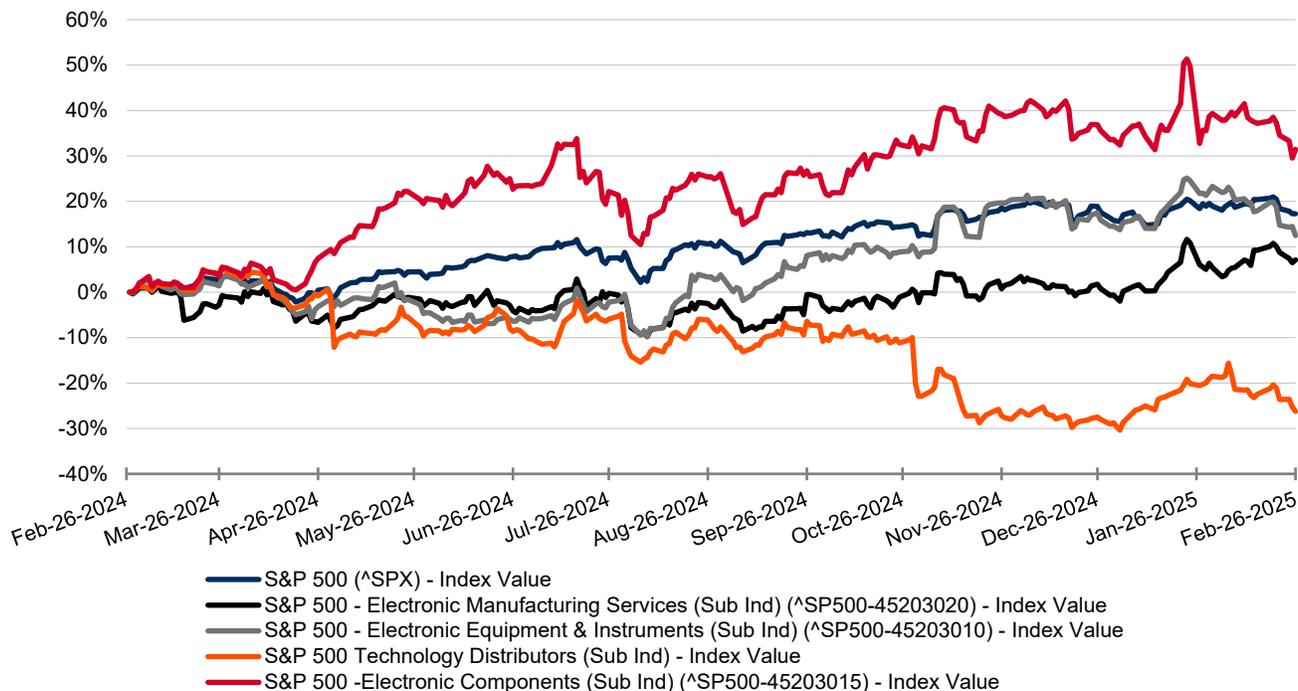
**Figure 6: Worldwide DRAM Market Forecast**



Source: CFRA Research, IDC.

- 8. We anticipate OEMs will accelerate strategic outsourcing, increasing EMS penetration in key verticals by 7%-10% through 2025.** We expect a fundamental shift in the OEM-EMS relationship from transactional to strategic, with OEMs increasingly recognizing outsourcing as a competitive advantage rather than merely a cost-reduction measure. This trend is particularly evident in high-growth segments like electric vehicles, medical devices, and industrial automation, where manufacturing expertise represents a crucial differentiator. Several factors are driving this trend: (1) accelerating product complexity requires specialized manufacturing capabilities that are increasingly difficult for OEMs to maintain in-house, (2), persistent supply chain volatility favors EMS providers with global footprints and diversified supplier relationships, and (3) intensifying capital requirements for advanced manufacturing technologies are shifting the economic calculus toward outsourcing. We observe leading OEMs developing tiered outsourcing strategies, maintaining in-house production for cutting-edge or proprietary technologies while leveraging EMS partners for mature products and scaling innovations. This more sophisticated approach is creating opportunities for EMS providers to engage earlier in product development cycles and deliver higher-value services. The most successful partnerships now feature collaborative design practices, shared risk/reward structures, and deeper integration of operational systems. While some OEMs experimented with reshoring and vertical integration following the pandemic disruptions, most are discovering the formidable challenges of maintaining competitive manufacturing operations at scale. We expect this realization to drive the next wave of EMS penetration in 2025, particularly among mid-sized OEMs that can no longer justify the capital expenditures required to keep pace with manufacturing technology advancements.
- 9. We predict electric vehicle supply chain localization will emerge as a major growth driver for specialized EMS providers in 2025/2026, creating significant new revenue streams in an otherwise mature industry.** The convergence of government incentives, reshoring initiatives, and stringent local content requirements is creating unprecedented opportunities for EMS companies with automotive-grade manufacturing capabilities. Landmark legislation like the Inflation Reduction Act in the U.S. and similar policies in Europe and Asia are accelerating investments in regional EV supply chains, with major automakers increasingly partnering with specialized electronics manufacturers to navigate complex regulatory requirements while scaling production. We see EMS providers responding by developing dedicated automotive divisions with IATF 16949 certification and establishing manufacturing campuses near major EV assembly plants. Significant capital is being deployed toward specialized capabilities for battery management systems, high-voltage power electronics, and electric drivetrain components, all areas requiring manufacturing expertise beyond traditional automotive suppliers. The competitive landscape is evolving rapidly, with established EMS players expanding automotive capabilities while tier-2 suppliers develop electronics manufacturing competencies, positioning those with demonstrated quality systems and regional manufacturing footprints to capture disproportionate value as EV production volumes accelerate globally.
- 10. We expect 5G infrastructure and edge computing to drive a new wave of specialized manufacturing demand over the next 12 months.** Telecom-focused EMS revenue growing at twice the industry average as networks transition from coverage to capacity and optimization. The telecom equipment market is entering a second phase of 5G deployment focused on network densification, creating substantial new manufacturing volumes for small cells, distributed antenna systems, and integrated edge computing hardware. Our industry analysis shows telecom OEMs are increasing their outsourcing ratio to manage capital requirements while accelerating time-to-market for next-generation equipment. Leading EMS providers are responding by developing specialized capabilities in high-frequency RF manufacturing, ruggedized edge computing hardware, and power-efficient network equipment optimized for outdoor deployments. The growth opportunity extends beyond traditional telecom equipment into adjacent markets like private 5G networks for industrial applications, smart city infrastructure, and vehicle-to-infrastructure communication systems. We see particular momentum in regionalized production as governments increasingly classify telecom infrastructure as critical national assets subject to domestic content requirements. EMS providers with established telecom qualifications, regional manufacturing footprints, and technical expertise spanning both communications and computing technologies are positioned to capture premium valuations as this segment accelerates through 2025 and into 2026.

## Relative Performance



Source: S&P Global Market Intelligence.

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