

# Decoding Software's Future

Despite the short-term pressure on software stocks, the long-term wealth creation opportunity tied to select software businesses remains strong, buoyed by a massive and immutable move toward consumer and enterprise experiences that are built on software.

## Key Points

- The long-term wealth creation opportunity tied to select software businesses remains strong, buoyed by a secular shift toward consumer and enterprise applications that are built on software.
- Not all software businesses are created equal. Distinguishing those that are best poised to navigate the coming waves of digital transformation will require deep knowledge of the business models that can deliver sustainable advantages in a crowded field.
- Businesses that offer mission-critical, multiproduct platforms with fast time-to-value, in our view, offer attractive long-term growth and wealth creation potential.

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Over the past three years, stocks of several of our leading software businesses have come under pressure from a confluence of macroeconomic factors, sector-specific challenges, and in some cases business missteps. Rising interest rates, accelerating inflation, and broader market volatility have combined to push valuations lower as investors weigh the impact that a potential economic slowdown could have on a sector still absorbing the significant software pandemic-era investments. Speculation about whether generative artificial intelligence (gen AI) will ultimately be a friend or foe to the software industry has added an additional layer to the veil of uncertainty.

However, we believe these headwinds and the effect they have had on the stocks of select software companies are transitory and do not undermine the structural strength of the software industry or the fundamental value of the businesses we own. Software and the move to cloud computing remain one of the largest secular growth trends we see, with software continuing to be at the heart of digital transformation, which is driving increased demand for scalable, cloud-based solutions across every sector of the economy.

While near-term market fluctuations can be unsettling, our investment theses are based on our views of the long-term potential of select companies to create significant shareholder value, driven by their ability to leverage their competitive advantages, which today can include their capacity to seize the promise of gen AI and capture expanding market opportunities.

As long-term investors, we view these short-term price dislocations as opportunities to build our positions in high-quality software businesses that we believe are well-positioned for sustained growth. Our focus remains on multiproduct platform businesses that are essential to their customers' operations, exhibit strong unit economics, and have leadership teams capable of executing over multiyear horizons. In this article, we outline the key secular growth drivers supporting the software industry, our disciplined framework for selecting leading companies, and five portfolio businesses in which we continue to have high conviction.

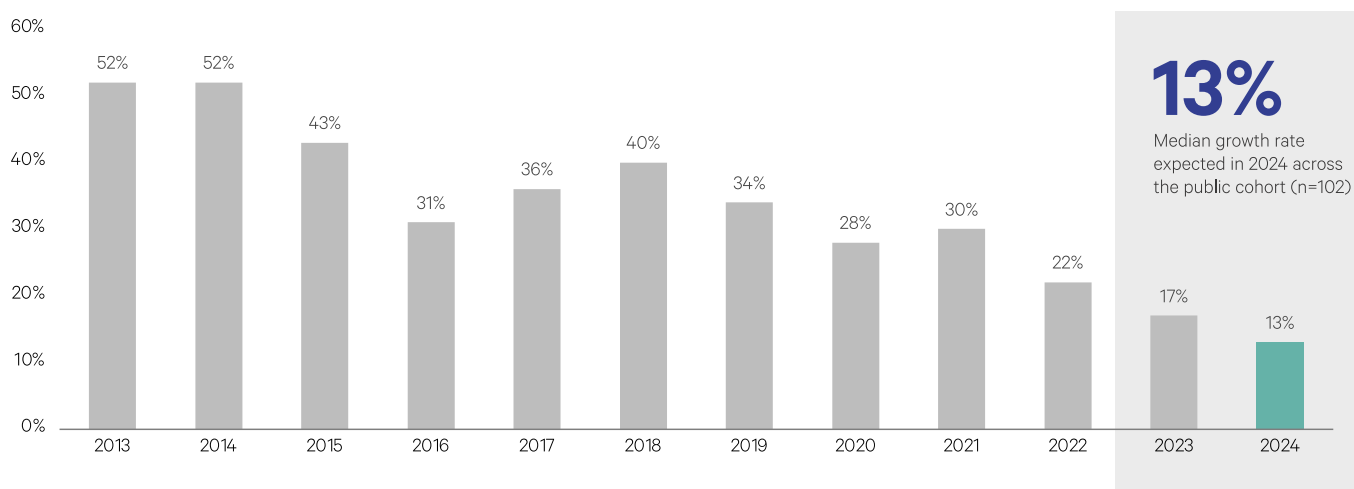
## As long-term investors, we view these short-term price dislocations as opportunities to build our positions in high-quality software businesses that we believe are well-positioned for sustained growth.

### Under Pressure

The gyrations of the past few years were just the most recent to hit an industry that is often caught in the crosshairs of innovation and uncertainty. When the world first closed its doors in early 2020, software stocks rallied across the board, supported by low interest rates and increased demand from a population in lockdown that broadly looked to accelerate digital transformation efforts. Across the industry, revenues grew, the so-called knowledge economy expanded, and valuations for long-duration assets rose in the process.

Two years later, the U.S. Federal Reserve put an end to the spending. Its moves to rapidly raise interest rates drove capital costs higher, valuations lower, and sent businesses scrambling to consolidate spending, including reducing headcount. Concerns about economic growth further constrained budgets, while the emergence of use cases for gen AI over the past two years shifted incremental spending away from some of the core digital transformation projects that many enterprise software businesses are tied to. The result: a drop in overall industry growth to an estimated 13 percent this year from 30 percent in 2021.<sup>1</sup>

#### EXHIBIT 1 SOFTWARE SECTOR GROWTH SLOWING SINCE 2021



Source: Gartner Data Book (4Q2023), Piper Sandler Estimates as of 9/30/24. FactSet

## A Broad Albeit Uneven Slowdown

But the tide that had once lifted all boats did not recede uniformly. Recently, we have begun to see an increased dispersion in business results, which has driven a similar variability in stock performance.

Vertical software businesses, such as Axon and Samsara, and multiproduct, mission-critical ones, such as ServiceNow, have held up better this year. They were isolated from some of the pressures that weighed on less fortunate peers that were more exposed to constraints in traditional information technology (IT) budgets or that depended on landing new customers for growth without a broader platform to upsell existing customers.

On top of the high-level sector headwinds, some of our portfolio companies suffered more business-specific concerns. Atlassian and Okta came under pressure as customers cut headcount during the more difficult macroeconomic environment, but they also faced more idiosyncratic challenges. Atlassian's cloud migration effort created forecasting challenges, while Okta was forced to regroup after struggling to integrate its Auth0 acquisition and dealing with several security breaches. Shopify has delivered strong top-line results but surprised investors with an increase in marketing spending on a bet that this investment will deliver strong multiyear returns, which has weighed on the stock in the short-term.

Datadog and Snowflake worked through the infrastructure optimization headwinds introduced over the last few years, and Snowflake specifically has seen increased debate around its role in a world where gen AI is at the forefront. With a change in management, there are concerns Snowflake is behind in AI and machine learning workloads compared to its hyperscale cloud competitors and several other emerging entrants. Databricks, a competing private data platform business, is expected to generate over \$2 billion in revenue this year.<sup>2</sup>

Stepping back, amid all the uncertainty that has played out over the last several years, many investors have shifted their attention away from software to sectors with more immediate revenue upside potential from AI, such as semiconductors, or to those with lower volatility and durable growth prospects, such as the megacap tech companies. This has exacerbated the pressure on software stocks this year.

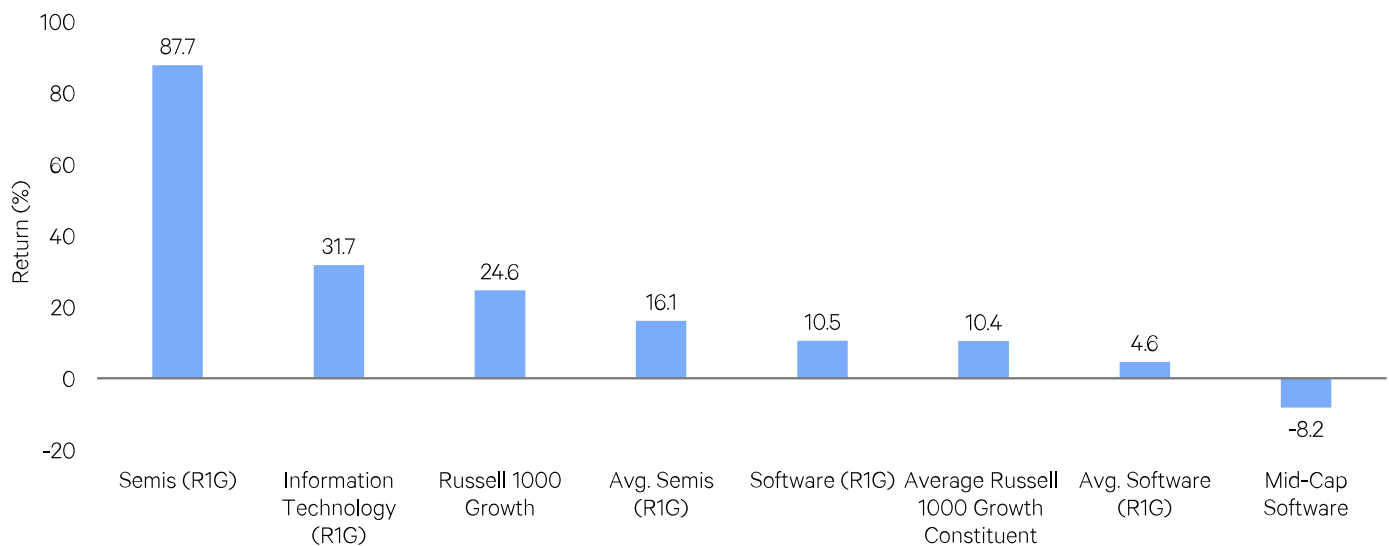
In Exhibit 2, we can see how the multitude of headwinds we have discussed produced a significant dispersion in returns across technology through the end of the third quarter. Strong headline returns have been relatively concentrated among a few outsized performers. This is evident when comparing tech to the average benchmark constituent, which significantly lags the index itself. This dispersion is most evident in software, where returns have underperformed the index, and those returns have been largely concentrated in large cap software businesses, such as Microsoft, SAP, Oracle, and IBM whereas smaller software companies have generally fared worse. Using the BVP Nasdaq Emerging Cloud Index as a proxy for mid- and large-cap growth software, this segment has declined nearly 9 percent this year.

In our view, this year's big divergence in outcomes across software is likely to be an enduring trend, with the big secular trends in digital transformation and cloud adoption likely shifting from a "rising tide lifts all boats" environment to tailwinds that benefit a more select group of businesses in the space. With that backdrop, we continue to believe in the utility of our software investing framework, which helps us focus on investment selection over the long term in the space. We put a particular emphasis on owning companies with the potential to build multi-product platforms, as this has been the biggest driver of durable growth and strong long-term returns for shareholders in our experience. Later we will illustrate how this framework led us to the businesses that have held up best during the period, and why we believe that our multi-product, horizontal software businesses should stabilize or accelerate once headwinds abate more broadly.

## EXHIBIT 2

### DISSECTING THE INDEX REVEALS DISPERSION BY SIZE AND SECTOR

Year-to-date returns through 9/30/24



Source: FactSet as of September 30, 2024. This chart compares the returns of the Russell 1000 Growth Index with the returns of its constituent sectors as well as the average returns of businesses in those constituents. Mid-Cap Software is represented by the BVP Nasdaq Emerging Cloud Index, an equally weighted index that is designed to track the performance of emerging public companies primarily involved in providing cloud software and services to their customers.

### Reasons for Optimism

Over the past 50 years, software has evolved from obscurity to a critical driver of digital modernization. Shifts in technology—mainframe, client-server, cloud, and the rise of personal computing, the internet, and mobile—have expanded its transformative role. In the 1980s, early spreadsheets, such as VisiCalc, Lotus 1-2-3, and Excel revolutionized finance departments, while in the 1990s, Wal-Mart's Retail Link leveraged data analytics for a competitive edge with data storage capacity that was second only to that of the U.S. government.

Today, software powers daily life through platforms like Netflix, DoorDash, Uber, and Nubank, disrupting slow-moving incumbents. It's essential for businesses to differentiate customer experiences and modernize employee experiences to drive growth and keep themselves competitive. JPMorgan Chase, for instance, invests \$14 billion annually to accelerate digital transformation and enhance customer experiences—noting at its annual investor day that this is a top business priority. While the company is a bank at its core, the primary way consumers interact with it in 2024 is via its mobile app.<sup>3</sup>

As competition all over the economy has shifted from the physical to the digital, we have seen strong, multidecade secular growth for software as the key enabler of this, which has seen its share of investment spend significantly increase.

It's essential for businesses to differentiate customer experiences and modernize employee experiences to drive growth and keep themselves competitive.

Cloud computing has emerged over the last decade as the ideal environment to build a modern technology stack that allows businesses to nimbly stay on top of technological change. Although cloud computing and software-as-a-service was initially viewed as a way to cut expenses by outsourcing infrastructure management, they have transformed to be the foundation for modern innovation. As a result, we have seen the migration to cloud infrastructure become one of the most significant secular trends of the past decade.

We believe this trend is set to continue. Cloud computing remains early in its share gains from on-premises IT spending, with about 20 percent share of wallet in 2024 despite the trend being in place for well over a decade now. We believe software will continue to gain in its share of IT spend and cloud will gain share within that software spend. Goldman Sachs recently estimated that the total addressable market for cloud services would expand at a 22 percent

compound annual growth rate from 2024 to 2030, reaching \$2 trillion in spend by 2030.<sup>4</sup> With \$5 trillion spent on IT at the beginning of 2024, growing an estimated 8 percent per year (per Gartner), there is substantial spend available to tap into for software companies that produce great products.<sup>5</sup>

We'd be remiss if we did not acknowledge the game-changing effect gen AI can have on the industry. Companies beyond the tech sector are focused on using gen AI to make their products smarter, faster, and more efficient. Current leaders may have the advantage at this time as they can build in AI functionality with limited change management from customers because they have the necessary proprietary data and, research and development budgets, own the customers, distribution, and customer relationships.

We have not seen proof of AI's impact on revenue, but we believe it can become meaningful in 2025 and 2026.

## **Breaking out of the Rut**

As the market stabilizes, we believe clearer U.S. Federal Reserve policy and a steady macroeconomic outlook should create a more favorable environment for the software industry. While predicting the exact timing of a positive inflection is tough, headwinds from optimization and headcount cuts seem to have stabilized. Leading cloud providers, such as AWS and Microsoft, indicate that many companies have completed their highest return-on-investment (ROI) optimizations, and are now refocusing on digital transformation, further fueled by growing interest in AI.

And while there has been much speculation about whether the rise of gen AI will be a friend or foe to software, we believe gen AI has created a new wave of enthusiasm, serving as a tailwind to help reaccelerate growth.

We remain confident that this digestion phase we have seen does not signal a dramatic change to the long-term outlook for leading software businesses. Enterprises that fail to keep pace in digital transformation risk missing out on growth opportunities, losing their competitive advantage, and losing ground to competitors that can deliver products and services that are digitally enabled. When spending resumes, we expect it to support the next wave of growth for select businesses in the industry and return software to its underlying secular growth trend.

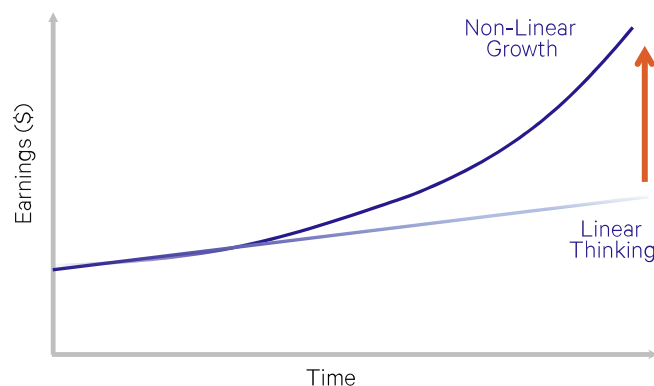
## **The Search for Needles in the Haystack**

Thanks in large part to the proliferation of cloud computing described above, investable opportunities in cloud software have increased ten-fold over the past decade, but not all software companies will benefit from these secular trends equally. As noted, we have seen increased dispersion in software, but this creates opportunities for active managers like us. Our six criteria can help us identify businesses with above-average earnings growth, large addressable markets, and sustainable competitive advantages.

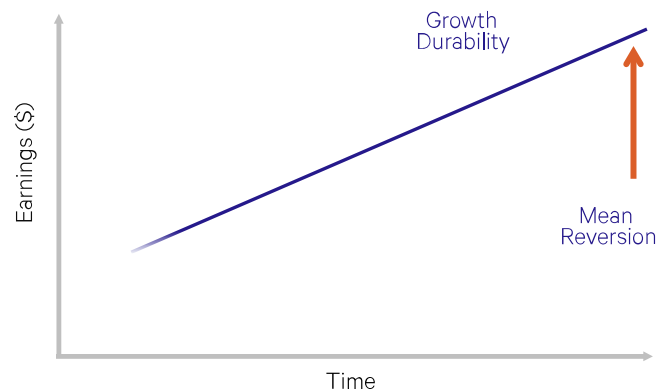
In software, market opportunities are large but finite, requiring expansion into adjacent categories for sustained growth at scale. Not all new products succeed in creating durable growth, so we focus on understanding synergies with core products, go-to-market strategies, customer needs, and the competitive landscape for these adjacent categories to help us select businesses in this industry. Companies with cohesive platforms that can support multiple use cases with simple implementations have the potential for sustained profitable growth, a function of the outsized ROI they offer customers.

Building differentiated insights on future products and the so-called "second acts" for many of these publicly traded software companies is a fertile opportunity for wealth creation opportunities, in our view. Consensus estimates can underestimate the magnitude and the duration of growth for the rare businesses that can deliver sustained above-average growth. When the market only focuses on the next few quarters of results, it misses the important incubation and early proof points of adoption of new products that may not move the needle today, but that can be material in several years, which is exactly the lens we invest behind.

## GROWTH MAGNITUDE



## GROWTH DURATION



Presented for illustrative purposes to show hypothetical growth trajectory stemming from 1) exponential growth vs. linear growth, and 2) sustained above-average growth vs. mean-reverting growth.

Vertical software leaders are a ripe category to find these opportunities as they become de-facto operating systems for how their customers run their business. This allows them to solve the many problems and tasks customers face daily, creating a long pipeline of monetizable opportunities. This multiproduct potential also exists for horizontal leaders who can consolidate multiple point products onto one compelling platform. We bring a few examples to life below.

### The System of Record for IT and Beyond

ServiceNow has built the kind of multiproduct platform we seek in portfolio businesses. By offering a single, scalable platform for multiple use cases, it avoids saturation risks common to single-product companies and supports long-term, profitable revenue growth.

Initially focused on replacing on-premises IT help desks, such as BMC Software with a cloud-based solution, ServiceNow quickly expanded into adjacent markets, such as IT operations management and other workflows around the organization. The company's key insights were that workflows similar to the IT help desk use-case exist across customer organizations and one platform could support this broad array use-cases, significantly broadening its market beyond IT.

Today, ServiceNow offers products generating significant revenue across various departments, including HR, legal, finance, and customer service. Eleven of its products generate more than \$200 million annually in revenue, with its Creator platform for customer-built workflows, its customer service platform, and its employee service platform each generating nearly \$1 billion in annualized revenue today. As a result of the company's expansion beyond IT, ServiceNow is currently projected to generate over \$10.5 billion in subscription revenue this year, significantly exceeding Gartner's addressable market estimate of \$1.4 billion at the time of the company's initial public offering in 2012.<sup>6</sup>

Many customers have derived significant ROI from this multi-product platform approach. JPMorgan Chase noted at its 2022 analyst day that it had saved \$50 million in three years by consolidating 24 disparate applications onto ServiceNow as one example. There are many more similar examples as well.

ServiceNow has achieved this as a horizontal software company, selling primarily to IT departments across a broad array of industry end markets. Similarly, companies such as Shopify, Samsara, and Axon are showing how vertical software providers can unlock multi-product potential when they become a de facto operating system for an entire business. At that point, nearly every role in a client's business represents a new product monetization opportunity.

## The Vertical Potential

Shopify is the leading ecommerce platform by market share for merchants of all sizes. It started by making it easy for small businesses and new entrepreneurs to set up online stores. Over time, its fast pace of innovation has allowed it to become a top omnichannel platform for selling consumer products. The Shopify dashboard lets merchants handle almost everything they need to run their daily operations—finding customers, managing inventory, optimizing web pages, running sales analytics, accepting payments, financing inventory, and much more. Shopify can solve all these job functions with one product. In certain segments, such as global logistics or email marketing, Shopify relies on its industry partners that build their solutions to integrate into Shopify in exchange for a share of revenue. This ecosystem is similar to the Apple iOS app store and has further differentiated Shopify versus its competitors, with more than 10,000 apps available to supplement the core Shopify product.

Whether with a direct product or an ecosystem partner, Shopify solves for nearly every job function of a merchant trying to run a retail business. This creates a pipeline of monetizable opportunities that has helped sustain growth while reinforcing its competitive advantages. The best metric of this adoption is Shopify's effective take rate, calculated as merchant solutions revenue divided by gross merchandise volume. This number has more than doubled today versus where it was a decade ago as Shopify has seen success launching and driving adoption across all of these new products. We see a large pipeline of future opportunities to monetize more products by solving more problems for customers moving forward.

Samsara and Axon similarly combine hardware and software for industries that are in the early stages of digital transformation. Samsara started by offering fleet tracking for large vehicle fleets, helping operators monitor their assets while on the road. It quickly introduced a dashboard camera system to track driver behavior inside and outside the vehicle to help with driver safety, which is something their customers were asking for. According to a recent IDC study, these two products offer an 800 percent ROI, helping companies save money on maintenance, fuel, and insurance.<sup>7</sup> Thanks to this significant ROI and a large market opportunity, Samsara has grown rapidly, reaching \$1.265 billion in annual recurring revenue in just eight years.<sup>8</sup>

Samsara currently collects 10 trillion pieces of data across 70 billion miles driven, and processes 85 billion API calls. This data is then fed into customers' financial systems, customer service tools, and payroll. The company also recently launched new software tools, Connected Forms and Connected Workflows. These tools are intended to help operations teams digitalize their business. For instance, they can replace traditional pen-and-paper forms, like safety checklists, using a mobile app. They can also digitalize more complex tasks, such as pinpointing when an asset needs maintenance and initiating a repair process. More recently, they have been layering gen AI into this platform, and while it's early days for this, initial feedback from customers has been very positive on the ROI of this as well.

These applications remind us of what ServiceNow was doing several years ago. We see a similar potential for Samsara to digitalize its unique data for a largely overlooked customer set, replacing the disjointed use of paper, phone calls, emails, and spreadsheets that operations teams currently rely on to manage their businesses. This is the type of platform and multiproduct opportunity that we like as long-term investors.

Axon is the leading Taser and bodycam supplier to federal, state, and local law enforcement agencies. The company has successfully leveraged its hardware business into a subscription-based software model that now totals more than \$850 million in annual recurring revenue. Its flagship software, Axon Evidence, is used by more than 20,000 agencies to manage 2 billion evidence files.

Like Samsara, Axon is increasingly set to leverage this position to drive more productivity and automation for law enforcement agencies that desperately need both amid a very challenging hiring environment. Its newly available Draft One AI product transcribes and analyzes bodycam footage and can automatically create police reports from this data. Initial customers report a 50 percent reduction in the amount of time police officers spend writing police reports.<sup>9</sup> This allows officers to get away from the desk and back to more productive police work, allowing their organizations to overcome their headcount challenges. We expect significantly more innovation from Axon in the future as it leverages its vast array of hardware, sensor data, and software to help make its law enforcement partners safer and more productive.



We expect that all these companies should benefit from incorporating AI into their products because they have unique data, integrations, and significant work processes built on them, in addition to trusted brands.

While not in the same category, Globant, a leading digital business services provider to global corporations, has fallen victim to many of the headwinds that have pressured software. We believe Globant is making the right business moves during this environment and should remain well positioned to be a disproportionate winner coming out of the downturn. Globant is a great example of a company that is taking advantage of market challenges to expand its business and increase market share. It was able to increase its European business more than 42 percent on a year-over-year basis in the second quarter of 2024. That came after its 2023 acquisition of the French digital transformation specialist Pentalogy that enabled it to expand its footprint across the continent. Its use of generative AI has also provided a meaningful revenue tailwind, with AI-related revenues growing some 130 percent year-over-year. Overall growth was strong across its verticals, which include finance, sports, gaming, travel and education.

## Software Builds the World

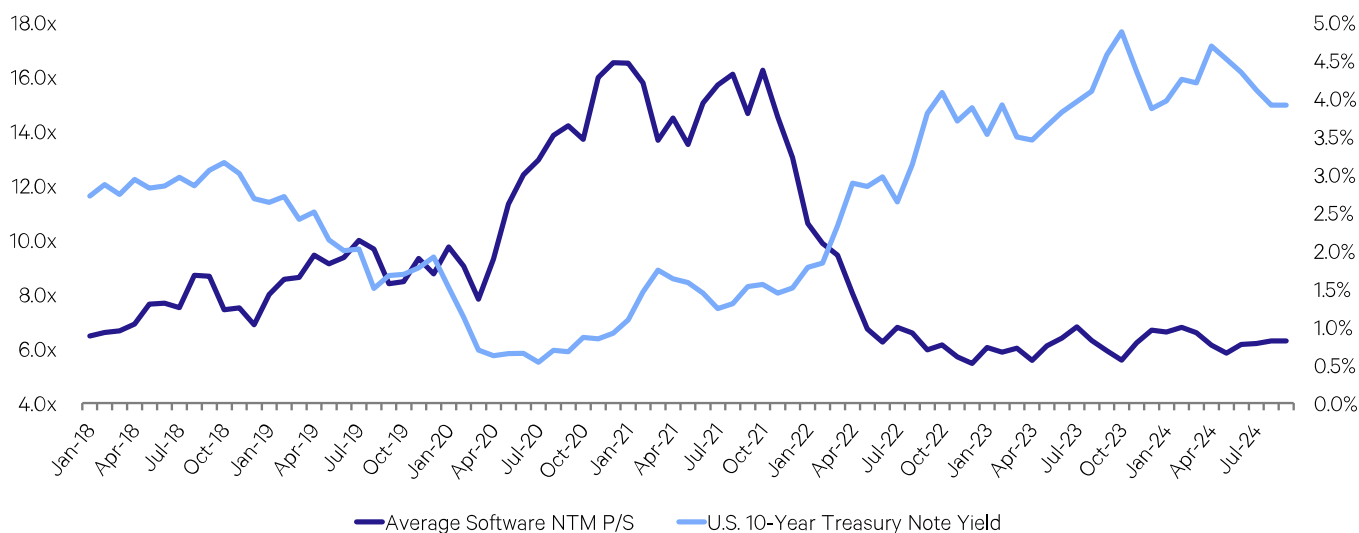
As we start to move beyond the macroeconomic headwinds of the past few years, we expect to see growth rates stabilize and potentially reaccelerate, while software business models as a whole are now much healthier than pre-pandemic following significant margin expansion. Software companies have significantly rightsized their cost bases over the past few years as they have reoriented from growth at all costs to a model that focuses on growth and profitability.

Additionally, valuations in the industry have now been reset and look reasonable relative to historical averages. We believe this should allow us to capture strong revenue and earnings growth moving forward. Lastly, gen AI has only provided minimal revenue uplift in the software space so far, but we believe the technology will be a long-term tailwind for many of the best platforms in the industry over the next decade—just as cloud has been over the prior decade.

### EXHIBIT 4

#### SOFTWARE VALUATIONS HAVE RESET TO PRE-PANDEMIC LEVELS

Average software multiple versus U.S. 10-year Treasury note yield over time



Source: Visible Alpha as of 9/30/24.

With all the disruption over the past few years in software, it is easy to lose sight of the fact that many of these remain strong business models as measured by markets' sizes, growth rates, and margin profiles. This means software will continue to be fertile ground for investors. However, as noted, in this new paradigm for software we will most likely see more dispersion when it comes to stock outcomes. By leveraging the six criteria, our framework for identifying durable growth in the space, and our long-term focus, we believe we are well positioned to own the companies that have the potential to create long-term growth for our clients.



<sup>1</sup> Gartner Data Book (4Q2023) Piper Sandler Estimates. FactSet.

<sup>2</sup> <https://www.databricks.com/dataaisummit/speaker/dave-conte>

<sup>3</sup> <https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/investor-relations/documents/events/2022/jpmc-investor-day-2022/2022-global-technology.pdf>

<sup>4</sup> <https://www.goldmansachs.com/insights/articles/cloud-revenues-poised-to-reach-2-trillion-by-2030-amid-ai-rollout>

<sup>5</sup> <https://www.gartner.com/en/newsroom/press-releases/01-17-2024-gartner-forecasts-worldwide-it-spending-to-grow-six-point-eight-percent-in-2024>

<sup>6</sup> <https://www.reuters.com/technology/service-now-raises-annual-subscription-revenue-forecast-genai-product-demand-2024-01-24/>

<sup>7</sup> Sandeep Mukunda and Matthew Marden, "The Business Value of Samsara," IDC, June 2024, <https://www.samsara.com/pdf/docs/idc-roi-whitepaper.pdf>, page 7.

<sup>8</sup> <https://investors.samsara.com/news/news-details/2024/Samsara-Reports-Second-Quarter-Fiscal-Year-2025-Financial-Results/default.aspx>

<sup>9</sup> <https://investor.axon.com/2024-08-06-Axon-reports-Q2-2024-revenue-of-504-million-up-35-year-over-year-raises-outlook>

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As of October 21, 2024, Atlassian, Axon, DataDog, Globant, Microsoft, Netflix, Nu Holdings (Nubank), Okta, Samsara, ServiceNow, Shopify, and Uber were held across Sands Capital strategies.

Unless otherwise noted, the companies identified represent a subset of current holdings in Sands Capital portfolios and were selected on an objective basis to illustrate examples of the companies that represent businesses across industries and geographies that use, create, or provide software and services that are deployed across multi-product platforms. They include top contributors and detractors across strategies. The software businesses are among the top 12 holdings across portfolios. Netflix, Nubank, Uber, and Axon represent businesses in other sectors that rely heavily on software and are among the top holdings in their respective industries (media and entertainment, banking, and transportation.) They are referenced to support our assertion that modern life is built on software. Axon is our largest holding with a material software component not classified as "software" by GICS.

Any holdings outside of the portfolio that were mentioned are for illustrative purposes only.

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The Russell 1000<sup>®</sup> Growth Index measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium-term (2 year) growth and higher sales-per-share historical growth (5 years).

The BVP Nasdaq Emerging Cloud Index is an equally weighted index that is designed to track the performance of emerging public companies primarily involved in providing cloud software and services to their customers. is an equally weighted index that is designed to track the performance of emerging public companies primarily involved in providing cloud software and services to their customers.

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