

Software Publishers

NAICS: 511210

SIC: 7372

prepared February 18th, 2022

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Coronavirus Update

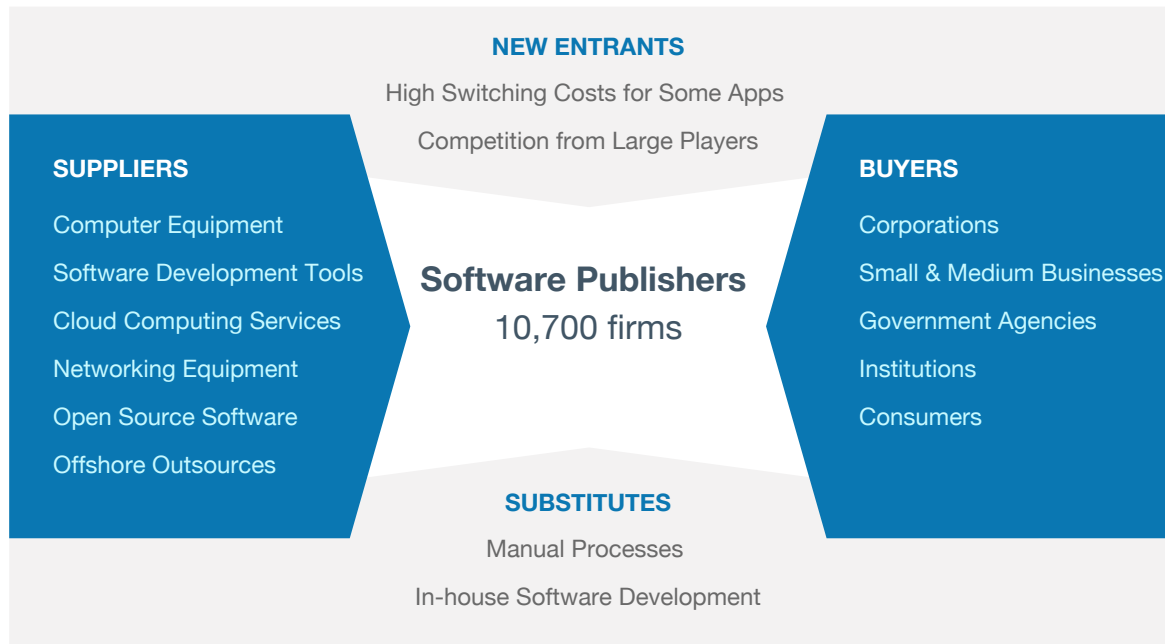
Feb 15, 2022 -- Number Of Telecommuting Jobs Is Increasing

- Many software developers won't return to their old desks on a permanent basis when offices reopen, according to a CompTIA analysis of job-posting data. Many key technology postings added between December 2021 and January were remote jobs. Software developers and IT support specialists topped the list, followed by web developers and systems engineers/architects. Many technologists are also embracing a hybrid workweek, which allows them to leverage the benefits of both remote and in-office work. Some 85% of technologists find the prospect of hybrid work anywhere from somewhat to extremely desirable, including 94% of younger technologists (those between 18 and 34 years old), according to Dice's 2021 Technologist Sentiment Report.
- The Supreme Court blocked the Biden administration from enforcing its vaccine-or-test requirements for businesses with 100 or more employees. "Although Congress has indisputably given OSHA the power to regulate occupational dangers, it has not given that agency the power to regulate public health more broadly," the court wrote in an unsigned opinion. "Requiring the vaccination of 84 million Americans, selected simply because they work for employers with more than 100 employees, certainly falls in the latter category," the court wrote.
- Traditional technology hubs' share of employment is falling due in part to the pandemic-related normalization of telecommuting. A Brookings Institution report from December 2019 noted that just five cities: Boston, San Diego, San Francisco, Seattle, and San Jose, CA, accounted for more than 90% of employment growth in the sector from 2005 to 2017. Data from research organization The Conference Board shows that, while many new tech jobs are in well-known business centers like New York, Washington, Boston and Austin, Texas, cities like Boise, ID, and Des Moines, IA, are now on the radar of technology companies. Employers have gotten more comfortable with hiring people who don't work at their companies' headquarters, according to Gad Levanon, the founder of the board's Labor Market Institute. Some new hires may be working at home while others are in satellite offices. Casting the net wider gives companies access to more talent, including people who may work for lower salaries because their living costs are cheaper elsewhere.
- Facebook CEO Mark Zuckerberg announced that employees who decided to work remotely, but left Silicon Valley, would be paid salaries reflective of their new residences, rather than their previous higher salaries. The high cost of living in many areas, particularly in the Silicon Valley, could induce many employees to move to lower cost metropolitan areas to substantially improve their standards of living. Software developers are highly paid, with a national median salary of \$107,500. Some experts say, however, that the purchasing power of the high salaries is effectively discounted by 40% or more by hyper-inflated costs of living in top technology centers like Silicon Valley. The purchasing power of software developer salaries in both San Jose and San Francisco is well below the national median, according to figures calculated by NewGeography.com using US Bureau of Labor Statistics data and the Urban Research Institute. When adjusted for purchasing power, only one of the metropolitan areas among the top 10 in nominal software developer salary, Seattle, remains in the top ten. Telecommuting may benefit both firms and their employees. Facebook CEO Mark Zuckerberg announced that employees who decided to work remotely, but left Silicon Valley, would be paid salaries reflective of their new residences rather than their previous higher salaries. The high cost of living in many areas, particularly in the Silicon Valley, could induce many employees to move to lower cost metropolitan areas to substantially improve their standards of living. Software developers are highly paid, with a national median salary of \$107,500. Some experts say, however, that the purchasing power of the high salaries is effectively discounted by 40% or more by hyper-inflated costs of living in top technology centers like Silicon Valley. The purchasing power of software developer salaries in both San Jose and San Francisco is well below the national median, according to figures calculated by NewGeography.com using US Bureau of Labor Statistics data and the Urban Research Institute. When adjusted for purchasing power, only one of the metropolitan areas among the top 10 in nominal software developer salary, Seattle, remains in the top ten.
- More than 80% of company leaders surveyed by research and advisory firm Gartner said that their organizations plan to permit employees to work remotely at least part of the time after reopening from the COVID-19 pandemic. About 47% of respondents said they intend to allow employees to work remotely on a full-time basis, while 43% would grant flex days and 42% would provide flex hours.
- The shift to cloud computing is not expected to slow when workers return to their offices. "We've seen a three-to-five-year speed-up in what is now an expectation around digital access," said Dominic Delmolino, vice president for technology and innovation for

Amazon Web Services. Demand is likely to increase due to the recognition that high accessibility and high security are possible with cloud computing, Delmolino added.

- Pandemic-related lockdowns pushed companies to automate some jobs, and software publishers are likely to benefit as that trend accelerates. Automation will displace an additional 8.4 million American workers by 2030, according to McKinsey & Company. That's a 23% increase from the management consulting firm's pre-COVID scenario. About 80% of business leaders say that they are accelerating automation of their services in response to the pandemic, and 43% anticipate reducing their workforces because of new technology, according to a World Economic Forum report. Jobs in sales, office support, and food and customer service will face the largest losses.

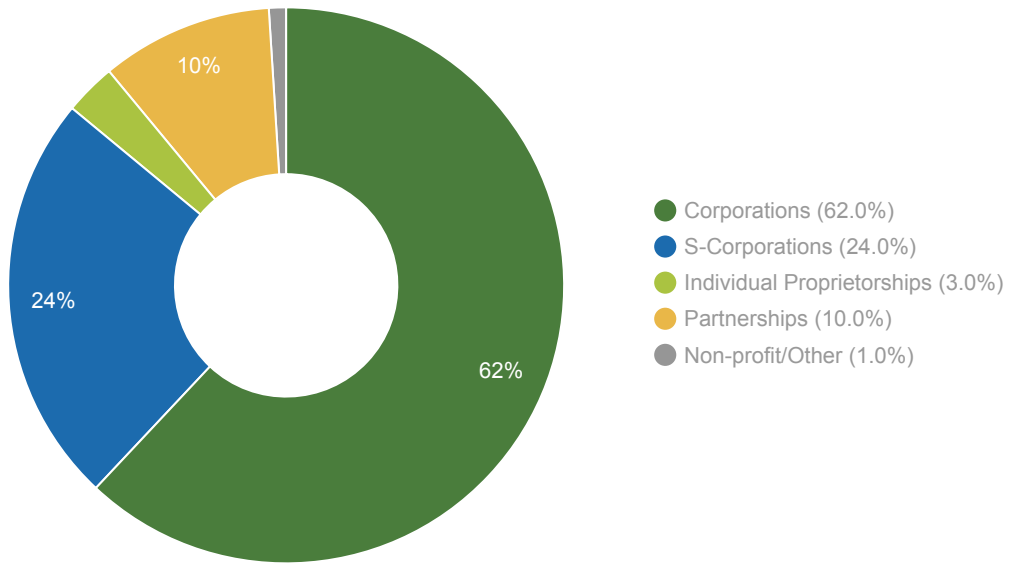
Industry Structure



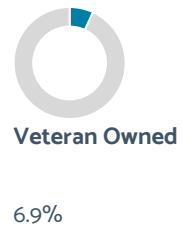
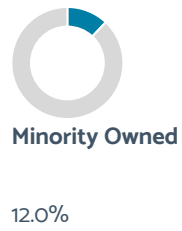
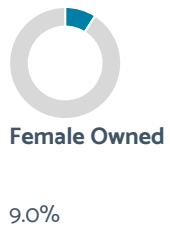
The average software publisher employs 46 workers and generates about \$35 million annually.

- The software publishing industry consists of about 10,700 firms with 14,200 establishments that employ over 500,000 workers and generate about \$376 billion annually.
- The industry is concentrated at the top; the top 50 companies account for about 69% of industry revenue.
- Large companies include Microsoft, Oracle, IBM, and Symantec. Large firms may generate a substantial percentage of sales overseas.
- Companies that offer primarily cloud-based services may be classified under the Census as Data Processing, Hosting, and Related Services. Software publishers may offer hybrid products that combine on-premise, private cloud, and public cloud services.

Industry Demographics



Source: US Census Bureau



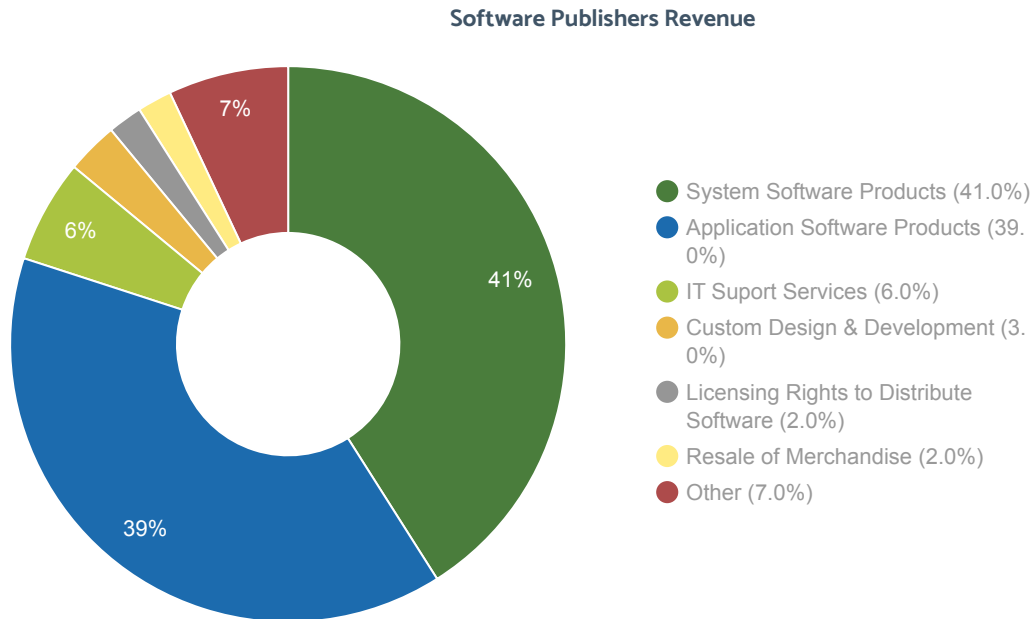
Source: Census Bureau

How Firms Operate

Products and Operations

Software publishers produce and distribute computer software.

- Major product categories include application software publishing, system software publishing, and resale of merchandise.
- Software publishers may also generate revenue by providing custom application design and development services or licensing the rights to reproduce and distribute software. The biggest firms have operations in the computer hardware industry.
- Firms are increasingly delivering software through cloud-based services (Software-as-a-Service or SaaS), in addition to on-premise products.



Source: US Census Bureau

Application software helps users perform single or multiple related tasks, and includes general business productivity and home use applications, game software, cross-industry application software, and vertical market application software. Systems software provides the foundation for the infrastructure software that controls hardware (computers, peripherals, tablets, mobile phones), and includes operating systems, network software, and database management software. Middleware functions as a transition layer and allows applications to interface. Enterprise Resource Planning (ERP) software manages and integrates business processes in multi-user environments. Customer Relationship Management (CRM) software manages customer data, interaction, and support. Software publishers may specialize in a particular area or offer a range of products in related areas. For example, Microsoft dominates the operating systems category, but also offers Office for business productivity and Dynamics for CRM. Salesforce.com specializes in CRM, while Symantec specializes in security software.

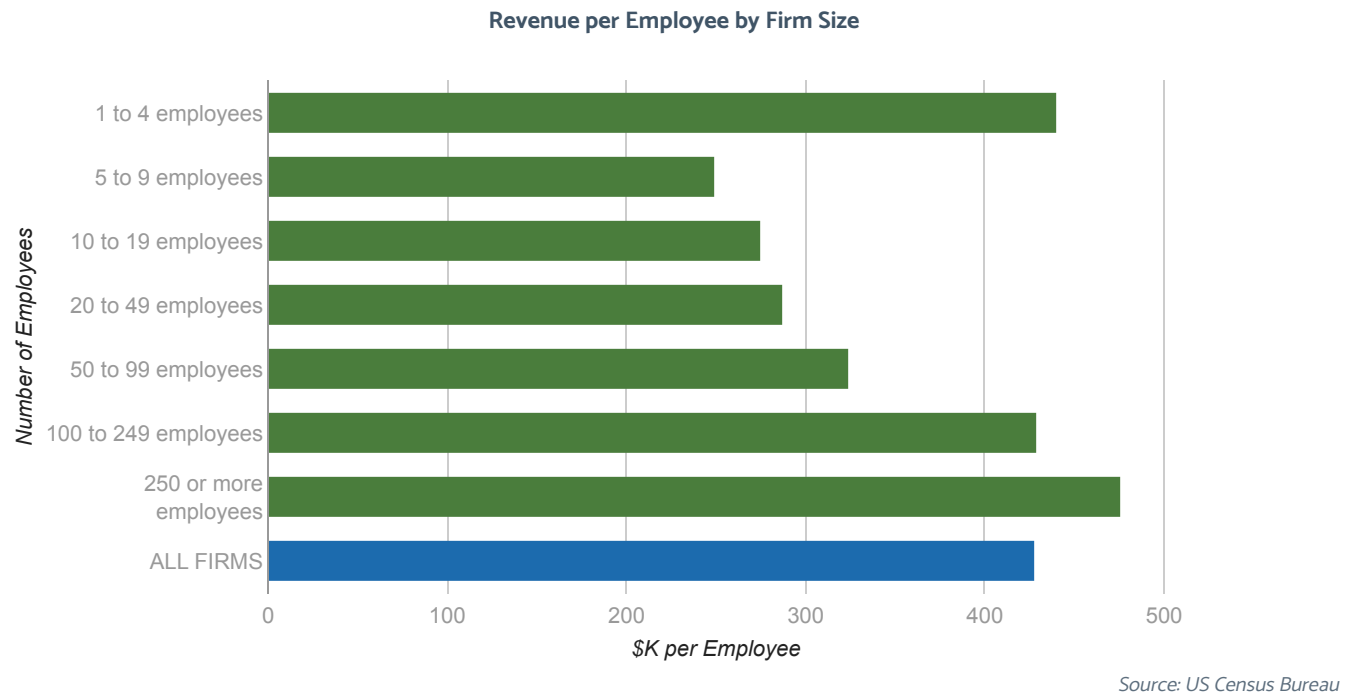
On-premise software is installed locally on customer hardware and servers and managed by customer IT staff. With cloud-based software (Software-as-a-Service or SaaS), programs and customer data are managed centrally by the vendor and accessed by the customer using a web browser. Public cloud services are available to the general public, while private cloud services use proprietary networks and resources. Hybrid cloud services combine on-premise, private cloud, and public cloud services.

Operations include software design, documentation, installation, and support services. The software development cycle generally starts with a requirements definition phase, followed by system design, implementation, testing, installation, and maintenance phases. Development can range from months to years depending on the complexity of the software, and development tools can accelerate the process. Firms typically have significant investments in research and development and often pursue patents to protect intellectual

property rights. Software publishers may develop products internally, license technology from third parties, or use a combination. Support centers assist customers during and after installation.

Channels of distribution vary, depending on the type of software, but include OEMs, distributors and resellers, retail outlets, and digital outlets (Internet, mobile). OEMs may sell hardware with pre-installed software. Firms may license software to customers through third party distributors or resellers, also known as value-added resellers (VARs) and value-added distributors (VADs). Large customers often work directly with software publishers. Small firms may sell products directly to end users through retailers or online channels.

Software engineers and programmers are highly skilled workers that are well-paid and in demand. Many developers have at least a bachelor's degree. The use of contract workers in the IT industry is common. Some firms employ workers from foreign countries through the H-1B visa program, which allows US companies to hire workers in specialty occupations.



Profit Drivers

Successfully Launching New Products

The software industry is driven by rapidly evolving technology and short product lifecycles. Sales are driven by the introduction of new products and enhanced versions of existing products. Major new products can take years to design, develop, and test, so they must meet their sales objectives for companies to realize a return on their investment. Delay or failure to launch a new product can cause companies to become unprofitable. Successful software publishers are able to accurately assess market needs, develop products to meet those needs in a timely manner, and creatively market and sell the products.

Growing Maintenance And Subscription Revenue

Sales of one-time license fees for software products can be uneven, particularly for “big ticket” business applications or system software. Companies can build a more reliable revenue stream by selling ongoing maintenance services or an annual subscription fee for product purchases. Besides generating steady revenue, maintenance services allow software publishers to stay close to customers and keep them up-to-date with the latest product releases. Subscription fees, rather than a one-time license fee, are becoming more prevalent as the industry adopts the software as a service (SaaS) model where products are used remotely via the Internet.

Increasing Software Development Productivity

Software publishers typically spend 10-20% of sales on product development and skilled software developers are highly paid.

Increasing the productivity of individual developers and the overall development process can lower costs and shorten the time required to bring new products to market. Companies invest in new software development tools and the latest computer hardware to increase productivity and attract high-performing software developers.

Industry Trends

Trends are affected by the COVID-19 pandemic.

Changes in revenue, employment, business practices, trade and forecasts are occurring rapidly and data reporting by the government lags the changes. We are tracking changes in the “Coronavirus Update” chapter.

Ramping Revenue Growth

Revenue growth for software publishers is strengthening. Industry revenue increased 12.3% in 2016, 10.6% in 2017, 9.9% in 2018, 9.2% in 2019 and 13.2% in 2020. The shift to cloud computing and a subscription-based payment model is expected to affect industry revenue patterns and reduce large surges. The number of players in the industry continues to grow, but revenue for individual companies is shrinking. The number of establishments in 2018 was 53% greater than in 2012, but revenue per establishment was 4% lower in 2018 than 2012.

Transition To Cloud-Based Services

The software industry is migrating toward cloud-based services, which provide the capability of storing and processing data at third-party data centers and allow customers to avoid IT infrastructure costs and outsource maintenance and other IT-related operations. Cloud computing is fundamentally changing the software industry. About 92% of businesses use multiple clouds, according to Flexera’s 2021 State of the Cloud Survey. The average number of clouds used per company is 5 and may include combinations of public, private and hybrid cloud environments.

Robust Growth For Mobile Apps

Ongoing growth in mobile phone sales is driving demand for mobile apps, increasing the need for mobile app developers. The digital workplace is becoming more complex – the average number of devices used by workers has increased, as wearable devices and the Internet of Things become more mainstream, creating pressure to deliver a wider variety of mobile apps faster, according to Gartner. Enterprises continue to struggle to find developers with the strong mobile skills necessary to develop, deploy and maintain mobile apps.

Growth For Security Software Market

Security continues to be a lucrative market for the software industry, as an increasing amount of corporate data is exposed to the Internet. Worldwide revenue for security software increased about 8% in 2016, 10% in 2017, 9.7% in 2018 and 13.9% in 2019, according to Gartner. High growth categories included security information and event management (SIEM) and IT outsourcing. Endpoint protection programs and consumer security software are experiencing low growth as the segments become commoditized. Global spending on security software is forecast to grow 8.3% annually through 2024.

IT Spending Market Growth

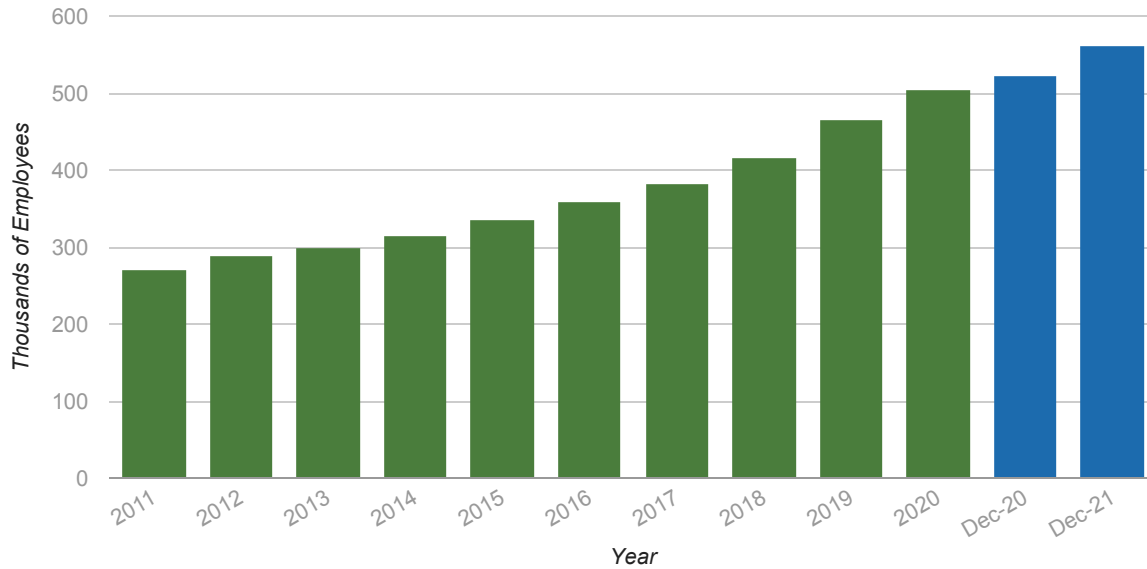
The IT market is expected to grow, driven by cloud adoption and the need to stay compliant with security and trade regulations. Worldwide IT spending is projected to rise 8.4% in 2021 and 5.5% in 2022, according to Gartner. Spending on communications services, the largest IT spending segment, is projected to increase 4.6% in 2021 and 3.7% in 2022. Spending on devices is expected to increase 14% in 2021 and 3.1% in 2022; enterprise software is forecast to grow 10.8% and 10.6% respectively; and data center systems investment is expected to rise 7.7% and 4.5%. IT services spending is forecast to rise 9% and 7.3%.

Employment and Wage Trends

Employment by software publishers increases

Overall employment by software publishers changed 7.1% in December compared to a year ago, according to the latest data from the Bureau of Labor Statistics.

Software Publishers Employment

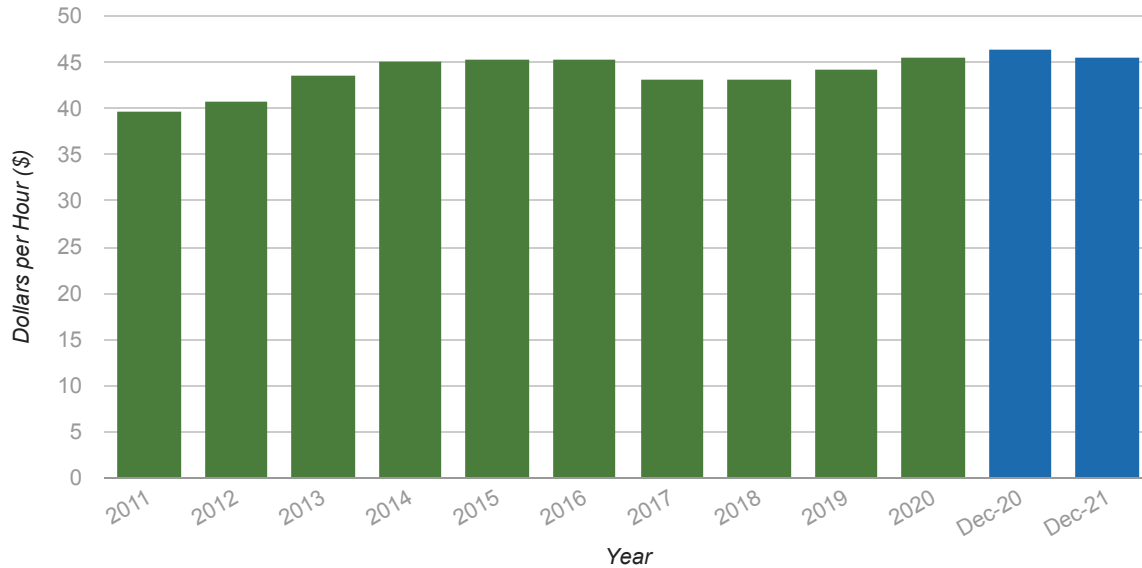


Source: Bureau of Labor Statistics

Wages at software publishers fall

Average wages for nonsupervisory employees at software publishers were \$45.51 per hour in December, a -1.9% change compared to a year ago.

Average Wages for Nonsupervisory Employees



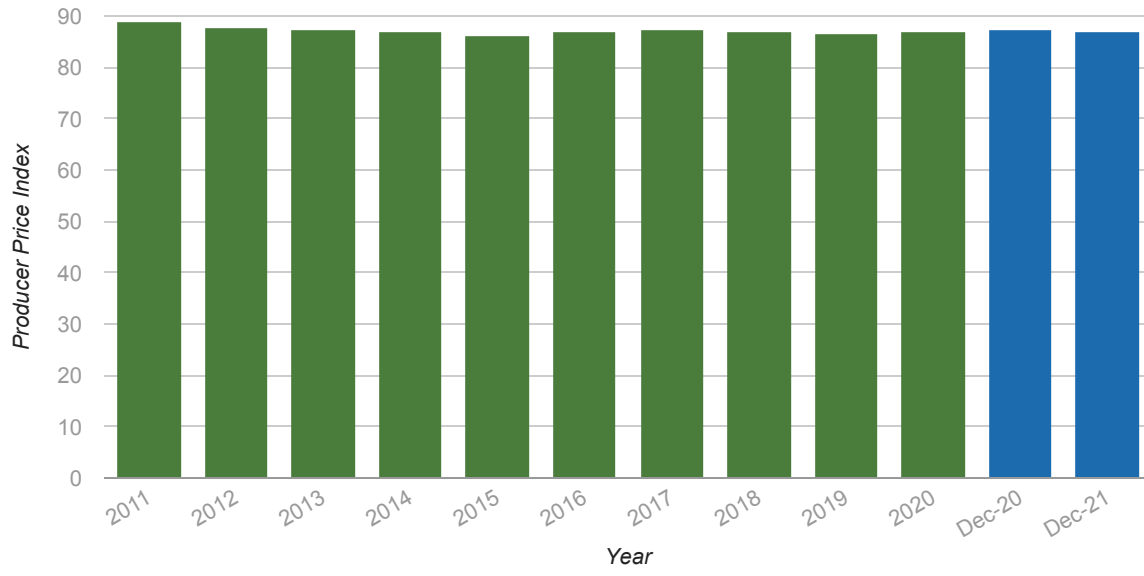
Source: Bureau of Labor Statistics

Price Trends

Producer Prices for software publishers stay flat

The Producer Price Index for software publishers changed -0.48% in December compared to a year ago, according to the latest data from the Bureau of Labor Statistics.

Producer Price Index for software publishers



Source: Bureau of Labor Statistics

Credit Underwriting and Risks



Business Exit Rates:	6.0	Higher than US average for all businesses
Cyclical Sensitivity:	5.0	Moderate Sensitivity
Barriers to Entry:	3.5	High initial capital; very high regulatory/technical barriers; very high concentration
External Risk:	6.1	High external risk
Industry Outlook:	5.0	Comparable to GDP; some cyclical risk
Financial Summary:	7.1	Very low margins; moderate liquidity; high leverage

Key Metrics

METRIC	VALUE	COMPARISON
Performance During 2007–2009 Recession	2.4%	0.0% GDP
Business Exit Rate 2019–2020	10.32%	9.0% All Industries
Compound Annual Growth Forecast (2020–2025)	5.82%	6.1% GDP
SBA 7(a) Default Rate by Number of Loans (2010–2019)	3.53%	3.82% All Industries
SBA 7(a) Default Rate by Gross Loan Amount (2010–2019)	0.66%	1.21% All Industries

Underwriting Considerations

- Experience and education are very important. How strong are the owners and management team?
- What are the company's main sources of recurring revenue?
- How has the company done at retaining clients?
- Review a current AR Aging looking for concentration risk and AR over 90 Days. Compare AR Day trends year over year.
- When firms are at least the average size of \$25 million in revenues, it is recommended that they submit Review quality financials to the bank. A Field exam is also recommended.

Industry Risks

Vulnerability To Economic Conditions

Demand for software products is sensitive to changes in economic conditions, and generally slows or drops during recessions. Corporate and consumer spending both decrease during periods of economic uncertainty. The software industry overall is more dependent on business spending, although individual categories may be more susceptible to economic conditions than others. During the last recession, revenue for software publishers dropped 3% in a single year, but recovered quickly.

Technology Drives Constant Change And Investment

The information technology industry is characterized by rapid change and constant evolution. Disruptive technologies can quickly create new markets and replace existing systems. Innovation drives the software industry, with publishers investing significant financial and human resources to develop new products and enhance existing products. Some firms spend years in development before producing revenue. Despite a volatile environment, software market dynamics and Internet-delivery models also create opportunities for small firms and start-ups, which may be better suited to act quickly on new ideas.

Domination Of Large Players

Major categories within the software industry are dominated by large, multi-billion dollar companies. Microsoft leads the systems software segment – its Windows operating system is used in about 90% of PCs worldwide. Salesforce.com, SAP, Oracle, Microsoft, and IBM account for about half of the global CRM software market (over half delivered as SaaS), according to Gartner. Large firms have massive installed bases and significant resources to invest in support and development. Small firms often find themselves crowded out when a large player decides to enter their niche.

Talent Shortage

Software developers are in short supply and many publishers are resource-constrained due to a shortage of skilled workers. The market for experienced workers in the software industry is highly competitive and firms have been known to “poach” talent. Employment for software developers is projected to grow 21.5% between 2019 and 2029, significantly faster than the average of 3.7% for all occupations. Some firms rely on H-1B visa programs to hire developers from foreign countries and the use of contract workers is common in the industry. Rapid growth in the use of mobile devices has exacerbated the shortage of developers that specialize in mobile apps.

Software Piracy

Software piracy, which is the illegal duplication, distribution or use of software, represents lost sales and security risks for the industry. Unauthorized use includes downloading, sharing, selling, or installing multiple copies of licensed software, according to the Business Software Alliance (BSA). About 37% of software installed on PCs globally is improperly licensed, according to the BSA. Unlicensed software represents nearly \$359 billion globally and exposes users to security risks and malware.

Malware Threats

Malware, or malicious software, continues to evolve and become more sophisticated, posing a threat to software publishers and their customers. Hackers have become increasingly sophisticated at breaching barriers, such as firewalls and anti-virus software. Publishers must constantly address vulnerabilities and develop mitigation technology to better protect their software and customer systems and data.

Company Risks

Competition With Large Players

Competing in categories dominated by large companies can be a challenge for smaller firms, despite success among niche players in the early days of the tech industry. Small firms often operate on shoestring budgets and struggle to secure outside funding. Industry giants can subsidize products, monopolize distribution channels, and spend massive amounts on marketing. Small firms often survive by targeting opportunities too small for large firms or acting faster.

Competition From Open Source Software

Companies that use open source code as a foundation for their software can operate with a lower cost structure than firms that use traditional systems. Open source software (OSS) is based on public source code, which is available for modification or enhancement by anyone. Open source software firms generally charge users a nominal fee and earn revenue through advertising or related products and services. The Linux operating system and Apache web server application are examples of open source software.

High Switching Costs

Customers are often highly resistant to switching software, once they adopt a certain type of application or platform. Customers spend considerable time and money to train users, develop staff, and create or install compatible applications. While the pain associated with switching helps firms retain customers, it also creates barriers to winning new business.

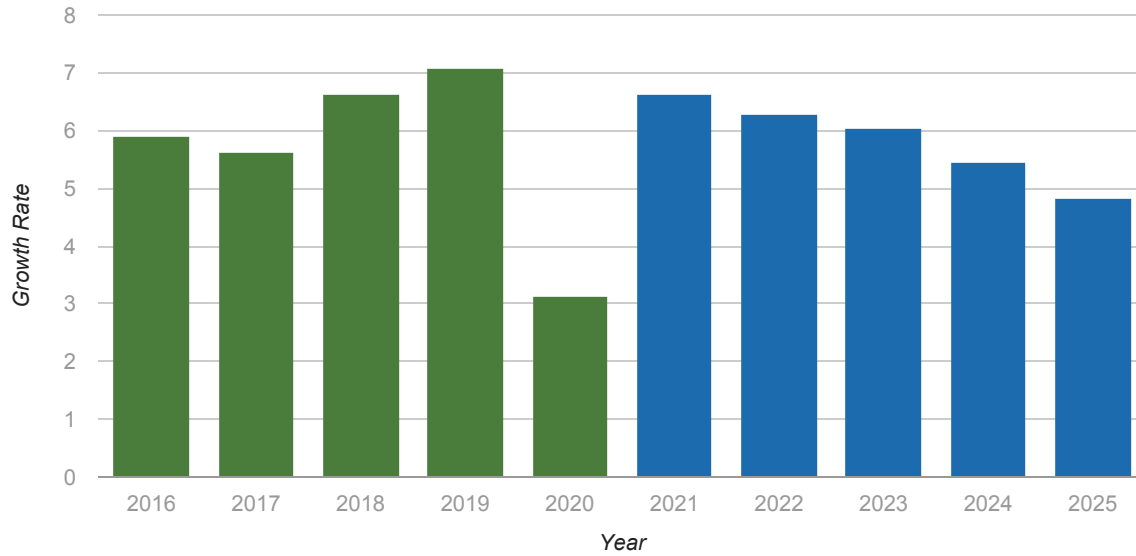
Industry Forecast

Sales for the US software publishers industry are forecast to grow at a 5.82% compounded annual rate from 2020 to 2025, comparable to the growth of the overall economy.

Vertical IQ forecasts are based on the Inforum inter-industry economic model of the US economy. Inforum forecasts were prepared by the Interindustry Economic Research Fund, Inc.

Last Update: August 2021

Software Publishers Industry Growth



Source: Interindustry Economic Research Fund, Inc.

Working Capital

Sell and invoice

Software publishers generate revenue by charging fees for software licenses, subscriptions, and product maintenance and support. With a license (also known as a "perpetual license"), the customer purchases and owns the software and usually pays for updates and support separately. An organizational license allows customer to purchase multiple licenses under a single agreement. With a subscription, the customer purchases the right to use the software and pays fees on a monthly or annual basis, based on the number of users or usage. On-premise software is typically purchased through the licensing model, while cloud-based software or Software-as-a-Service (SaaS) is purchased using the subscription model. Software publishers may have contracts with customers for updates and support services.

77% of printing and publishing firms said they go to their accountant or bookkeeper for cash flow advice, while 10% turn to their banker and 17% do not seek advice, according to a survey of small businesses by Barlow Research Associates.

Source: Barlow Research Associates.

Collect

Most software publishers offer customer credit and payment terms vary. Collection periods average 57 to 63 days and receivables average 20-24% of assets. The licensing model typically requires a large, upfront payment, although some software publishers allow customers to stretch payments over a period of years. During previous recessions, late payments were an indicator of tough times ahead. Large firms may sell receivables to third-parties to accelerate cash flow.

Manage Cash

The cash flow model for traditional licensed software, which is characterized by a large, upfront payment, tends to be more volatile than the model for Software-as-a-Service (SaaS), which relies on monthly or annual subscription payments. The release of a new product or major upgrade and sales force incentive plans create peaks during certain times of year. Large enterprises tend to make major purchasing decisions during the end of the fiscal year (winter months), with collections falling afterwards. European sales are typically lower during the summer due to reduced business activity. Recurring revenue from maintenance agreements and other services tends to be more stable, making renewals critical to maintaining steady cash flow over long periods of time.

Gross margins are high and average 67-68% of sales. Software publishers spend a considerable percentage of revenue on R&D and marketing and sales. R&D costs typically range from 10-20% of sales, according to Market Realist. Some start-ups spend years investing in product development before landing the first customer and generating revenue. Pilot customers are critical for start-ups and can act as referrals for other potential customers. Reproduction costs are low relative to production costs.

Pay

Payroll costs are significant for software publishers and average about 40-41% of sales. Software developers are highly skilled, expensive, and in demand - median pay is about \$110,000. Some firms employ foreign workers or outsource programming jobs to foreign countries for a fraction of the cost of equivalent US-based workers. To keep costs low, entrepreneurs with programming skills have started companies by developing products "on the side" of another job, until the company reaches the point of needing full-time dedicated staff.

Sales and marketing costs can range from 15-25% of sales, although large firms can spend up to 40% of sales on marketing. Software sales specialists earn an average of \$95,000 annually and compensation packages typically include performance incentives.

Rent averages about 2% of sales and advertising averages 6-7% of sales. Other costs include licensing fees for system software and administrative applications software.

Report

After-tax net profit averages -3% to -5% of sales. Trends in the number of licenses, users, or subscriptions are good indicators of revenue growth. Run rate is financial performance extrapolated over time. Monthly recurring revenue (MRR) is a measure of a company's run rate. Churn is the amount of customers or revenue lost during a period of time. Committed monthly recurring revenue (CMRR) takes into consideration the term of customer contracts, anticipated renewals and churn, price changes, and new business to determine future run rate. Other important metrics include the cost per customer acquisition and revenue per customer.

Cash Management Challenges

Cash Shortfalls Due To Volatile Sales

Software publishers that sell a one-time license purchase often experience volatile sales from month-to-month. Sales of big ticket business application software involve lengthy sales cycles and are difficult to forecast. Lower-priced consumer software sales can be seasonal, driven by holiday gift buying and back-to-school purchases. New product introductions and major upgrades can cause peaks in demand and a subsequent drop-off as customers implement new purchases. Companies selling a subscription license may have less volatility in cash flow, depending on their payment terms (annual or monthly).

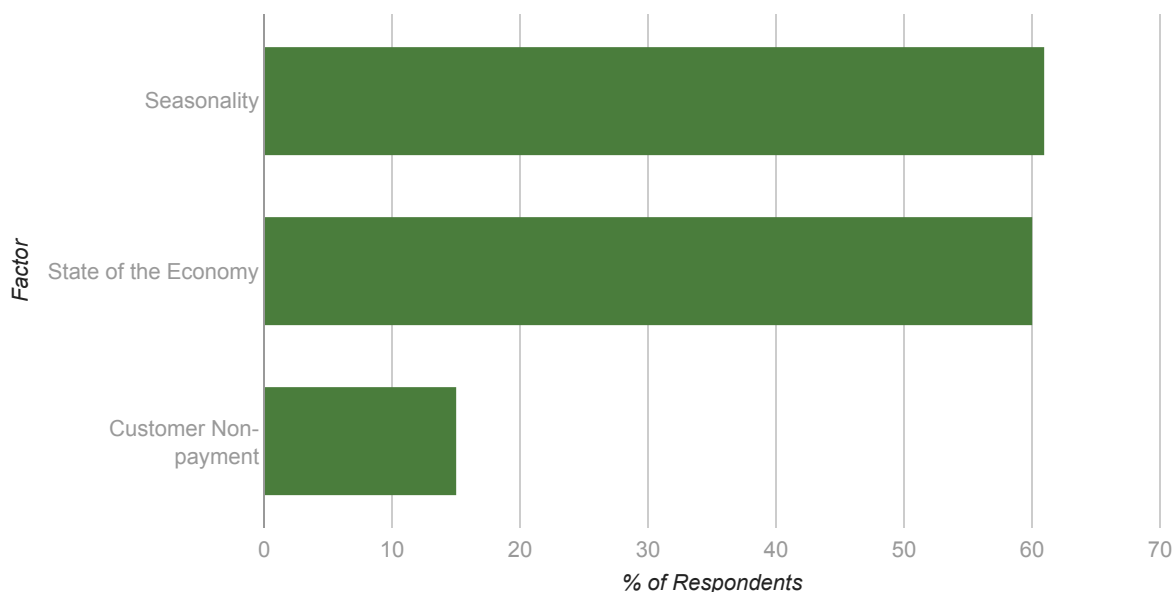
Funding The Cost Of New Product Development

Development of new products is critical for the success of software publishers and can be costly. Major new products can take years to design, develop, and test before earning any revenue. Companies typically spend 10-20% of sales on research and development of new products. The complexity of developing major new products often leads to project delays, which can result in temporary cash shortfalls. Software publishers also incur significant marketing expenses to launch new products before realizing any revenue, which can also strain company cash flow.

Efficiently Collecting Payments From Customers

Depending on the customer and type of software, software publishers may sell directly through their own salesforce, through value-added resellers and distributors, or through retail and online channels. They need to efficiently invoice and collect payments for one-time license fees and ongoing subscription and maintenance fees. For large business applications, customers may withhold payment until the software is successfully installed and implemented, which can take months for complex applications.

Factors Causing Cash Flow Stress: Printing and Publishing Firms



Source: Barlow Research Associates

Capital Financing

Projects that require capital financing include the purchase of property, buildings, equipment, technology and information systems. In the past, successful software companies were built on millions in venture capital. Software development required computers, servers, communications technology and other equipment. However, cloud computing has provided the capability of renting computer capacity as needed for a fraction of the cost of purchasing and maintaining independent IT departments. For small firms, expenditures on facilities, furnishings and fixture can be minimal and team members may work from home to minimize upfront capital costs. Several highly successful software companies started in basements and dorm rooms.

Large software publishers rely on capital to fund growth initiatives, typically by acquiring smaller software companies. Acquisitions allow firms to enter new product categories, quickly obtain new technology, and fill niches. The third quarter of 2020 saw a record 466 transactions involving software companies, according to Solganick & Co.

Sources of financing vary depending on the type of company. Publically-traded firms rely on cash, stock, debt, or a combination. Venture capitalists and private equity firms are key players in the software industry and have been extremely active in the acquisitions market. Start-ups have relied on personal savings, credit cards, family, friends, and crowd-funding to raise capital. "Serial entrepreneurs" have used the proceeds from the sale of one company to start a new one. A company may go through several rounds of capital financing to fund growth.

Examples of Equipment Purchases



Laptop Computers

\$500 - 2,000

High-performance laptop computer for software development and testing.



Computer Monitor

\$200 - 500

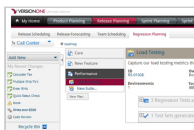
Wide-screen monitor for connection with laptop computer to provide dual screen environment for software development and testing.



Server Systems

\$3,000

Computer servers for networking, application hosting, data storage, and Internet access.



Software Development Tools

\$3,000 - 5,000 (Annually for 10 users)

Software tools integrating project management, change management, and code sharing across multiple software developers.

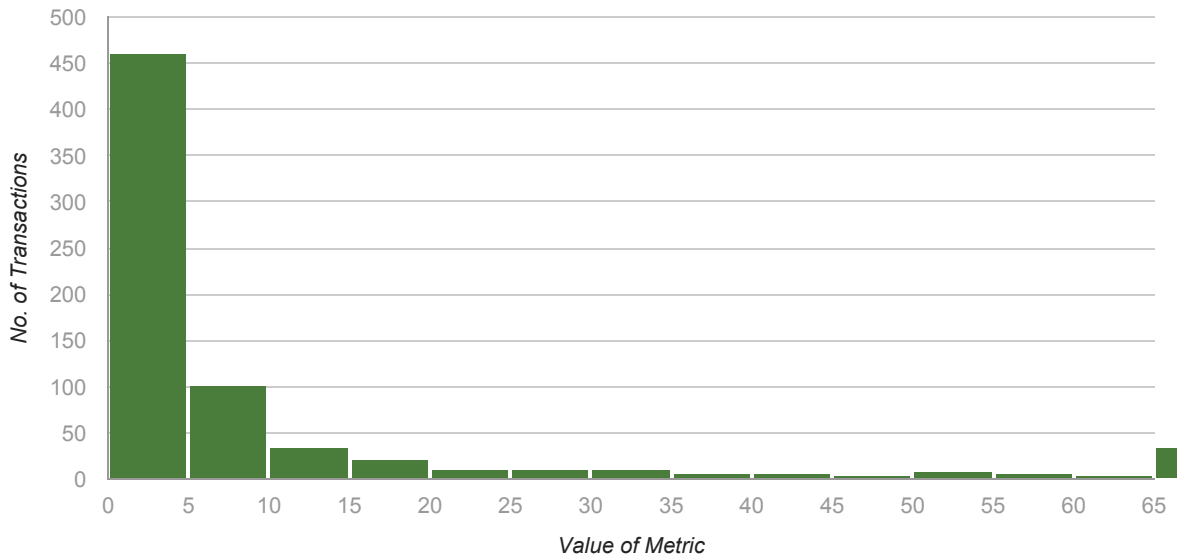
Business Valuation

This data on business valuations is supplied by DealStats, an online database with the most complete financial details on nearly 36,000 acquired companies. These companies are mostly small and medium-sized private firms.

Summary Valuation Data for Software Publishers

	MEDIAN	MEAN	# TRANSACTIONS	DATES
Price to Net Sales	2.97	33.23	694	04/12/1995–05/28/2021
Price to Gross Profits	4.63	40.73	653	04/12/1995–05/28/2021
Price to EBITDA	14.93	49.54	241	04/12/1995–05/28/2021
Price to EBIT	16.67	210.79	267	04/12/1995–05/28/2021

Click on the metric below to see a distribution of transactions for the industry:



Source: DealStats

Count: 694

Min: 0.03

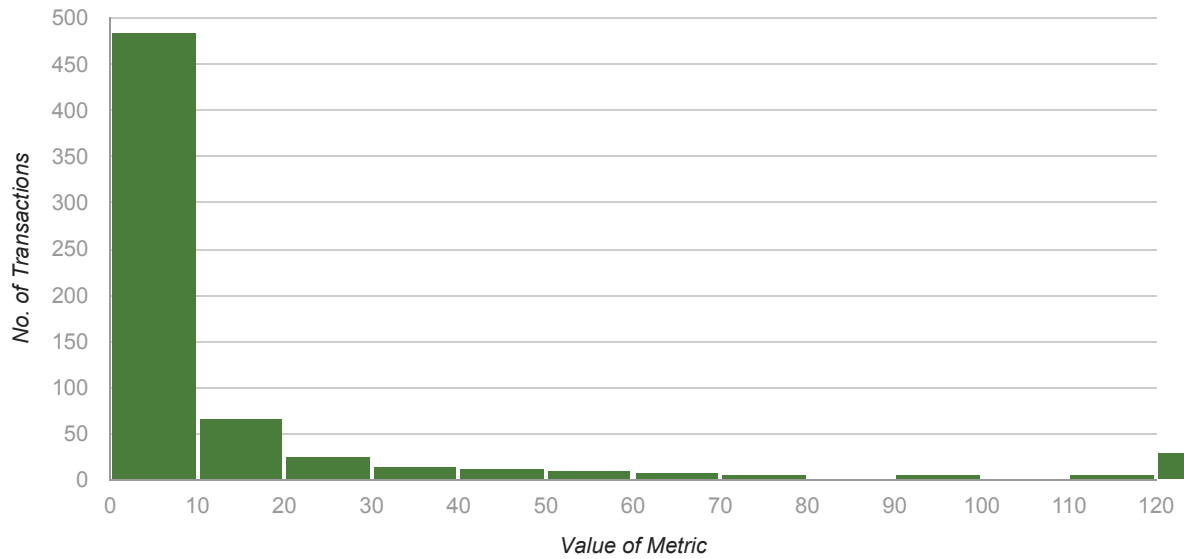
Max: 4550.77

Mean: 33.23

Median: 2.97

Price to Sales = Selling Price/Net Sales

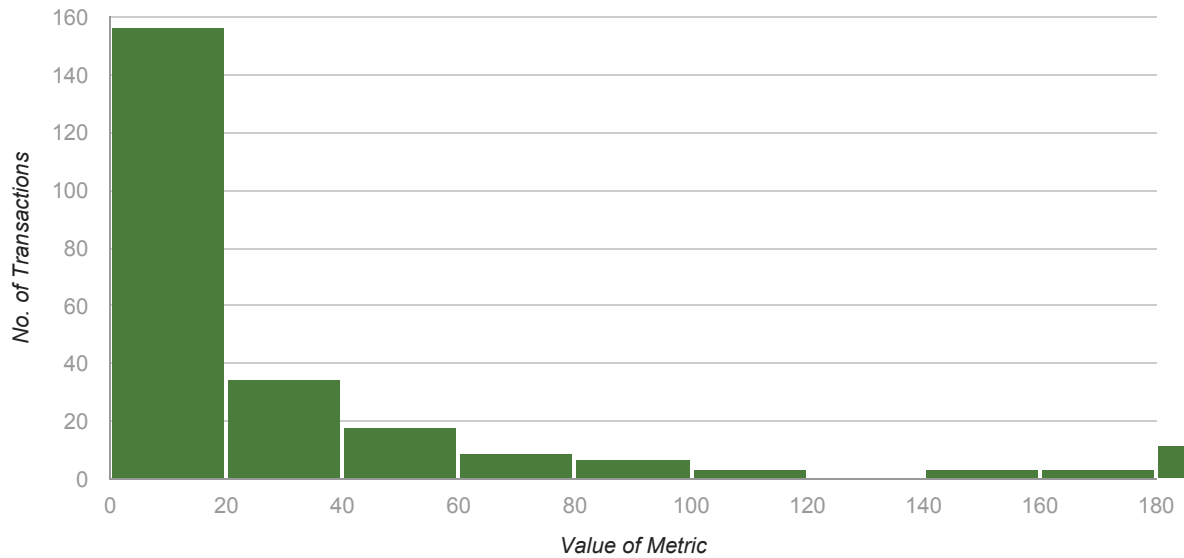
Date range: 04/12/1995 - 05/28/2021



Source: DealStats

Count: 653 **Min:** 0.07 **Max:** 4550.77 **Mean:** 40.73 **Median:** 4.63

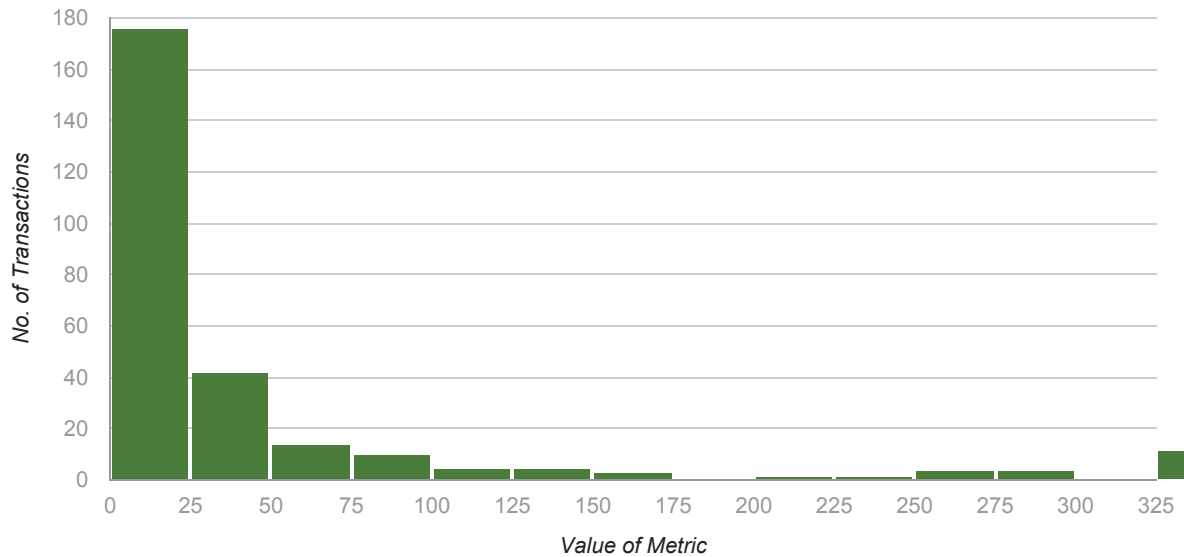
Price to Gross Profit = Selling Price/Gross Profit
Date range: 04/12/1995 - 05/28/2021



Source: DealStats

Count: 241 **Min:** 1.12 **Max:** 1765.05 **Mean:** 49.54 **Median:** 14.93

Price to EBITDA = Selling Price/Operating Profit + Depreciation & Amortization
Date range: 04/12/1995 - 05/28/2021



Source: DealStats

Count: 267

Min: 0.91

Max: 31117.83

Mean: 210.79

Median: 16.67

Price to EBIT = Selling Price/Operating Profit

Date range: 04/12/1995 - 05/28/2021

Selling Price, also known as MVIC (Market Value of Invested Capital) is the total consideration paid to the seller and includes any cash, notes and/or securities that were used as a form of payment plus any interest-bearing liabilities assumed by the buyer. The MVIC price includes the noncomplete value and the assumption of interest-bearing liabilities and excludes (1) the real estate value and (2) any earnouts (because they have not yet been earned, and they may not be earned) and (3) the employment/consulting agreement values. In an Asset Sale, the assumption is that all or substantially all operating assets are transferred in the sale. In an Asset Sale, the MVIC may or may not include all current assets, non-current assets and current liabilities (liabilities are typically not transferred in an asset sale).

Source: DealStats 2019 (Portland, OR; Business Valuation Resources LLC). Used with permission. DealStats is available at <https://www.bvresources.com/learn/dealstats>

Financial Benchmarks

The following financial benchmark data is based on annual financial statements submitted by member institutions of the Risk Management Association from Q2 of the first year listed through Q1 of the following year.

Financial Ratios (Software Publishers, Industry-wide)

MEASURE	2018-19	2019-20	2020-21
Current Ratio [?]	1.16	1.04	1.09
Quick Ratio [?]	1.00	.84	.96
Days Inventory [?]	7.57	6.64	10.73
Days Receivables [?]	63	57	66
Days Payables [?]	39.76	43.44	46.53
Pre-tax Return on Revenue [?]	-4.86%	-5.85%	2.11%
Pre-tax Return on Assets [?]	-4.20%	-5.00%	1.82%
Pre-tax Return on Net Worth [?]	-20.33%	-22.41%	7.39%
Interest Coverage [?]	2.39	2.31	4.90
Current Liabilities to Net Worth [?]	1.77	1.47	1.54
Long Term Liabilities to Net Worth [?]	2.08	2.01	1.52
Total Liabilities to Net Worth [?]	3.85	3.48	3.06
<i>Number of Firms Analyzed</i>	<i>360</i>	<i>313</i>	<i>156</i>

Income Statement (Software Publishers, Industry-wide)

ITEM	2018-19	2019-20	2020-21
Revenue	100.0%	100.0%	100.0%
Cost of Sales	32.52%	31.96%	34.16%
Gross Margin	67.48%	68.04%	65.84%
Officers Compensation	0.84%	0.96%	0.73%
Salaries-Wages	32.78%	29.12%	19.39%
Rent	1.81%	1.79%	2.13%
Taxes Paid	3.2%	3.12%	2.27%
Advertising	3.74%	3.7%	3.65%
Benefits-Pensions	4.03%	3.68%	2.72%
<i>Number of Firms Analyzed</i>	<i>360</i>	<i>313</i>	<i>156</i>

ITEM	2018-19	2019-20	2020-21
Repairs	0.68%	0.67%	0.91%
Bad Debt	0.25%	0.25%	0.46%
Other SG&A Expenses	12.27%	15.82%	21.19%
EBITDA	7.88%	8.93%	12.39%
Amortization-Depreciation	7.08%	8.17%	7.7%
Operating Expenses	66.68%	67.28%	61.15%
Operating Income	0.8%	0.76%	4.69%
Interest Expense	2.95%	3.29%	3.36%
Other Income	1.27%	1.63%	0.31%
Pre-tax Net Profit	-3.42%	-4.17%	1.02%
Income Tax	0.5%	0.64%	0.8%
After Tax Net Profit	-3.92%	-4.81%	0.22%
<i>Number of Firms Analyzed</i>	360	313	156

Balance Sheet (Software Publishers, Industry-wide)

ASSETS	2018-19	2019-20	2020-21
Cash	24.5%	20.46%	26.8%
Receivables	24.15%	20.49%	20.49%
Inventory	1.55%	0.85%	0.96%
Other Current Assets	5.72%	6.6%	4.99%
Total Current Assets	55.92%	48.4%	53.24%
Net Fixed Assets	6.91%	8.17%	7.87%
Net Intangible Assets	27.05%	34.41%	28.23%
Other Non-Current Assets	10.11%	9.02%	10.66%
<i>Total Assets</i>	100.0%	100.0%	100.0%
LIABILITIES			
Accounts Payable	6.91%	7.56%	6.06%
Loans/Notes Payable	7.02%	6.28%	6.15%
Other Current Liabilities	37.29%	33.63%	33.87%
<i>Number of Firms Analyzed</i>	360	313	156

LIABILITIES

Total Current Liabilities	51.22%	47.47%	46.08%
Total Long Term Liabilities	36.82%	43.83%	38.09%
Total Liabilities	88.04%	91.31%	84.17%
Net Worth	11.96%	8.67%	15.83%
Total Liabilities & Net Worth	100.0%	100.0%	100.0%
<i>Number of Firms Analyzed</i>	360	313	156

Vertical IQ financial benchmark data is based on data provided by the Risk Management Association (RMA) and Powerlytics, Inc. RMA's Annual Statement Studies provide comparative industry financial benchmarks based on financial statements of small and medium business clients of RMA's member institutions. Additional detail on income statement line items is provided using Powerlytics financial benchmarks, which are based on reporting submitted to the IRS. Additional detail on these data sources can be found at [RMA](#) and [Powerlytics](#).

Bank Product Usage

Top Bank Products Used by Software Publishers

The following table provides the frequency of bank product usage by Software Publishers with less than \$10 million in annual revenue. It is provided by Barlow Research Associates, Inc., the premier market research firm in the financial services industry.

BANK PRODUCT	% OF FIRMS
Business checking account services	100.0
Business debit card or business check card	91.0
Business credit card issued in your company's name (Visa, MasterCard, Amex, etc.)	90.0
Wire transfer services	74.0
Business savings or money market account	65.0
Remote deposit capture (scanning checks at your office or by mobile device for electronic deposit)	58.0
Automated clearing house services (ACH)	57.0
Overdraft protection for business checking	51.0
Money market mutual funds or short-term investments	47.0
Point-of-sale credit card processing	37.0
Unsecured short-term loans or working capital line of credit (less than one year)	25.0
International (foreign exchange, import/export letters of credit)	25.0
Electronic payments initiated through the Internet (Bill Payment)	21.0
SBA loans	21.0
Credit lines secured by receivables, inventory, property or other assets	18.0
Account reconciliation processing (ARP)	14.0
Term loans or equipment financing (one year +)	13.0
Commercial real estate mortgage (company occupied building)	11.0
Commercial real estate mortgage	11.0
Commercial real estate mortgage (investment property)	11.0
Company sponsored 401(k), SEP, pension or profit sharing plan	6.0
Payroll processing	4.0
Overnight investment or sweep accounts	1.0
Equipment leasing	0.0
Certificates of deposit	0.0
Accounts receivable collection (lockbox)	0.0

Barlow's Small Business Banking program is a multi-client research program sponsored by leading banks. Each quarter, a stratified random sample of businesses throughout the United States with sales between \$100,000 to \$10 million compiled from an independent list provider are invited to participate in a comprehensive banking survey of over 100 questions. The results measure channel adoption, bank satisfaction, brand power, account management, service quality, business product usage and the selling abilities of leading providers. The results in this chapter are calculated directly from the business product usage section and represent usage for the average small business (\$100K- \leq \$10MM).

For more information on Barlow's banking research, go to <http://www.barlowresearch.com/>

Quarterly Insight

1st Quarter 2022

Unions May Find an Industry Entry Point Through Video Game Sector

A group of testers at Call of Duty studio Raven Software, which is owned by Activision, have formally begun the process of creating a union. The quality assurance developers are working with the Communication Workers of America union to create a guild called Game Workers Alliance. The group is seeking to become among the first video game industry unions in North America. Some of the QA staff at Raven Software, a Call of Duty co-developer that contributes to Call of Duty: Warzone and other projects, have been on strike in some form since before the 2021-22 holiday season began.

4th Quarter 2021

“Killware” Seen As Next Cybersecurity Threat

US Department of Homeland Security Secretary Alejandro Mayorkas has said that “killware”, ransomware made to intentionally cause death, is the next breakout cybersecurity threat. While ransomware has disrupted supply chains for the first time this year, causing stoppages in the delivery of everything from gas to meat, these attacks do not represent the kind of direct threat to the health and safety of human beings that an attack on software created for industries like healthcare may cause. Research from Gartner projects that threat actors will be weaponizing operational environments within the next four years to harm and kill people. Mayorkas believes that killware will be used to cause death and destruction via compromised systems to coerce payments or simply to make a political statement.

3rd Quarter 2021

Executive Order May Set Security Standard for Entire Industry

President Biden has issued an executive order that directs the National Institute of Standards and Technology to establish guidelines for secure software development for government suppliers. Analysts say that the standards are likely to become private sector industry standards too. The driving force behind the Biden administration’s executive order on improving the nation’s cybersecurity was the recent SolarWinds breach. The breach allowed the Russian intelligence service to get into the systems of at least nine federal agencies and numerous prominent private-sector companies via a software supply-chain hack that exploited SolarWinds software updates. The government’s software vendors include well-known firms that also serve the private sector, such as Cisco, IBM, Microsoft, SAP, and Workday.

2nd Quarter 2021

Visa Ban Allowed to Expire

President Biden has allowed a ban on H-1B and other kinds of foreign work visas to expire. H-1B visas are heavily relied upon by software publishers, as they are a source of skilled foreign workers. The White House also revoked policies that blocked entry for family members of US citizens, winners of the diversity lottery program, and some immigrants with employment-based green cards. Former President Trump blocked the entry of H-1B visa holders in June 2020.

1st Quarter 2021

Trump Administration H-1B Visa Program Changes Placed Under Review

President Biden has frozen for 60 days the “midnight” rules finalized by the Trump administration that would allow only higher-wage foreign workers to be employed in the US. A final rule issued on January 8 by the Homeland Security Department would allow only the highest-paid applicants to the H-1B visa program – which allows companies to temporarily employ foreign workers in specialty

occupations – to be selected. Currently, foreign workers are randomly selected through the annual H-1B visa lottery. The new rule was scheduled to go into effect March 9. Another rule issued on January 14 by the Labor Department would significantly increase H-1B holders' minimum wages. US employers seeking H-1B workers would be required to attest that they would pay H-1B holders higher wages than other employees with similar experience and qualifications. That rule was scheduled to take effect March 15.

4th Quarter 2020

Trump Administration Makes H-1B Visa Program Changes

The US Department of Labor announced in early October a significant revision to the wage scale used by employers to price the salaries of high-skilled foreign workers. Meanwhile, the Department of Homeland Security indicated it would boost degree requirements among those applying for the H-1B visa program and amplify enforcement efforts to ensure compliance. The new rules are meant to discourage employers from paying foreign workers less than what US citizens in the same role might earn. Software publishers that rely on H-1B employees may be negatively impacted by the changes.

3rd Quarter 2020

Visa Restrictions Approved by President Trump

Software publishers may be negatively impacted by an executive order signed by President Donald Trump in early August that bars workers in the US on H-1B visas from replacing American workers on federal contracts. Employers are required to prove that they are not replacing qualified American workers with people from other countries and federal contractors may not shift H-1B workers to other job sites in a manner that would "displace American workers." The order follows a June 22 executive order aimed at restraining the number of "foreign nationals" working in the US by suspending new visas, including the H-1B, H-2B, J, and L programs. "U.S. firms seek more H-1B visa holders not because they are looking to displace American workers, but because doing so is essential to fill the desperate shortage of engineering talent in this country," said Jeff Urbanchuk, vice president of the American Council of Engineering Companies.

2nd Quarter 2020

Software Firms Can Help Address IT System Weaknesses

Despite recent discussions about rising demand for COBOL programmers needed to update old mainframe systems, industry experts are now saying that Cobol probably isn't to blame for the problems with unemployment systems in many states. Errors shown in screenshots of the New Jersey unemployment insurance website, for example, were related to the Java programming language. The New Jersey Office of Information Technology didn't answer Wired Magazine's specific questions about what technologies it uses, but the unemployment insurance service isn't based on a single technology system, the state's director of technology Julie Garland Veffler said in a statement. "Different components operate together, such as web servers, application servers, mainframes, and special databases," said Veffler. "Some of these systems, unlike modern applications or cloud-hosted computing, cannot quickly or readily scale upward."

Industry Terms

Churn

The amount of customers or revenue lost during a period of time.

Cloud-based Software

Programs and customer data are managed centrally by the vendor and accessed by the customer using a web browser.

CMRR

Committed monthly recurring revenue, takes into consideration the term of customer contracts, anticipated renewals and churn, price changes, and new business to determine future run rate.

CRM

Customer Relationship Management, software that manages customer data, interaction, and support.

ERP

Enterprise Resource Planning, software that manages and integrates business processes in multi-user environments.

H-1B

Visa program that allows US companies to hire workers in specialty occupations.

Hybrid Cloud

Combines on-premise, private cloud, and public cloud services.

IOT (Internet of Things)

Network of objects that can collect and exchange data.

Licensed Software

Also known as a “perpetual license”, the customer purchases and owns the software and usually pays for updates and support separately.

Middleware

Functions as a transition layer and allows applications to interface.

On-premise Software

Software installed locally on customer hardware and servers and managed by customer IT staff.

OSS

Open source software, based on public source code, which is available for modification or enhancement by anyone.

Private Cloud

Cloud services that uses proprietary networks and resources.

Public Cloud

Cloud services available to the general public.

SaaS

Software-as-a-Service, software provided as a service, sold through subscription model.

Subscription Software

The customer purchases the right to use the software and pays fees on a monthly or annual basis, based on the number of users or usage.

Web Links

[Software & Information Industry Association](#)

News, trends, statistics, studies, and surveys from industry association

[Information Week](#)

News and trends on the business technology industry

[InfoWorld](#)

News and trends on enterprise technology

[Software Magazine](#)

News, trends, and company rankings

[BSA: The Software Alliance](#)

News, legislative issues on the software industry

Related Profiles

Book Publishers

NAICS: 511130 SIC: 2731, 2741

Computer & Peripheral Manufacturers

NAICS: 3341 SIC: 357x

Computer Programming Services

NAICS: 541511 SIC: 7371

Data Processing & Hosting

NAICS: 518210 SIC: 7374

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NAICS: 511210 SIC: 7372

HR and Payroll Software

NAICS: 511210 SIC: 7372

Video Game Publishers

NAICS: 511210 SIC: 7372

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