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INVESTMENT MANAGEMENT

AI-Related Sell-Off in Software: Framing Investor Concerns and Underwriting Implications



NORTH AMERICA PRIVATE CREDIT | March 2026

Software Disruption In a Private Credit Context

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Executive Summary

- The recent ~\$2T sell-off in software reflects a sharp shift from AI optimism to skepticism but appears driven more by long-term uncertainty than near-term fundamental deterioration.
- GenAI is a Total Addressable Market (TAM) expander, providing a \$270 billion net tailwind to software over the next five years. The main debate is over what sails will catch that tailwind and pace of mix shift to agentic AI. We believe incumbents are well positioned to share equally in that shift.
- The four dominant bear concerns—insourcing, loss of AI TAM, pricing disruption, and architectural disintermediation—are valid in narrow contexts but overstated for mission-critical, enterprise software platforms.
- Credit and equity fundamentals remain resilient, with improving upgrade/downgrade trends and declining default indicators, potentially creating an attractive opportunity for disciplined private credit investors focused on defensible software assets.
- AI disruption in software is uneven and depends on the nature of underlying workflows, with probabilistic use cases more exposed (e.g. content generation) and deterministic, control-heavy systems significantly more resilient (e.g. financial control).

Historic correction in software valuations

Software stocks and credit instruments have underperformed significantly over the last several quarters as investors reassessed the sector's long-term growth prospects amid rising concerns that AI could disrupt traditional SaaS business models. These concerns have eased recently, but not before

erasing ~\$2T of market-cap and registering the worst non-recessionary decline for software in over 30 years.¹

Revisiting the virtues of SaaS

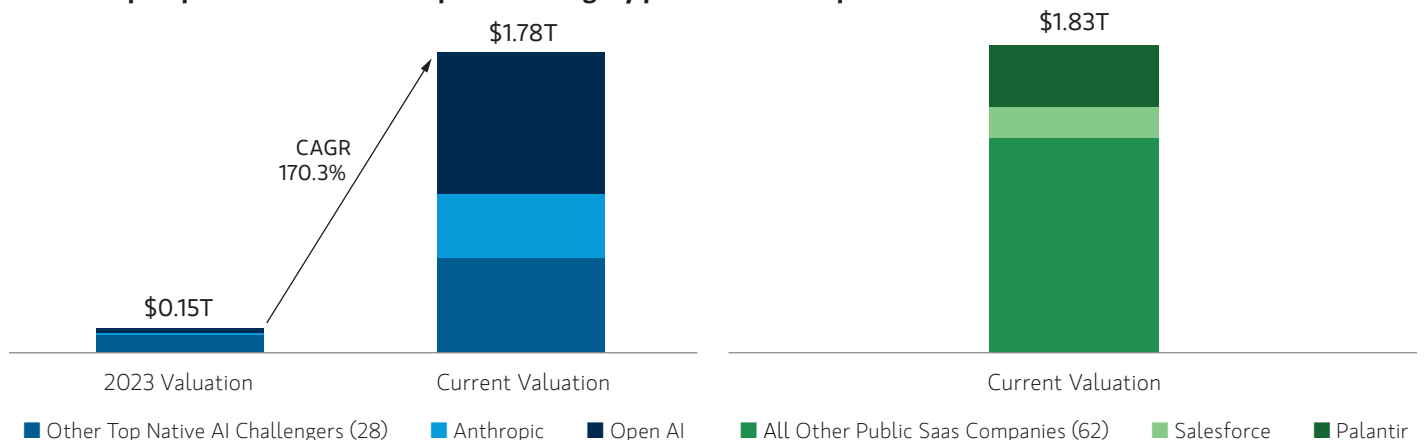
Since arriving on the scene in the late 2000s and early 2010s, the software-as-a-service (SaaS) model transformed what was once an erratic business dependent on one-time license sales and difficult-to-scale on-premise deployments into one of the most prized targets for equity and debt investors seeking strong and highly predictable growth.

The subscription- and multi-tenant cloud-based nature of the SaaS model translated into gross margins that typically ranged between 70-80%, client retention that averaged 90% or more, and growth rates that handily outpaced other industries with uncanny consistency. In the four years ending 2021, the 75 pure-play SaaS companies that trade publicly delivered average annual revenue growth of 32.8% with just 1.8 percentage points in volatility.¹

In the four years since, growth has slowed in the software sector, reflecting the later stages of SaaS adoption. The industry was expected to normalize at ~8% top-line growth over the next five years, still favorable relative to other industries and a multiple of GDP growth.² Early on, it was thought that agentic AI would broadly benefit the industry and reaccelerate growth. That view has dramatically shifted to a highly skeptical one, at least in the context of established players, amid rapid innovation and product announcements by new entrants. The market has, for the time being, lost confidence in existing players' ability to participate in that same AI innovation cycle. Meanwhile, in less than three years' time, AI-native new entrants have sprinted to the same aggregate value that took SaaS companies 20 years to build (*Display 1*).

DISPLAY 1

Market cap of private AI-native companies vs. legacy public SaaS companies



Note: Private company valuations based on PitchBook estimates or reported terms of fundraising rounds.

Source: PitchBook LCD, Morgan Stanley Investment Management. As of March 26, 2026.

Dissecting the Bear Story

The broad-based sell-off in the software sector is overdone, in our opinion. Current valuations reflect the view that Generative AI will result in more downside than upside for legacy software providers. Specifically, that software incumbents will:³

- **GET HIT BY A SECULAR CHANGE** in outsourced software solutions, as companies migrate to insourced solutions for the first time in 20 years
- **GET NONE OF THE NEW AND ENORMOUS GENAI REVENUE TAM**, which will flow instead to a new breed of start-ups and research labs
- **GET BROKEN ON THEIR PRICING MODELS**, as AI automation shrinks employee headcount (and revenue paying seats)
- **GET DISPLACED FROM THE FRONT OFFICE** to become back-end systems of record only

Each of these deserves careful examination. We believe that some elements are valid underwriting risks. Others are probably overstated—particularly in the context of enterprise, mission-critical software businesses that we view as having more defensive moats and attractive AI monetization opportunities.

Looking at these in turn:

1. More insourcing, less outsourcing.

For two decades, enterprises have steadily shifted from custom-built internal applications toward third-party packaged software and platforms. The outsourcing of application development, maintenance, compliance, and

security to scaled vendors that can readily deploy from the cloud had an almost indisputable logic and became the default decision among corporate IT buyers during that span.

The concern that this may change maps directly to what Morgan Stanley's Equity Research describes as the "DIY risk" thesis.³ The thinking goes that if generative AI can dramatically reduce coding costs while allowing internal teams to build bespoke tools very quickly, enterprises will be tempted to bring development back in house and reduce reliance on packaged third-party software in the process.

There is some validity in narrow contexts—particularly in lightweight workflows or thin application layers that are not deeply integrated. However, for complex, regulated, and front-to-back systems of record, enterprises continue to value outsourcing compliance, security, updates, domain expertise and reference data to scaled vendors. The economics of one vendor serving thousands of customers remain more efficient than widespread internal duplication.

UNDERWRITER BEST PRACTICE

An underwriter should avoid lending to thin application layers or easily replicable point solutions. Instead, the strategy emphasizes mission-critical enterprise systems of record that require compliance, security, integration depth, governance, and long-term maintenance. The underwriting process should evaluate switching costs, workflow entrenchment, integration complexity, and regulatory exposure. Businesses that function as core infrastructure within enterprise IT environments are significantly less vulnerable to DIY replacement. The underwriter should further prioritize companies with long-term contracts, high renewal rates, and recurring revenue models, reducing exposure to sudden behavioral shifts.

2. New \$420 billion TAM flows exclusively to new entrants

A new addressable market is evolving for AI workflow software. By some accounts, this is already \$65 billion in size,⁴ growing to \$420 billion by 2030,⁵ and is potentially incremental to the \$1 trillion SaaS TAM estimate in 2025.⁶ It is also separate and distinct from the roughly \$3 trillion in projected AI infrastructure and computing spend over the same span.³ Central to the software disruption debate is whether the new Agentic AI TAM carves into the legacy TAM along the way. Research by Goldman Sachs indicates that it likely will, but that the net effect will still translate to an AI tailwind for the overall software TAM (*Display 2*).

The rapid scaling of AI-native start-ups and research labs has created concern that incumbents will miss the upside while suffering erosion. This concern is partially valid, particularly for narrow point solutions. However, generative AI functionality is accessible to incumbents and start-ups alike. Incumbents retain durable advantages in data, distribution, platforms, existing integrations and customer relationships. Over time, AI is likely to expand the total addressable market for software by automating broader domains of the knowledge economy. In such a scenario, scaled incumbents that invest appropriately can capture meaningful upside.

Importantly, this upside participation is contingent on incumbents' ability to execute on credible AI roadmaps, which may involve near-term margin compression and investment cycles similar to the SaaS transition. A key underwriting question is differentiating future 'winners'

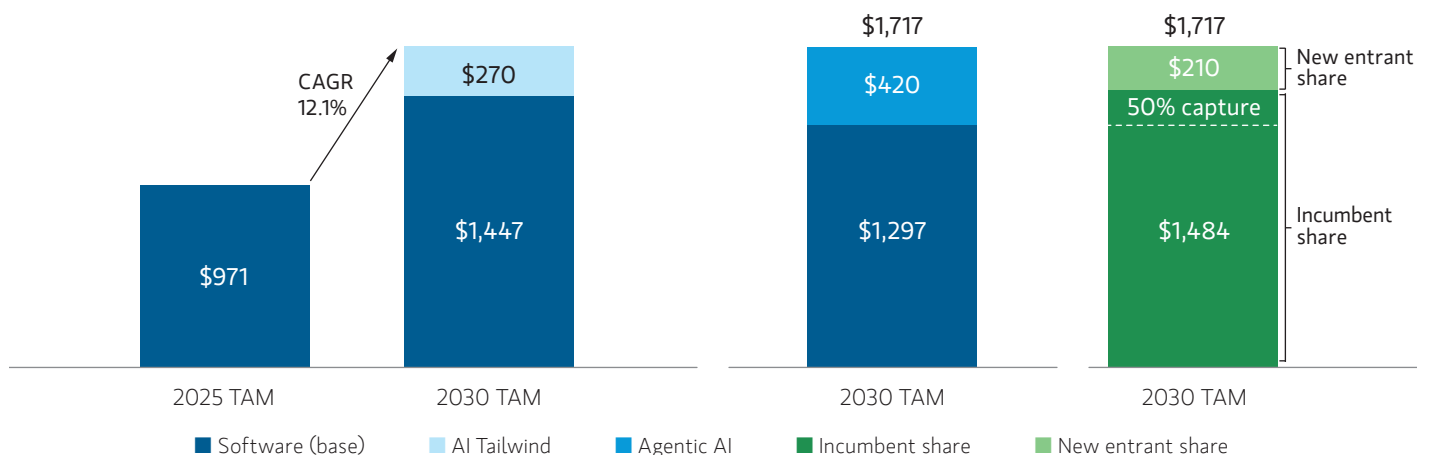
from 'losers,' particularly as AI-native firms attract disproportionate talent and innovation momentum. The perceived dominance by AI-native companies in the innovation cycle is one that incumbents must change with breakthroughs of their own in AI-embedded offerings.

UNDERWRITER BEST PRACTICE

An underwriter should focus on scaled incumbents with durable advantages in data, distribution, platform integration, and customer relationships. The underwriting process evaluates proprietary data access, distribution reach, ecosystem depth, and sponsor-backed innovation capacity. Companies already embedding AI features into their existing product set is a pre-requisite requirement for prospective software borrowers. Sponsor backing is also critical. An underwriter of software loans should focus on sponsor-backed platforms capable of funding R&D investment, accelerating product roadmaps, and executing strategic M&A. This ensures incumbents have the capital and operational resources to compete effectively in AI-enabled markets. Vertical software that caters to highly regulated industries, such as healthcare, financial services and government, may also offer, we believe, an extra degree of protection from substitution risk given higher sensitivity to financial penalties due to non-compliance or IT failure.

Given the requirement for a robust AI product roadmap, an underwriter should explicitly incorporate downside scenarios that explore tolerance to lower near-term margins and elevated R&D and go-to-market spend, ensuring capital structures can withstand execution volatility.

DISPLAY 2
New Agentic AI TAM vs. Legacy SaaS TAM by segment



Note: For illustrative purposes only.
Source: Goldman Sachs Research, Morgan Stanley Investment Management

3. Seat-based pricing models give way.

Seat-based pricing headwinds are a legitimate underwriting variable. If automation reduces headcount, per-seat models may face pressure. However, pricing in enterprise software is often embedded within broader contracts, and vendors historically renegotiate around value delivered. Industries such as tax and accounting have demonstrated that software growth can outpace underlying seat growth through pricing power and value expansion.³ For businesses with a value-based pricing model, AI-driven efficiency may expand monetization rather than compressing it, and that is likely the path forward for the industry.

Importantly, emerging evidence suggests the shift away from seat-based pricing is evolutionary rather than disruptive. Recent industry analysis indicates that approximately two-thirds of incumbent software vendors have already moved to hybrid pricing models—combining traditional per-seat pricing with usage-, feature-, or outcome-based AI monetization—while only roughly one-third remains purely seat-based.⁷

Customers may seek to share in vendor efficiency gains by way of reduced pricing, but each are gaining equal efficiency. Value-based pricing frameworks allow vendors to retain economics tied to productivity, risk mitigation, and embedded workflow control.

UNDERWRITER BEST PRACTICE

Revenue model durability is a core underwriting focus. An underwriter should assess whether pricing is strictly per-seat or embedded within broader enterprise contracts. Preference is given to value-based, transaction-based, instance-based, or contractually committed pricing structures. Underwriting stress tests model potential churn, seat contraction, and pricing renegotiation scenarios.

Companies demonstrating pricing power, high net revenue retention, and mission-critical positioning are prioritized. Where AI creates productivity gains, and underwriters should evaluate whether those gains can be monetized through upsell modules or expanded functionality rather than leading to revenue erosion.

4. Systems of record get pushed down the value chain.

The architectural concern is that AI agents overlay and simplify the user interface, downgrading application vendors to commoditized data repositories. While this risk warrants monitoring, ingesting enterprise data without context raises integration, governance, and security challenges. Compliance-heavy systems of record with regulated workflows require deterministic outcomes, meaning guaranteed outputs from inputs, as opposed to the probabilistic outcomes that AI models can introduce due to hallucination or matching to random data. Incumbents can—and increasingly do—embed AI-driven interface layers within their own ecosystems. Vendors offering broad suites that automate complex end-to-end processes are more insulated than narrow point-solution providers.

AI excels in probabilistic tasks but struggles to fully replace high-stakes deterministic workflows, where correctness, auditability, and compliance are non-negotiable. In practice, AI is more likely to function as a ‘system of intelligence’ layered on top of systems of record, rather than a full replacement for workflow ownership and governance.³

UNDERWRITER BEST PRACTICE

An underwriter should prioritize companies that own deterministic workflows, operate in regulated industries, or manage highly sensitive data where governance and auditability are paramount. The underwriting framework evaluates ecosystem control, API strategy, integration defensibility, and customer dependency depth. Vendors offering broad, integrated suites that automate complex end-to-end processes are preferred over narrow point solutions. An underwriter should also evaluate AI roadmap integration—requiring companies that are embedding AI-driven interfaces within their own ecosystems rather than ceding innovation layers to third parties.

Current trends in software credit issuance, defaults and ratings

The recent sell-off reflects uncertainty and is more about buyer paralysis than a strong-held conviction in wholesale disruption, in our opinion. Technology's share of year-to-date volume in the broadly syndicated loan (BSL) market has collapsed to 8% of deal count, down from twice that in 2025, and spreads on traded software loans have gapped to north of 700bps from below 500bps previously.⁸ Overall BSL underwriting volume is down 30%, in no small part due to the pullback in software commitments. The bank-led BSL market can prove quite fickle, as shown during a complete withdrawal from LBO lending during a 9-month period in 2023 and 2024. This led to near

record spreads and market share gains by non-bank private credit lenders. We don't expect as severe of a retrenchment this time around, given the different direction in rates, but a partial withdrawal that can reduce competition for new loans and improve return opportunities, should it persist.

Valuation compression appears driven by value debates that are handicapping cash flows many years into the future rather than any near-term fundamental collapse. Exiting 2025, the Software and Services sector was one of the few within private credit with a positive trend in credit upgrades versus downgrades, as tracked by S&P estimates of private credit issuers (*Display 3 and 4*).

DISPLAY 3

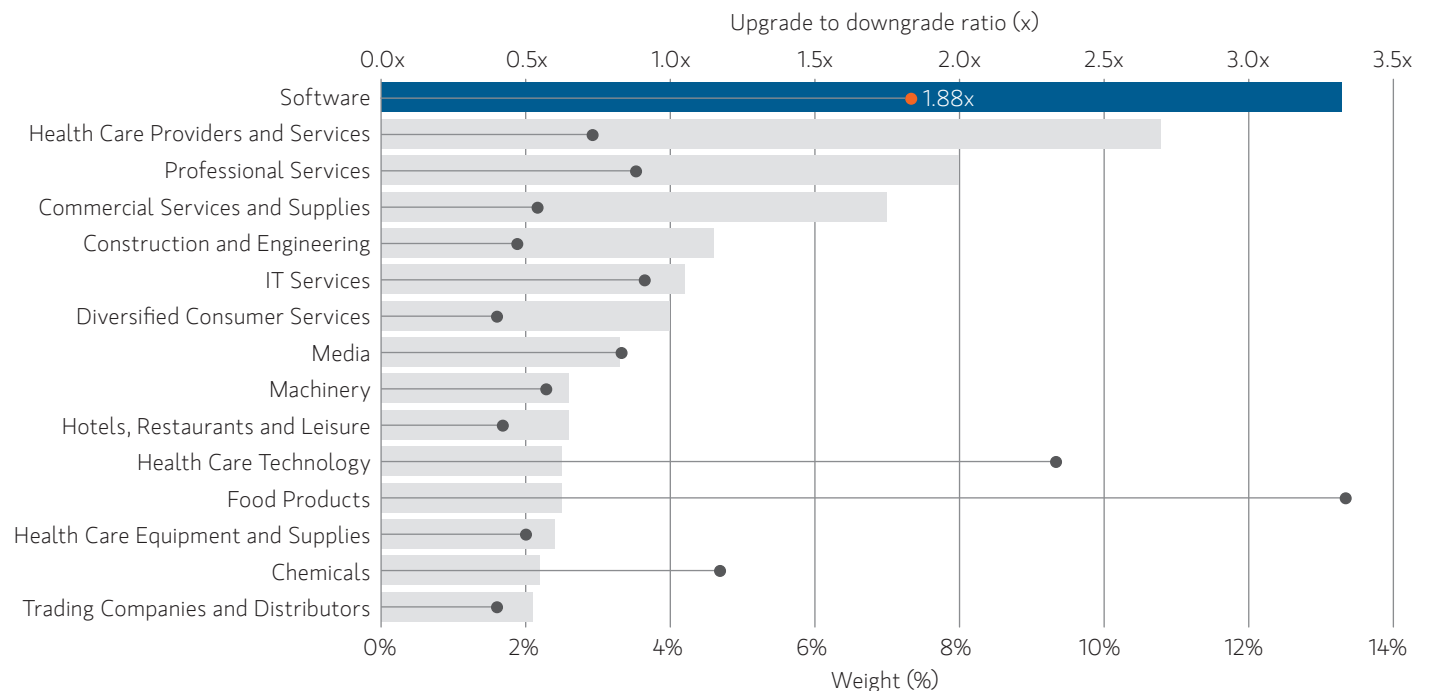
Upgrades outnumbered downgrades in software & services among private credit issuers

SECTOR (TOTAL # OF COMPANIES IN SECTOR)	SECTOR WEIGHT OF TOTAL CREDIT ESTIMATES (%)	UPGRADES (NO.)	DOWNGRADES (NO.)	UG-TO-DG RATIO
Software & Services (537)	17.5	52	34	1.5
All Industries ex-Software & Services (3,192)	82.5	183	274	0.7

Source: S&P Global Ratings. Based on credit estimates on 3,729 private credit issuers. As of December 31, 2025.

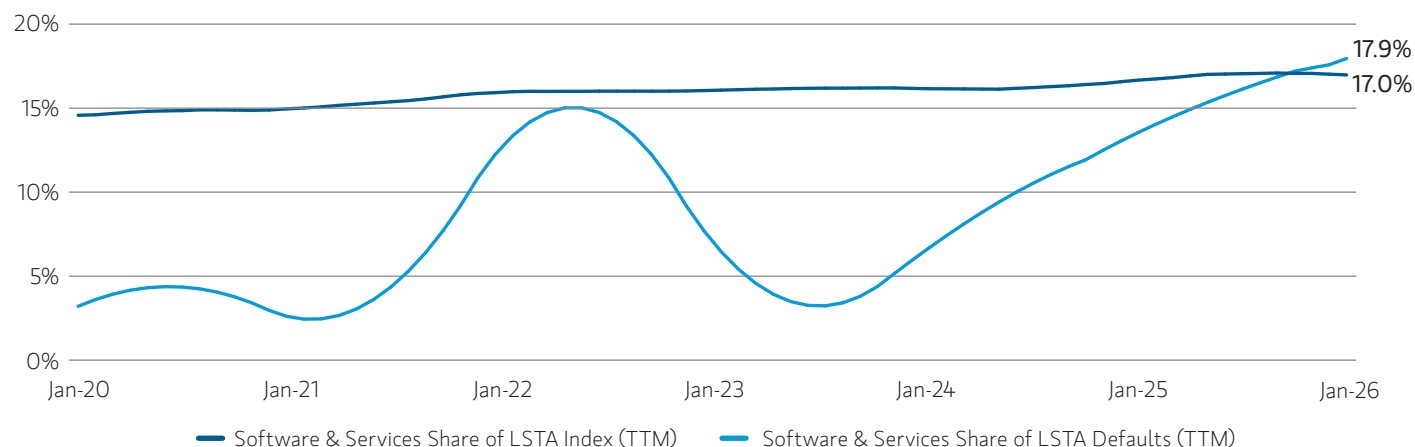
DISPLAY 4

Software had the highest upgrade to downgrade ratio of the major sectors (>3% weight)



Source: S&P Global Ratings. Based on credit estimates on 3,729 private credit issuers. As of December 31, 2025.

DISPLAY 5
Default trends within Software & Services



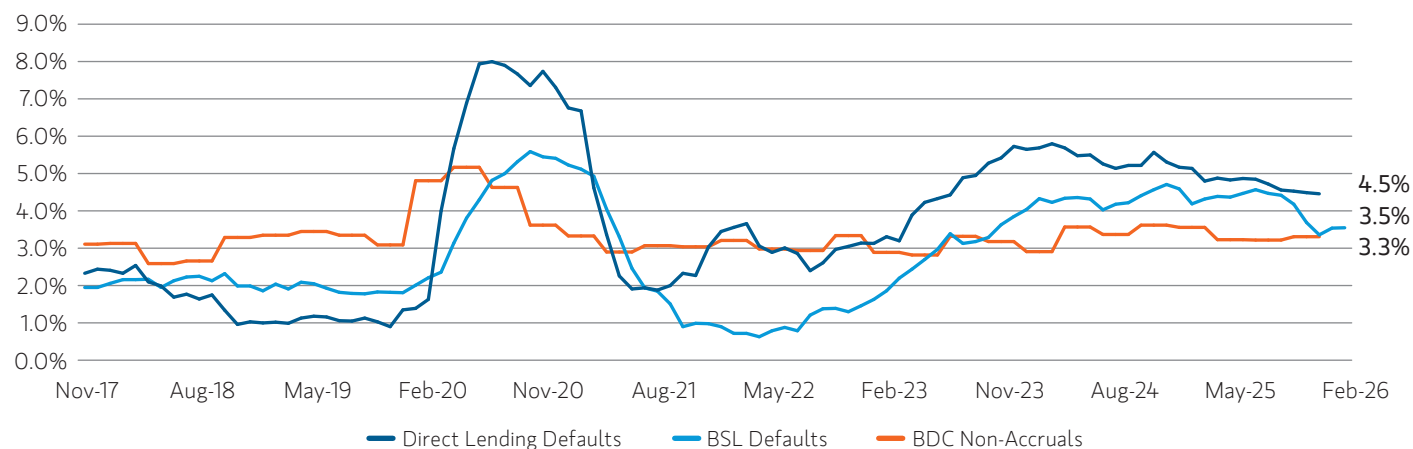
Note: Software share of index based on GICS industry classification and loan cost. Share of defaults based on count of defaults inclusive of distressed exchanges. Source: PitchBook LCD, Morgan Stanley Investment Management. As of February 28, 2026.

Software loans have demonstrated a lower incidence of default in the years leading up to the present, including a temporary spike post-pandemic. Using BSL as a proxy and the fully loaded default rate inclusive of restructuring as measured by LCD. The software industry’s share of defaults has only recently reached parity with its representation in the leveraged loan index (the Morningstar LSTA index) at approximately 17% (*Display 5*).

Importantly, while software is often viewed as non-cyclical, it has experienced prior idiosyncratic disruption cycles (e.g., the 2014–2016 correction on cloud transition fears, the 2022 SaaS correction on hyperscale fears) with similarly limited default impact.

In this context, it’s also important to note that contrary to market perception, indicators of loan stress in both the traded and non-traded loan markets have been trending downward since late 2024. For direct lending, this can be seen in the latest estimated default rate reported by S&P at 4.5%, down from the cycle high of 5.8%, and the reported BDC non-accrual rate of 3.3%, down from its recent high of 3.6%. Both are as of Q4 2025. In the traded BSL market, which reports more frequently, the full loaded default rate including restructurings held steady at 3.5% in February, down significantly from a cycle high of 4.6% (*Display 6*).

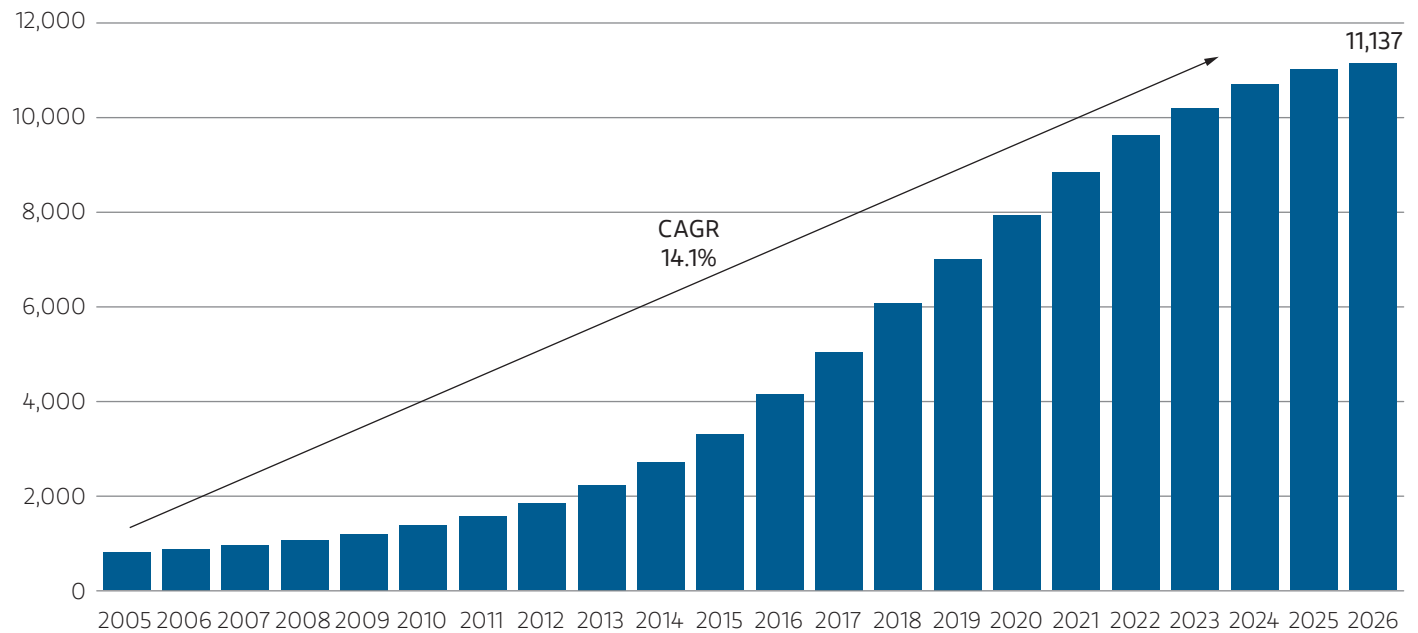
DISPLAY 6
Overall default and non-accrual trends



Note: Non-accrual rates are for traded BDCs only in order to reflect seasoned loan portfolios. Source: LSEG, PitchBook LCD, S&P Global. BSL default rate as of February 28, 2026. All other data as of December 31, 2025.

DISPLAY 7

Population of sponsor-backed private software companies (application only)



Source: PitchBook LCD, Morgan Stanley Investment Management. As of December 31, 2025.

While the downward trend in these three measures may well reverse in the future should the bear story on AI disruption fully play out, the current path of travel suggests convergence of default rates in the 4.0-5.0% range in the two markets, even after allowing for a 50bps backup, which is approximately 125bps above the average for fully loaded defaults since this data was first tracked on both BSL and private credit markets in 2017.

Current trends in equity fundamentals

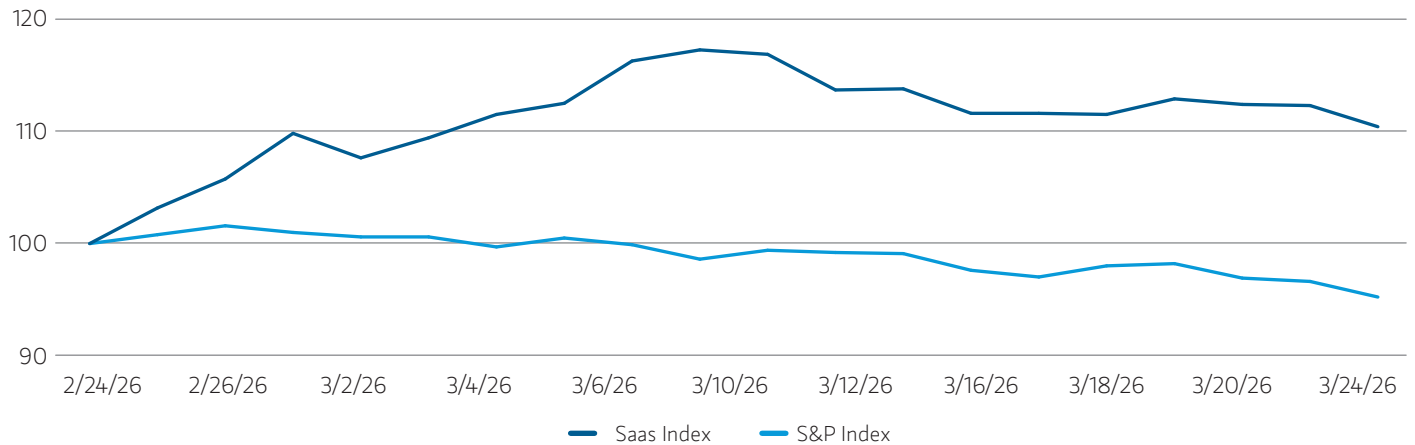
Revenue and earnings growth in public SaaS companies remained resilient in 2025, including the recently completed fourth quarter reporting season. Net income surprises were biased slightly to the upside, but no more or less than the overall market. For 2026, expectations call for a modest acceleration to ~16% revenue growth as compared to ~7% for the market overall.¹

Of course, fundamental strength in large public companies does not always translate to the long tail of smaller private companies, although the positive trend in private credit estimates referenced above indicates that fundamentals are holding up there as well, at least for now.

The greatest challenge facing software companies in private markets is their sheer number. In application software alone there are more than 11,000 sponsor-backed SaaS companies, more than double the total of just 10 years ago (*Display 7*). The vast majority of these are VC-backed and not debt eligible, leaving approximately 1,200 PE-backed software companies. All the same, industry fragmentation is high with the market share leader controlling just 2% of the combined public-private revenue total.⁵ Consolidation is likely, especially among companies that cannot afford the R&D budgets necessary to keep up with AI innovation and integrations.

DISPLAY 8

SaaS has outperformed the broader US market since the Iran conflict began



Source: BVP Emerging Cloud Index, S&P Global. As of March 26, 2026.

Acting defensively again

Following the indiscriminate sell-off in January and February, publicly traded software assets found their footing in March, coinciding with the US-Iran conflict and weakness in stocks and bonds. Software shares have advanced while the broader equity market has declined, delivering the best relative performance of any major industry since that point in time (*Display 8*).³ Meanwhile, software loans have also bounced from their lows, closing the gap with the broader traded market for syndicated loans (*Display 9*). Whether this is a partial acknowledgment that incumbents are better positioned to benefit from AI than the worst fears, or due to fundamentals remaining intact post the Q4 earnings season, or investors rediscovering the virtues of software as an asset light, low input cost industry is open for

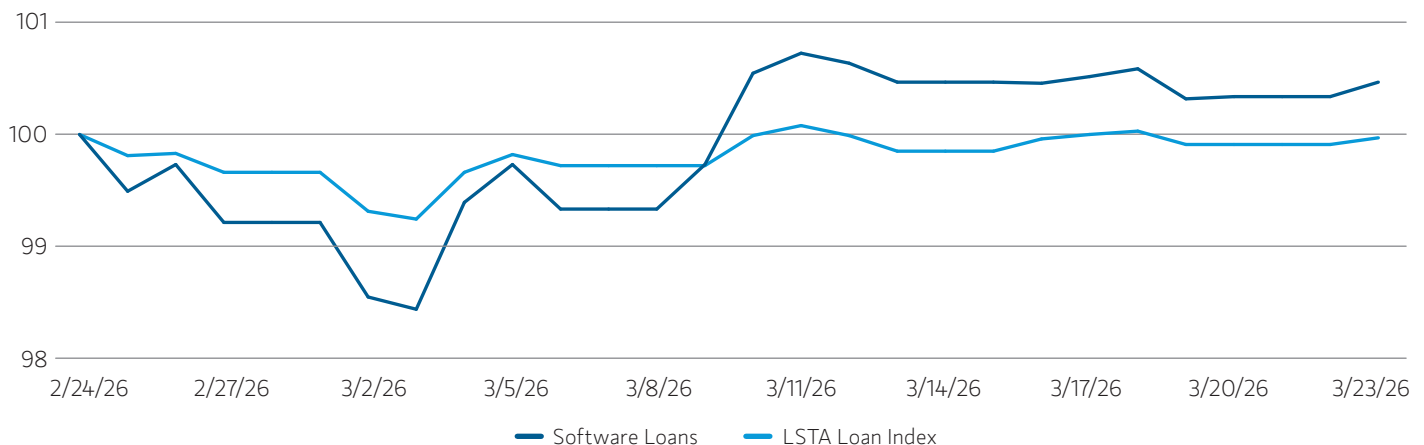
debate. Whatever the case, the sector is acting defensively again in the face of a geopolitical storm.

Conclusion

The four main concerns relating to GenAI disruption of legacy software businesses contain valid elements, but they are concentrated in specific sub-sectors. A sound underwriting approach should avoid thin application layers, commoditized pricing structures, and structurally vulnerable business models. Instead, it should emphasize enterprise systems of record, high switching costs, proprietary data advantages, and sponsor-backed innovation capacity. In many such cases, AI is more likely to expand TAM, increase stickiness, and create incremental monetization opportunities than to destroy value.

DISPLAY 9

Weighted average price of traded software loans has also bounced



Source: PitchBook LCD. As of March 26, 2026.

ENDNOTES

¹ JP Morgan Research, *Equity Thematic Strategy – Historic Software Crash, Extreme Positioning, Adding Exposure to AI-Resilient Companies*, February 10, 2026.

² FactSet consensus mean of analyst estimates, March 16, 2026.

³ Morgan Stanley Research, "What's Causing the Collapse in Confidence?" published on February 9, 2026, which outlines four core areas of investor concern on GenAI-related disruption to software incumbents.

⁴ PitchBook Institutional Research, *Clash of the Titans – Incumbents versus Challengers in the Age of Agentic AI*, January 14, 2026.

⁵ Goldman Sachs Research, *Assuming Coverage into the Decade of Agentic Workflow*, January 11, 2026. Net AI tailwind estimated at ~\$450 billion in present value and ~\$650 billion in future value in 2037. Assumes 12-year full adoption cycle with agentic AI achieving approximately 35% share of total software TAM by year 12. *Display 2* is for illustrative purposes only to demonstrate the first five years of the adoption cycle using similar assumptions.

⁶ Gartner Research, *Worldwide IT Spending Forecast*, July 15, 2025.

⁷ Bain & Company Research, *Per Seat Software Isn't Dead, but New Models Are Gaining Steam*, October 2025.

⁸ PitchBook LCD Research, *AI-Driven Risk Sets Up the Software Sector for Divergence*, February 9, 2026.

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