

# The Customization of SaaS

How SaaS Thrives across E-Commerce





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# Introduction

Since 2010, Software as a Service (SaaS) has virtually become a household word and *de rigueur* for e-commerce. Still, many midsized and smaller organizations and industries faced barricades stemming from cost, logistics, and the scale of existing solutions. The development of what could be dubbed SaaS 4.0 applications for firms in sectors historically slow to adopt digitization has changed outcomes for the better for both businesses and their customers. Opportunities abound, and investors have taken notice of its benefits.

Now, even boutique start-ups and the manufacturing sector's legacy players can visualize how the new world of data, infrastructure, and cloud computing solutions can manifest into real progress and improvement to business process, customer experience, and the bottom line.

For example, Amazon, myriad payment processing firms, and the lacework of connected devices called the Internet of Things (IoT) uncover unimaginable amounts of usable data, even in real time.

One of the chief results of SaaS 4.0's accessibility to new tools means even small companies can strive for a much richer customer experience with a wider reach. The aim to understand consumers and build tailored solutions and targeted messaging begins with gleaning particular insights from troves of raw data analysis distilled into workable results.

Both existing and emergent industries that historically faced high costs preventing their participation in the technological forefront can design affordable solutions and still compete in the marketplace.

The section below outlines how SaaS thrives across e-commerce, and how your company can keep pace with technological trends to improve both customer experience and your bottom line. We hope you find value within this report.

**FRANK KAUFMAN**  
National Practice Leader  
Retail and E-Commerce Practices

**TAFT KORTUS**  
National Industry Group Leader  
Technology, Communications & Media,  
and Life Sciences Practices



# EXECUTIVE SUMMARY

Throughout the 2010s, SaaS adoption grew steadily as the leading edge of innovation cycled from SaaS 1.0 to its latest incarnation, SaaS 4.0.

The latest version represents a balance between incumbents hoping to expand their client base by bundling additional products, and start-ups inventing new products or unbundling parts of the full spectrum of services for businesses.

As a wider variety of companies look to acquire e-commerce capabilities and direct consumer engagement, the need increases for more bespoke SaaS solutions.

In particular, SaaS providers need to consider enterprise size when pricing solutions because small-to-midsized businesses have had to develop commercial presences online.

The fourth generation of SaaS, arguably just now beginning to take off, is the development of applications for firms in sectors with retail and consumer product and services implications, with implementation difficulties that slow transitions to digital. This revolution is attracting record levels of private investment. \$93.8 billion accrued across 2,540 completed transactions by early August 2021, which could mean record deal value in private financial markets across the SaaS and e-commerce spaces.

In such a heated deal-making environment, the allure of recurring revenues and the potential for significant growth as e-commerce surges have helped lead investors to rosy projections and fierce competition when it comes to due diligence and overall execution.

Discipline is hard to maintain when competitors with deep pockets are active within the space, but investors must achieve a balance to avoid the possibility of overpaying. As a result, intense focus on margins and ease of doing business will be vital, necessitating a clear view of current tech stacks and the SaaS tools that could deliver an edge.

For example, better integrating brick-and-mortar locations with customers' online activity remains an ever-present goal—if difficult to achieve.

Record investment levels are likely to persist—especially in the venture space, where the demand for exposure to next-generation business software remains strong, given the thousands of small-to-midsized businesses moving online and looking to invent new customer experiences.

# Industry Trends

The penetration and growth of SaaS, especially in e-commerce, continues at a breakneck pace. The COVID-19 pandemic drove businesses globally to increase their investments in cloud computing as well as in an increasing variety of SaaS tools.

Regulations and tax policies continue to evolve in tandem with software sales, prompting executives to step up preparations for more sophisticated tax rules.

**“As enterprises transition away from smaller, siloed technical systems, processes and systems are becoming more integrated, especially with remote-hybrid workforces. This in turn is necessitating greater investment by e-commerce businesses in a variety of SaaS tools.”**

– Michael Parker, Principal, Enterprise Systems Consulting Services

Gartner forecasts worldwide end-user spending on public cloud services to grow 23.1% in 2021 to \$332.3 billion—a staggering and swift increase above the roughly \$270 billion in 2020.

SaaS estimates could reach \$122.6 billion by the end of 2021 as demand for cloud-based applications rockets across a wide variety of use cases and end users.

COVID-19 helped many executives at large and small companies justify shorter timetables, and increased spending on digitization efforts. The need for additional types of applications that address fledgling segments should provide new entry niches for start-ups.

When a wider variety of companies look to acquire e-commerce capabilities, it requires more bespoke SaaS solutions. In particular, small to mid-sized businesses which must develop commercial presences online need a solution with costs sensitively scaled to their enterprise size.

Security remains a key challenge for SaaS solution providers, especially when it comes to processing customer information and payments across multiple accounts at scale. Striking a balance between ease of use, stickiness, and security remains a key focus for executives, who must also adapt their incident response plans to mitigate the seemingly inevitable security breaches to come.

If they hope to gain an edge, executives will need to focus closely on accounting and marketing practices to better acquire customers and gauge business health, especially given increased competition—fueled even further by the extraordinary flood of private capital into new SaaS enterprises and the record jump in market caps for public SaaS giants.

Key areas of innovation in SaaS and e-commerce include headless architecture—using a set of application programming interfaces (APIs) to cover all necessary functions that can link to front-end channels, no-code to low-code development platforms for building customized SaaS add-ons, and expansion of suite tools designed to achieve greater market share and compete against rivals, as companies look to simplify their tech stack.

**\$93.8 BILLION**

2021 is on pace to reach record highs in private investment activity, both by count and aggregate value, across the SaaS and e-commerce spaces.

**\$46.7 MILLION**

The average private investment size has never been higher, signifying the glut of available capital but also the degree of competition for top companies.

**48.7%**

The aggregate of SaaS late-stage deal value in 2021 to date accounts for nearly half of all deal value, showcasing how heated that financing environment has become. Moreover, financing volume has tilted more and more toward private equity (PE) and late-stage activity.

**\$178.1 BILLION**

Capitalizing on a red-hot equities market, SaaS and e-commerce businesses achieved a new high in aggregate exit value for their private backers, with exit count also on pace to set a record.

Dubbed SaaS 4.0 by some, this latest wave of applications within the space focuses on improving e-commerce capabilities for businesses worldwide across the entire technology stack. Artificial intelligence-powered customer engagement tools represent only one example of budding innovation that also aims to address shortages in the labor market.

Start-ups are racing to build tools that can glean more insight from the expanding streams of raw data ordinary business activity generates, to better inform executives' decision-making. Technical challenges abound, as companies must thoroughly clean and curate raw data sets to find any correlation or causation.

Manufacturing and other industries still early in the adoption cycle for SaaS tools showcase numerous examples of how it's easier to obtain and implement SaaS software for enterprise resource planning and maintenance management than to attempt to build in-house solutions.

**“Although some companies are revamping their tech stacks piecemeal in response to the COVID-accelerated push to digitization, others are adopting a more holistic approach.**

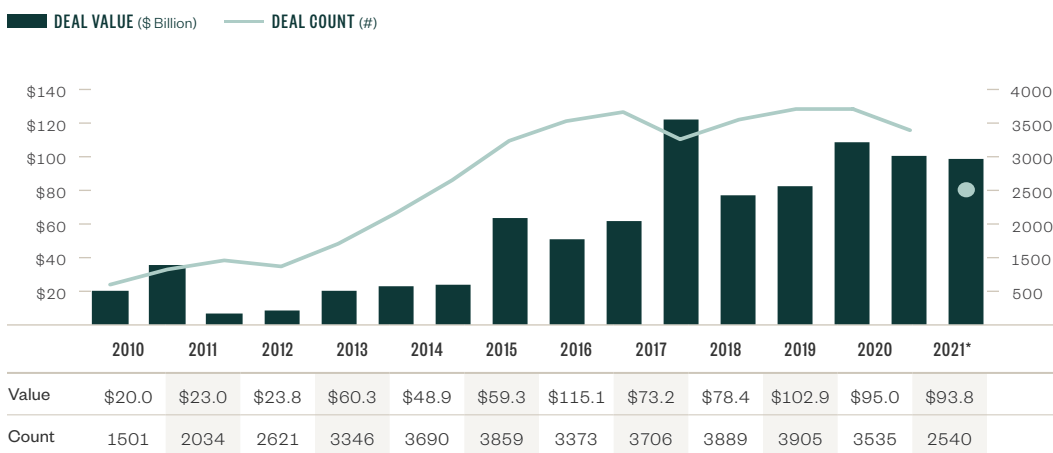
**Best practices in general remain definition of requirements, alignment of those tech requirements back to overall strategies, and then weighting and agreement as to all technical requirements that can enable planning for order, timing and budget.”**

– Francis Tam, Partner, Cybersecurity Services

# The Investment and Market Landscape

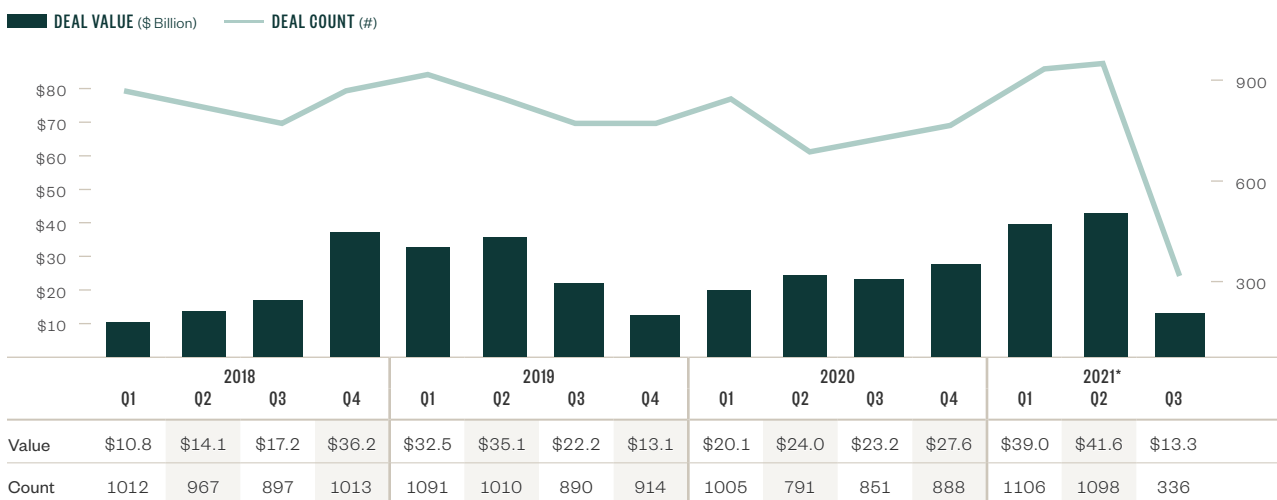
## OVERVIEW

FIGURE 1: US Private Investment Activity in SaaS/E-Commerce



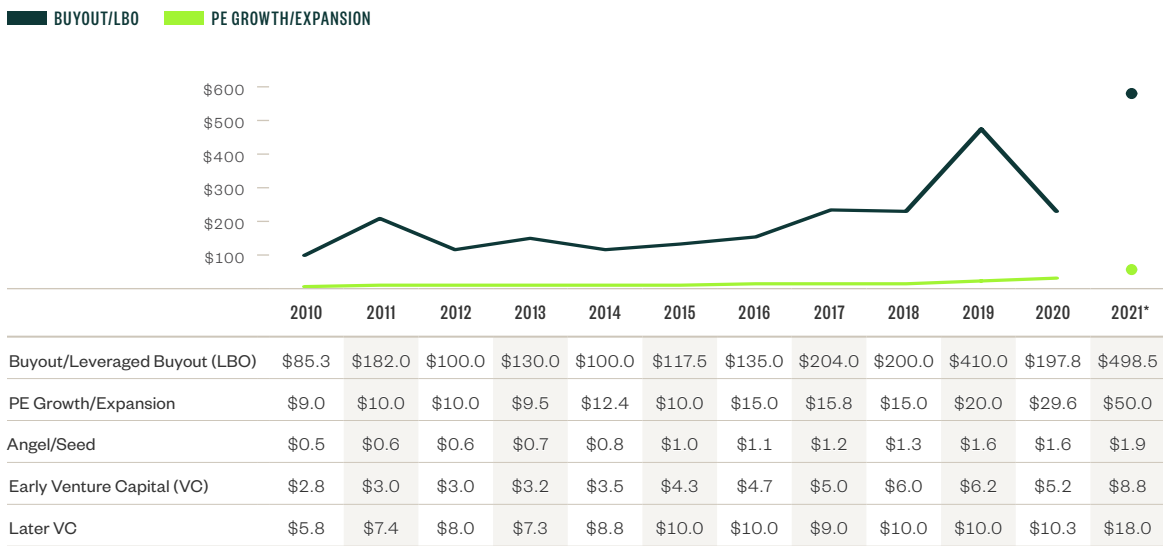
\* As of August 5, 2021

FIGURE 2: US Private Investment Activity in SaaS/E-Commerce



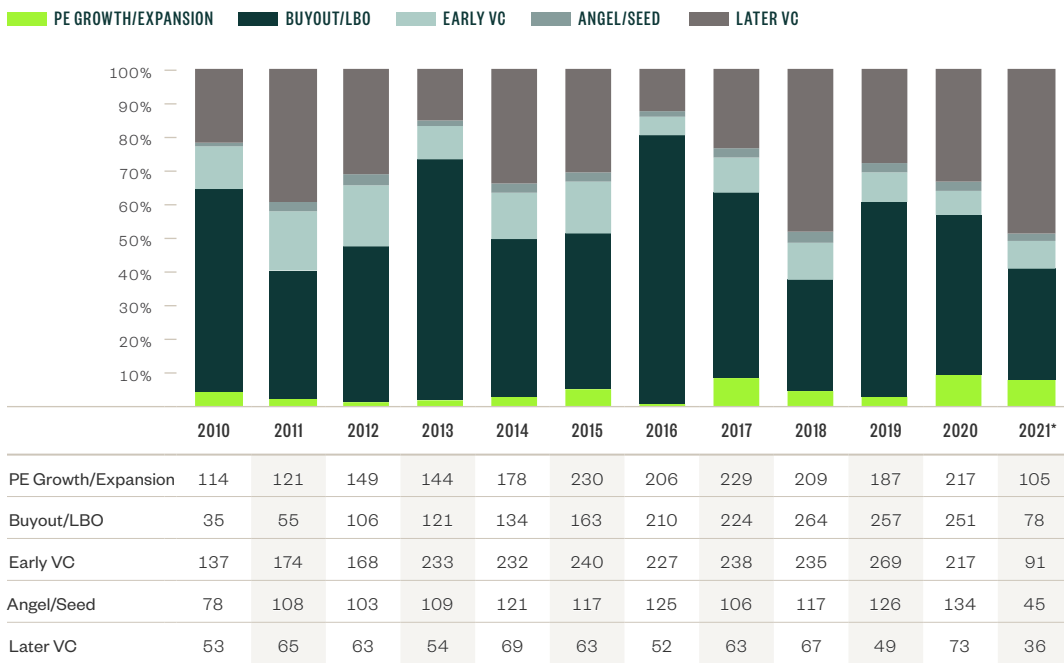
\* As of August 5, 2021

FIGURE 3: Median US Private Investment Size (\$M) by PE Type in SaaS/E-Commerce



\* As of August 5, 2021

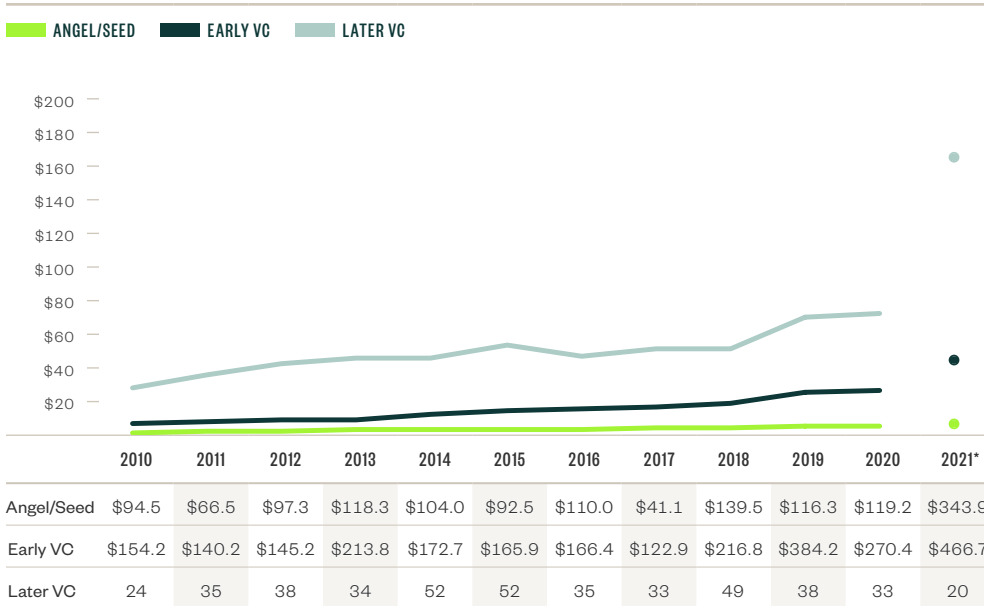
FIGURE 4: Median US Private Investment Size (\$M) by Venture Type in SaaS/E-Commerce



\* As of August 5, 2021



FIGURE 5: Median US Venture Pre-Money Valuation (\$M) by Stage in SaaS/E-Commerce



\* As of August 5, 2021

Private investment activity rose steadily across the SaaS and e-commerce spaces throughout the 2010s, as the SaaS revolution evolved through its first three waves; it now enters its fourth wave.

As the original layer of cloud-based software tools continued to evolve, other businesses sought to provide equivalent services and tools in customizable dedicated suites, such as human resources management or accounting.

Slowly but surely, start-ups focused on different layers of the underlying technology stack—especially as virtualization grew more popular and hardware and software further decoupled—proliferated in the marketplace.

**“The third wave of SaaS largely consisted of attempts to mine insights from massive data sets—the embodiment of Big Data—generated across online marketing channels. Technical progress in that challenging arena is ongoing.**

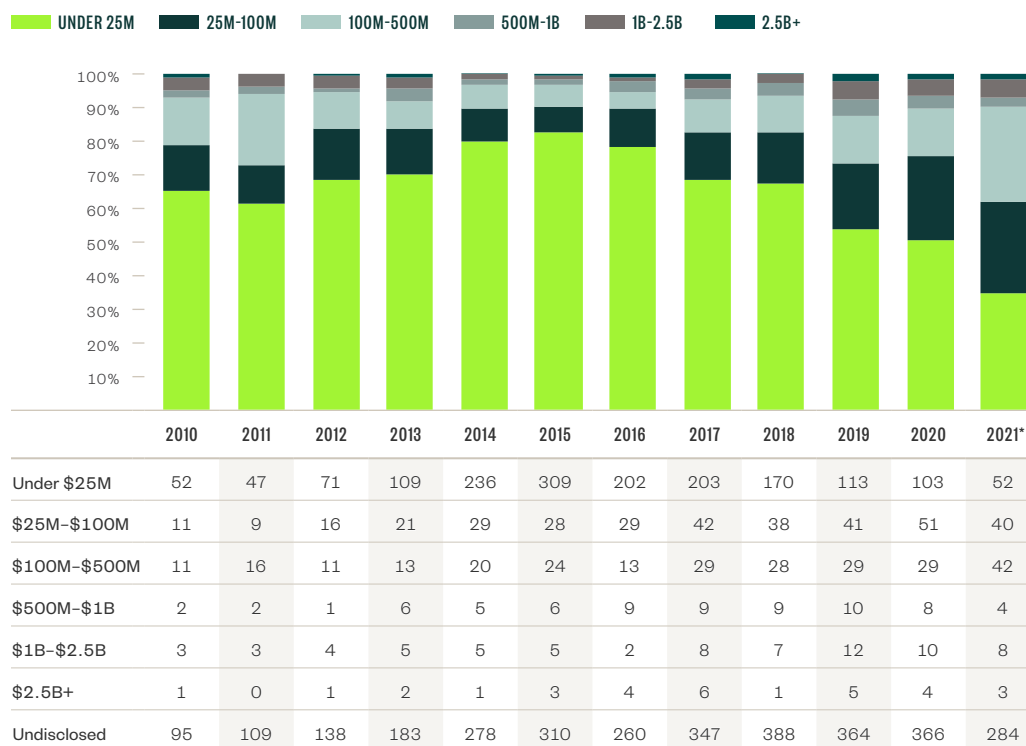
**Change management is one of the most critical steps in a software project. Gaining the adoption and buy-in are critical to the success of any system and associated processes; it can make or break how all stakeholders use and view the system.”**

– Francis Tam

The level of difficulty is declining, however, thanks to improvements in data aggregation via connected devices and diminishing costs of SaaS applications. Manufacturing firms can now lower operating costs by entrusting administration and maintenance of pieces of their software tech stack to a SaaS provider. E-commerce, however, remains a nexus for SaaS innovation and investor interest.

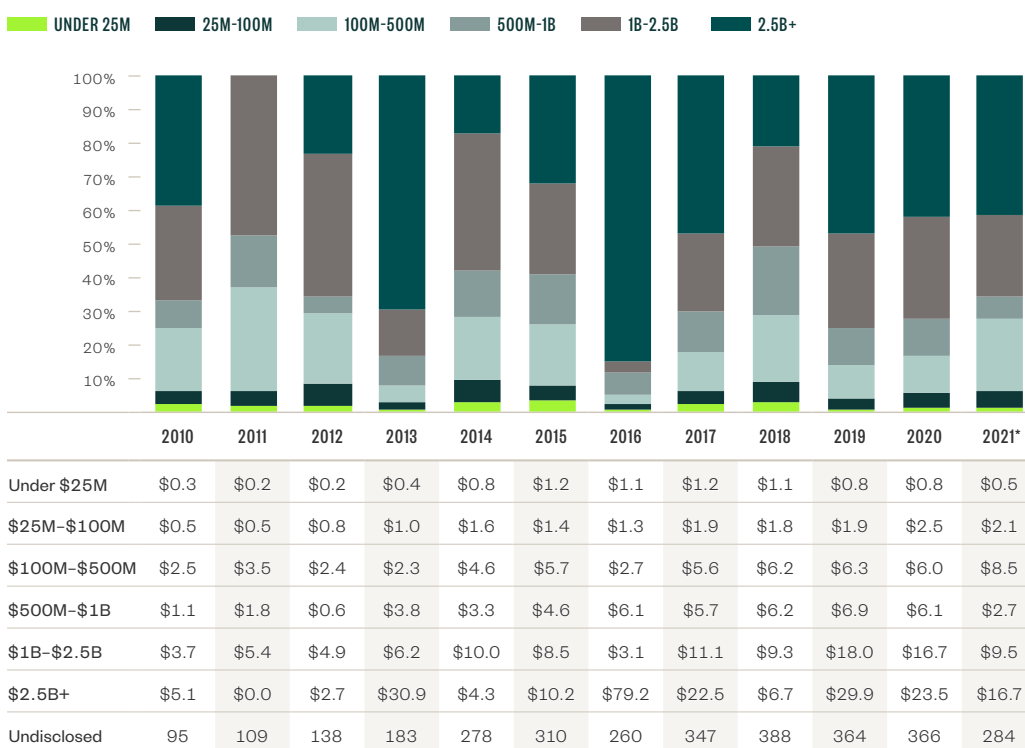
## PROLIFERATION AND INNOVATION

FIGURE 6: US Private Investment Activity (#) by Size in SaaS/E-Commerce



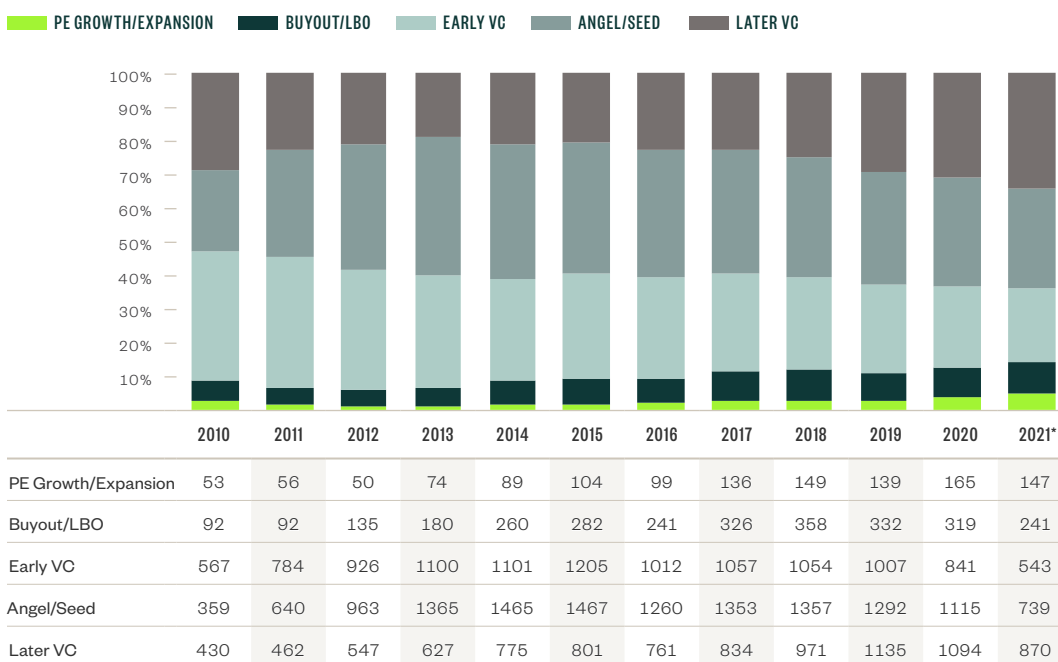
\* As of August 5, 2021

FIGURE 7: US Private Investment Activity (\$) by Size in SaaS/E-Commerce



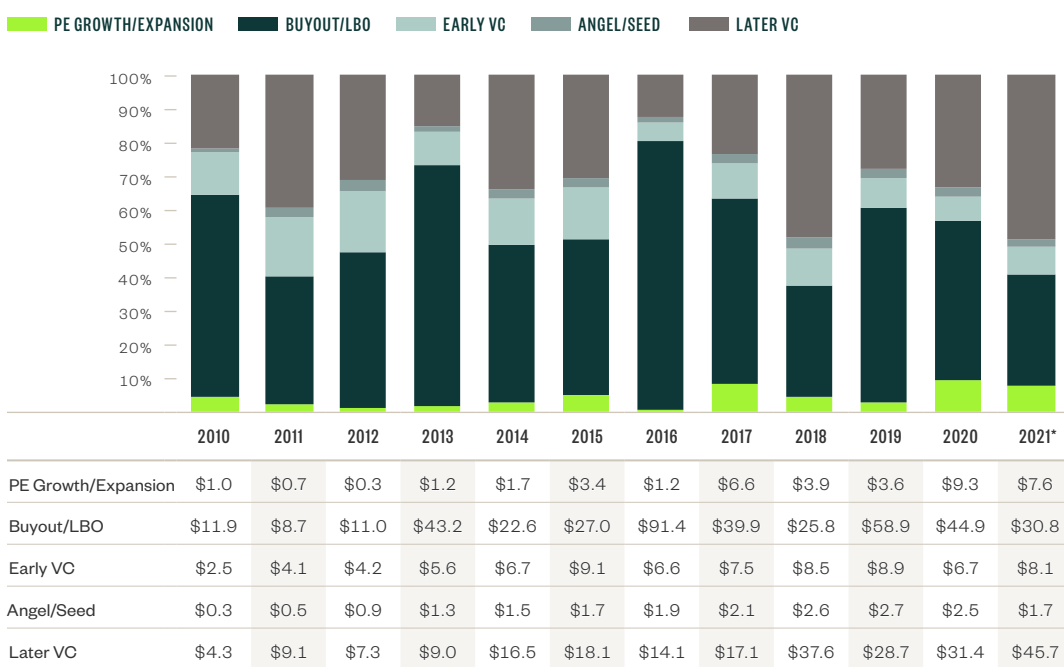
\* As of August 5, 2021

FIGURE 8: US Private Investment Activity (#) by Type in SaaS/E-Commerce



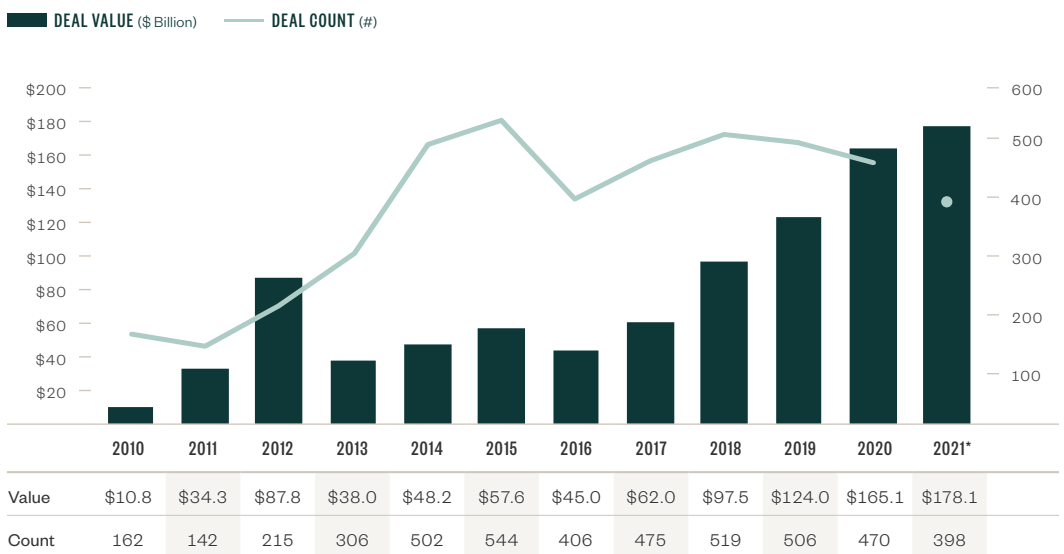
\* As of August 5, 2021

FIGURE 9: US Private Investment Activity (\$) by Type in SaaS/E-Commerce



\* As of August 5, 2021

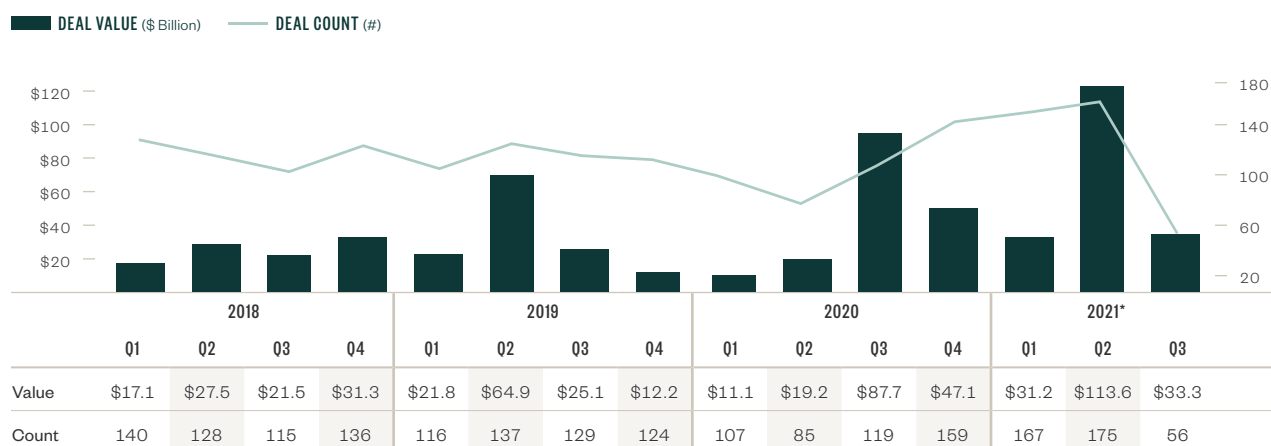
FIGURE 10: US Private Exit Activity in SaaS/E-Commerce



\* As of August 5, 2021

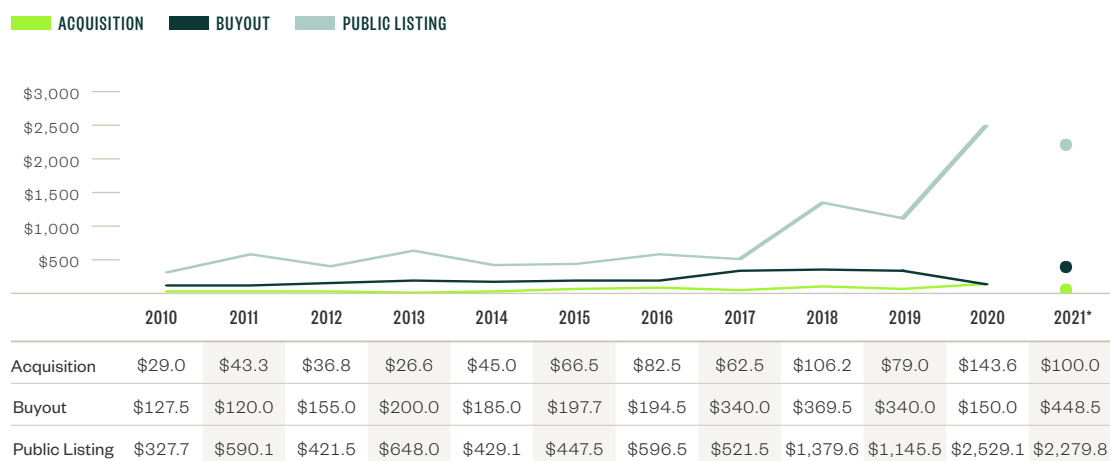


FIGURE 11: US Private Exit Activity in SaaS/E-Commerce



\* As of August 5, 2021

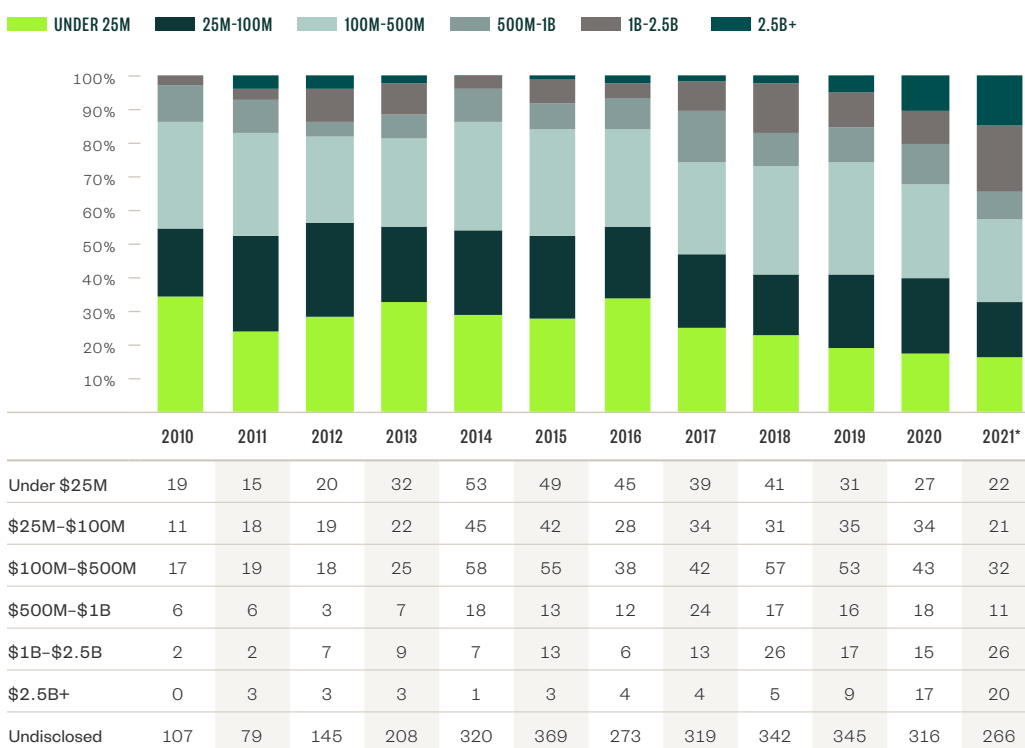
FIGURE 12: Median US Private Exit Size (\$M) by Type in SaaS/E-Commerce



\* As of August 5, 2021

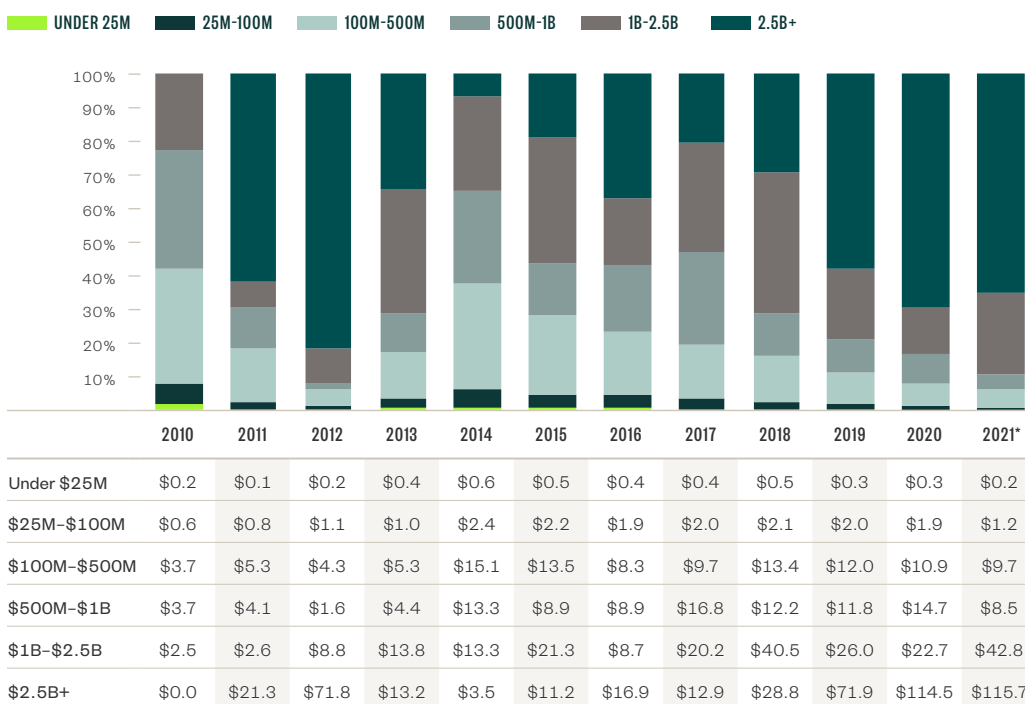
The public listings metric prior to 2021 is based on population sizes of n < 30 per year. Excepting the year 2015 and between 2017 and 2020, the buyout metric is also based on population sizes of n < 30 per year.

FIGURE 13: US Private Exit Activity (#) by Size in SaaS/E-Commerce



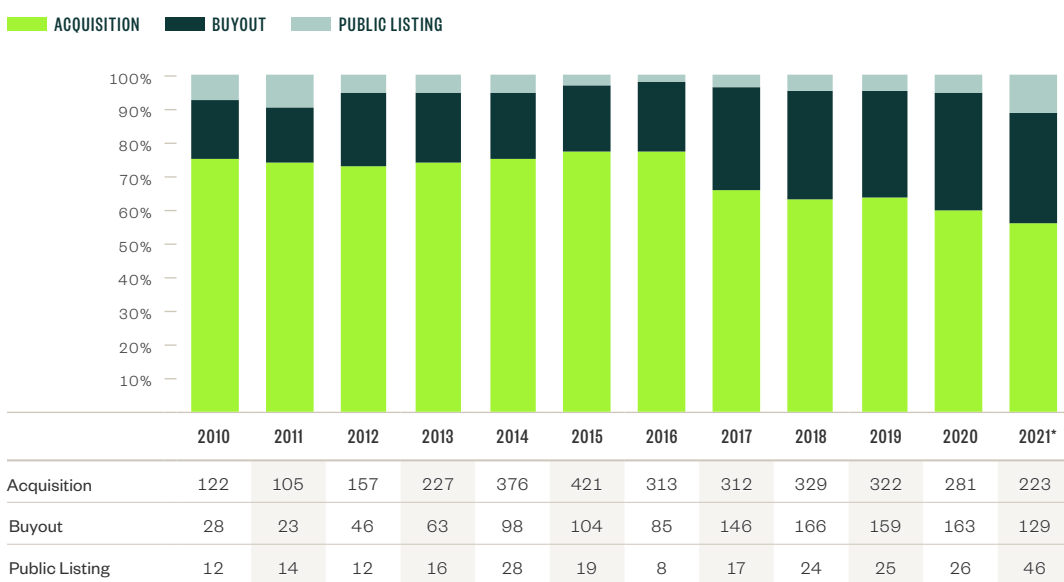
\* As of August 5, 2021

FIGURE 14: US Private Exit Activity (\$) by Size in SaaS/E-Commerce



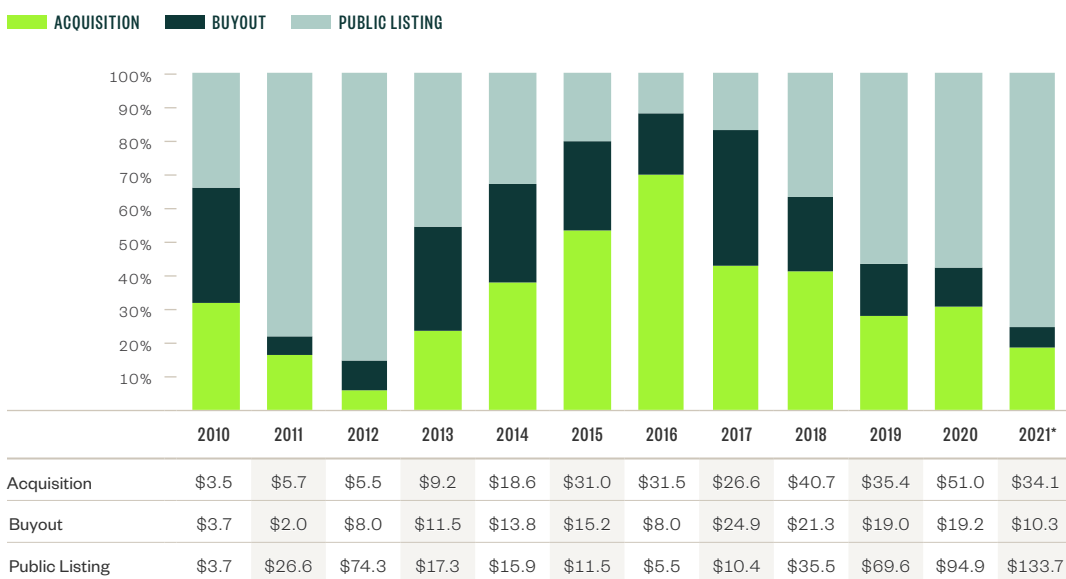
\* As of August 5, 2021

FIGURE 15: US Private Exit Activity (#) by Type in SaaS/E-Commerce



\* As of August 5, 2021

FIGURE 16: US Private Exit Activity (\$) by Type in SaaS/E-Commerce



\* As of August 5, 2021

The proliferation of SaaS across sectors, hastened by the onset of COVID-19, has driven record levels of investment.

With \$93.8 billion across 2,540 completed transactions by early August 2021, deal value in private financial markets across the SaaS and e-commerce spaces is on pace for a record year. Moreover, the average and median deal sizes are notching new highs, at \$46.7 million and \$5.9 million, respectively.

Accordingly, valuations are being marked up at the highest clip since the dot-com era.

**“Fast-growing e-commerce companies can often incur a significant sales tax liability by exceeding a certain quantity or dollar amount of sales in a given state, thereby triggering economic nexus. Companies should analyze these issues prior to negotiating a transaction as it could ultimately affect the deal price.”**

– Sean Kelly, Partner, Tax Services

In such an expensive climate, as volume tilts more towards the late stage, deal-making and growth become trickier even for mature companies and experienced investors.

It’s worth noting that SaaS is still a relatively young business model, and the ways in which SaaS companies measure performance, make projections, and try to make sense of their various business lines is evolving.

Metrics such as the ratio of lifetime value to customer acquisition cost are relatively recent business innovations, which may be augmented by discoveries of even clearer, more powerful metrics in the future.

For this reason, firms should be open to adapting and enhancing their approaches to generating the data points that inform strategies for growth. For e-commerce businesses, competing for market share in an increasingly crowded marketplace will only become more difficult.

**“Even with usage of front-end systems to help ease customer experiences, there can still be manual back-end processes and tools, for example, aligning with accounting often still remains quite manual. So investing on building a more holistic, complete integration of all systems should remain a key area of focus.”**

– Michael Parker

As a result, intense focus on margins and ease of doing business will be vital, necessitating a clear view of current technology stacks as well as which SaaS tools could deliver an edge. For example, a more seamless integration of brick-and-mortar locations and customers’ online activity is an ongoing goal, if difficult to achieve.

Maintaining a consistent customer experience across a company’s brand—while retaining the ability to personalize—will usually require SaaS applications that can draw on stored customer data, track inventory, and present in-person associates with relevant information automated data crunching.

For fully online marketplaces, challenges shift toward conveying a richer experience with less friction, so customers feel they benefit from transparency, obtaining the information they need, and encountering fewer barriers to action. Much innovation is ongoing in this segment, particularly regarding partnerships between SaaS and fintech at their intersection in the value chain.



**“The top security concerns for e-commerce businesses remain phishing, spam, denial-of-service (DoS) and distributed denial-of-service (DDoS) attacks, malware, personnel risk, and brute force attack, among others. Investment in cybersecurity insurance and training will become even more of an imperative.”**

- Francis Tam

In a heated deal-making environment, the allure of recurring revenues and the potential for significant growth as e-commerce surges have helped lead investors to very rosy projections and fierce competition in speed of due diligence and overall execution.

Discipline is hard to maintain when competitors with deep pockets are active in the space, but investors must achieve a balance to avoid the possibility of overpaying.

Fortunately, SaaS tools that reach into all aspects of e-commerce operations are usually a better investment than the higher-risk direct-to-consumer brands. It's better to sell the tools to all companies attempting to optimize product-market fit in each category rather than compete for the same customer base, especially when it comes to e-commerce, as their need for more holistic tech stacks that remain secure and enable easier user experiences grows more pressing.

**“As any business that processes credit card payments must comply with Payment Card Industry standards and practices, e-commerce companies should stay up to date with built-in fraud prevention tools, secure online session protocols and other secure protocols to protect its customers.”**

- Francis Tam

Given that relative proportions of financing volume and value are tilting toward the late stage, many investment firms compete for access to the higher growth, more mature businesses in the SaaS and e-commerce spaces, rather than innovative start-ups in the vanguard of SaaS 4.0.

There's still considerable activity at the earliest stages of investment for fledgling opportunities; but there's much more late-stage activity, relatively speaking, because SaaS 3.0 companies matured to considerable size and are commanding larger sums at pricier valuations.

Such capital hoards have enabled significant staff expansion as companies can now afford to pay market-beating rates for top talent.

Many are also taking the opportunity to go public or enter an acquisition, given the remarkable liquidity conditions that exist.

Late-stage companies currently raising should plan for such liquidity events, using them as enticements for final private capital infusions prior to embarking on roadshows or entertaining corporate development pitches.

**“It’s very important for business owners to document the applicable tax treatments, such as Qualified Small Business Stock, that could impact the amount of total taxes paid if they sell their business.”**

– Sean Kelly

## **CONSOLIDATION: INCUMBENTS INCREASINGLY EMBRACE MERGERS AND ACQUISITIONS (M&A) WHILE OTHERS OPT FOR PUBLIC MARKETS**

Private investors in SaaS and e-commerce businesses have rarely enjoyed a more favorable climate for achieving liquidity. 2021 has already seen a record sum in exit value—a staggering \$178.1 billion across nearly 400 transactions.

Publicly traded equities surging to record heights have enticed many debuts; 42 SaaS or e-commerce businesses have gone public in 2021, notching a median exit size of close to \$2.3 billion. However, the bulk of exit volume remains either via buyouts or strategic acquisitions, primarily the latter.

At well over 200 completed acquisitions in 2021 through early August, clearly consolidation is accelerating. Major incumbent SaaS companies that achieved prominence as the frontrunners of SaaS 1.0 have sought to expand their product and service portfolios via acquisition.

In addition, some major e-commerce players have opted to purchase SaaS companies rather than develop capabilities in-house or outsource the needed functions to third parties.

Thus, increasing numbers of late-stage companies are being targeted, even at lofty valuations. Although the marketplace is awash in capital, preparations are still intensive across both accounting and administration, as the degree of scrutiny for public companies is still significantly greater than anything seen in private financial markets.

**“There are many potential tax changes being considered or proposed at the federal level—capital gains rate increases and gift tax changes, and elimination of the qualified business income deduction. Business owners should prepare for multiple scenarios when planning for the growth of their business.”**

– Sean Kelly

Although both PE buyers and special purpose acquisition company (SPAC) sponsors are increasingly active, their due diligence processes remain rigorous even if expedited, which necessitates plenty of upfront work on the part of the seller.

Regulatory oversight is also tightening as agencies grow more hawkish regarding retail investor protection. Hence the bulk of exit volume is still concentrated in outright strategic acquisitions, as their synergies can often make the most sense for both parties.

**“Sales and use tax issues most frequently come up during transactions, whether it is inventory or sales that trigger nexuses across states. As M&A continues across the space, potential sellers will need to fully scope the degree of their liability.”**

– Sean Kelly

No one knows how these dynamics will play out, although major incumbents in these segments seem to be piling on more power and market size. However, uniquely favorable market conditions may not necessarily persist. At a certain scale, real challenges exist for those who want to remain at the forefront of SaaS innovation, especially with regard to e-commerce, given the necessity of maintaining continuity for existing customers.

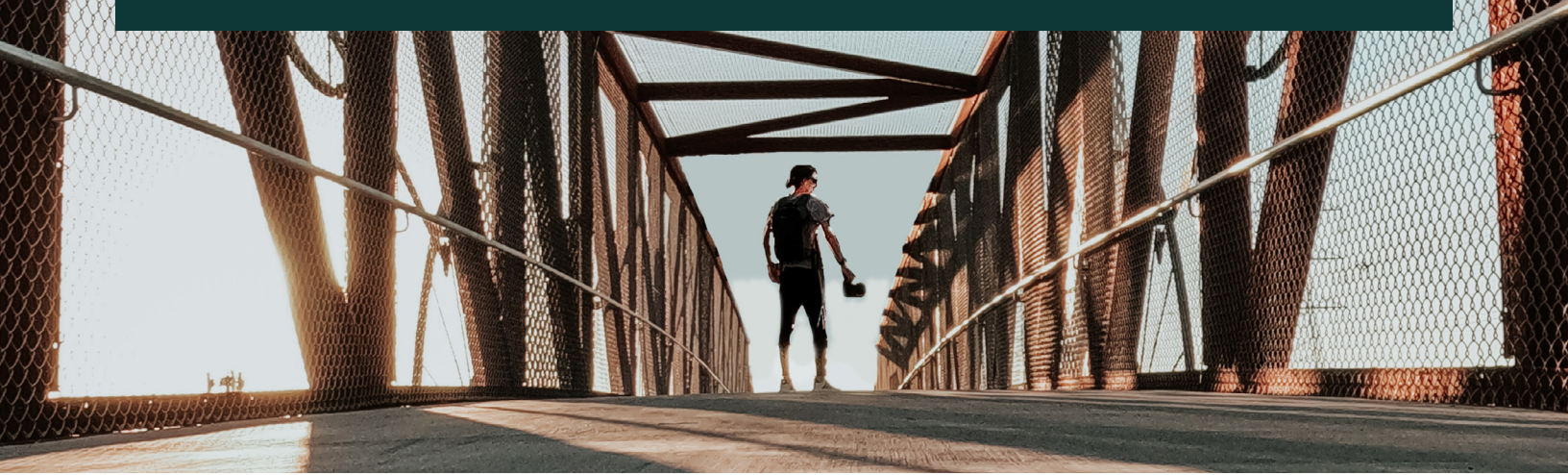
What has become an endless cycle of bundling and unbundling technological capabilities will likely evolve in the coming years into a balance between SaaS 4.0 start-ups tackling new niches of existing value chains, and the larger players looking to maintain and perhaps expand their bundle of offerings.

**“Given the advent of hybrid work models, companies will need to shore up security controls around access of information across a greater variety of devices and accounts, as the potential attack surfaces will have increased significantly.”**

– Francis Tam







#### SECTION FOUR

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# Looking Ahead

As sales processes remain omnichannel, being able to offer a consistent user experience remains challenging—both on the direct-to-consumer e-commerce side and the internal user side—for SaaS providers.

Moreover, many industrial companies contemplate changing their current operating models and toolkits into bundles of hardware, software, and services in a model, often called anything-as-a-service.

The dedicated solutions SaaS 4.0 companies develop could provide partnership opportunities or even grounds for mergers, as they look to broaden their suite of SaaS solutions to reach larger, different end markets.

**“Hiring is challenging in the current environment and unfortunately looks set to remain difficult, as different states are treating remote workers differently which can complexify compensation and team structures.”**

– Michael Parker

Record deal-making investments will likely persist. Particularly with VC, the demand for exposure to next-generation business software remains strong, especially for the thousands of small-to-midsized businesses moving online.

Thus, venture dollars will continue to flow into these market segments as retailers invent new customer experiences and SaaS start-ups begin to meet existing and new needs.

More robust online buying experiences, specifically in the realm of quality verification, will likely be a clear focus as incumbent technology giants increasingly struggle with misinformation and lack of clarity around product details online in their own platforms.

Key challenges for SaaS tool providers include ensuring transparency and quality controls for vast amounts of data for which they’ll provide analytics, curation, and storage services. Unquestionably, current business solutions grow more complex every day as the pace of innovation continues to rise.



# Methodology

This publication used PitchBook verticals to define SaaS and e-commerce. Companies in the underlying population needed at least one of those industry codes tagged as their primary industry code.

All data sets used Standard PitchBook methodology regarding venture transactions and venture-backed exits.

You can find full details [here](#).



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