

Industry Overview

Fast Facts

Companies in this industry design, develop, publish, and support software used to collect, store, report, and analyze data from various operations of a business. Major companies include MicroStrategy, QlikTech, SAS, and Tableau (all based in the US), as well as divisions of IBM, Microsoft, Oracle, and SAP (Germany). Other providers based outside the US include Longview Solutions (Canada) and Statpro (UK).

Worldwide, business intelligence software companies generate more than \$18 billion in annual revenue, according to Gartner. North America represents the largest BI software market; top growth markets include the Middle East, Africa, Latin America, and the Asia/Pacific region.

The business intelligence software industry is a subset of the computer software industry, which is covered in a separate industry profile.

Industry Growth Rating



Reflects snapshot of industry performance vs. industry risk over the next 12 to 24 months relative to other U.S. industries, along with short descriptions of vital demand and risk factors influencing the industry. Use to quickly determine the overall projected health of an industry.

- Demand: driven by corporate spending
- Need technical expertise, effective marketing
- Risk: highly competitive market

Industry Indicators

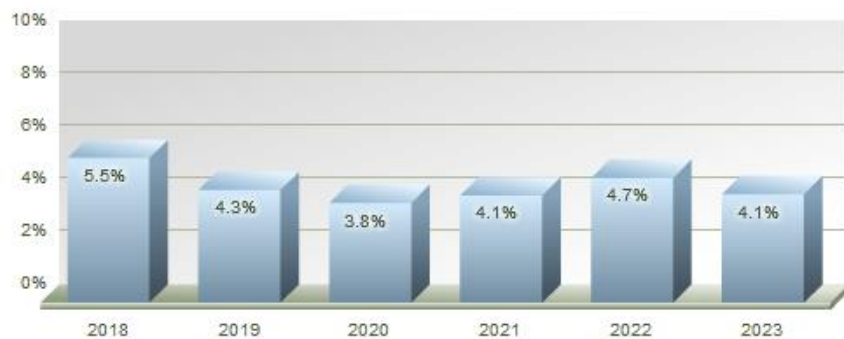
US corporate profits, an indicator of corporate demand for software, rose 2.7% in the second quarter of 2019 compared to the same period in 2018.

Total US revenue for software publishers rose 11.4% in the second quarter of 2019 compared to the previous year.

Industry Forecast

Revenue (in current dollars) for US software publishing is forecast to grow at an annual compounded rate of 4% between 2019 and 2023, based on changes in physical volume and unit prices.

Data Published: August 2019



First Research forecasts are based on INFORUM forecasts that are licensed from the Interindustry Economic Research Fund, Inc. (IERF) in College Park, MD. INFORUM's "interindustry-macro" approach to modeling the economy captures the links between industries and the aggregate economy.

Top Challenges & Talking Points

Uneven Revenue Stream

Revenue for business intelligence software companies comes mainly from licensing fees and technical support contracts and may fluctuate during the year.

 How does the company mitigate fluctuations in revenue from licensing fees?

Competitive Technology Environment

The rapid development of new business intelligence products creates a highly competitive marketplace.

 What key factors differentiate the company from its competition?

Data Security

Business intelligence software companies must take care to secure customer data sets.

 How does the company manage data privacy concerns?

Top Opportunities & Talking Points


Data Discovery Visualization

Customer preference is driving demand for visual data discovery tools over traditional business intelligence outputs.

 What new ways to present BI data look most promising to the company?

Cloud Computing

As technology advances, cloud-based business intelligence software is an increasingly viable way for development companies to meet customer demand for off-premise solutions.

 How has the emergency of cloud computing affected the company's development strategy?

Broader Use of Analytics

More types of users are taking advantage of tools to analyze data.

 What new use cases has the company identified in recent years?

Executive Talking Points

Chief Executive Officer - CEO


Determining Areas for Future Development

How does the company plan future developments in the rapidly changing technology industry?

Chief Financial Officer - CFO

Managing Seasonal Revenue

How does the company manage seasonality in product sales?

 **Chief Information Officer - CIO**
Maintaining Data Security

What security support services does the company offer?

 **Human Resources - HR**
Hiring Project Programmers

How is the company challenged by hiring programmers on a project basis?

 **VP Sales/Marketing - Sales**
Coordinating Digital Marketing

How important is internet marketing to the company's sales?

Industry Description

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Competitive Landscape

Demand is driven by corporate spending. The profitability of individual companies depends on technical expertise and effective marketing. Large companies have economies of scale in development, marketing, and distribution. Smaller companies can compete effectively by targeting niche markets or developing new technology. The global business intelligence software industry is concentrated: the top 10 companies account for more than 50% of revenue, according to IDC.

Products & Operations

Major products include business intelligence (BI) platforms and corporate performance management (CPM) suites, as well as analytic applications and advanced analytics tools.

BI refers to the tools and systems that play a key role in the strategic planning process of a company. BI software is used to manage large quantities of data and provide statistical analysis regarding customers, market trends, forecasting, and performance management. The software is used to speed up decision-making processes to improve customer service, control costs, or increase revenue.

BI software platforms analyze data through automated processes and generate outputs including reports, spreadsheets, and graphs. A variety of methodologies and applications are used to organize and analyze data sets. Programs often include dashboard technology that efficiently informs users about key metrics and allows for data manipulation. Mobile and visual data discovery applications are also growing in popularity.

Technology

BI systems are implemented through in-house equipment installation or SaaS (software as a service). Companies are also adopting cloud-based business intelligence solutions. Software applications work alongside data storage and warehouse systems, and the term "big data" is often applied to the large unstructured and structured data sets that are sorted and analyzed. BI software is sometimes packaged with enterprise resource planning (ERP, back-office solutions) and customer relationship management (CRM, sales administration) software.

BI providers are enhancing data discovery and analysis tools to become more enterprise-capable as the user base expands from IT experts to everyday business users. Self-service data preparation tools are moving beyond time-consuming basic data mashup technologies, allowing business users to prepare data in a governed, less-complex, and reusable environment. Data governance is key as new unstructured, structured, and streaming (real-time) data sources come into play.

Innovative vendors are incorporating advanced automation and smart data discovery capabilities into the analytics workflow to provide faster insights to an enterprise-wide audience. Augmented analytics incorporates machine learning and natural language processing to automate data preparation, insight discovery, and insight sharing. Interactive visuals allow for exploration of data through complex graphics that allow for user analysis and manipulation.

Sales & Marketing

Typical customers include financial service firms, government agencies, telecommunications carriers, manufacturers, universities, health care providers, leisure and retail firms, and other clients looking to identify patterns in customer, operational, and market data. Sales are conducted through dedicated sales forces and channel partners including resellers, technology consultants, and original equipment manufacturers (OEMs).

Sales and marketing activities can account for as much as 40% to 50% of revenues. Marketing programs target technology buyers, integrators, and users, as well as marketing executives. Promotions include direct email campaigns, print and online advertising, and industry event promotions. Business intelligence software companies also use websites and social media outlets to market products.

Some companies give away samples or free versions of software in order to drive upgrades and "word-of-mouth" sales.

Finance & Regulation

Sales are based on licensing transactions and are often seasonal, with highest revenues reported during the fourth quarter. The timing of sales can impact gross margins and profits due to fixed expenditures throughout the year. Licensing fees account for the majority of revenues; additional sales come from related maintenance, training, and consulting agreements. The software industry, which includes business intelligence software, is capital-intensive: average annual revenue per worker in the US is about \$600,000.

For many companies, sales and marketing are the largest expenses, at 40% to 50% of revenue; research and development typically account for 20% to 30%.

Regulation

Companies in the software industry must comply with state and federal laws governing online commerce, data security, competition, corruption, labor, and immigration. Litigation over intellectual property rights is common, and software firms must deal with growing information security concerns. Software developers must comply with international import-export requirements and anti-bribery laws.

Working Capital Turnover by Company Size

The working capital turnover ratio, also known as working capital to sales, is a measure of how efficiently a company uses its capital to generate sales. Companies should be compared to others in their industry.



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Regional & International Issues

Worldwide, business intelligence software companies generate more than \$18 billion in annual revenue, according to Gartner. North America represents the largest BI software market; top growth markets include the Middle East and Africa, as well as Latin America and the Asia/Pacific region.

Leading companies based outside the US include Longview Solutions (Canada), Statpro (UK), and SAP (Germany). Many software companies operate on a multinational basis; US-based SAS, for example, has customers in about 150 countries.

Companies worldwide are adopting business intelligence software to manage increasing volumes of available data. Growth is strong in the advanced analytics category, which includes predictive and prescriptive analytics, as well as in visual data discovery category, which includes tools that produce infographics and storyboards based on the analyzed data. Companies are also increasingly integrating business intelligence software into broader SaaS (software-as-a-service) and DaaS (data-as-a-service) solutions. Another growth category comes from companies utilizing BI software for internal corporate performance management (CPM) purposes.

Clients in mature markets in North America and Western Europe, as well in emerging economies in Eastern Europe and the Asia/Pacific region, are moving toward cloud-based solutions for BI and other applications. Other emerging markets in the Middle East and North Africa are lagging behind in cloud adoption due to the relative lack of local IT expertise, as well as data security, privacy, and latency concerns. In India, BI is growing rapidly as executives explore different analytical tools to resolve business imperatives through metrics and performance management.

In the US, software companies are concentrated in California, Texas, New York, Florida, and Massachusetts. Major providers of BI software are located in North Carolina, Pennsylvania, Virginia, and Washington state. Software companies are often located in metropolitan areas near major universities, such as San Francisco,

Austin, and Boston.

Human Resources

Software development is a highly skilled profession, and industry wages are about twice as high as the national average. Competition for hiring and retaining experienced software engineers is fierce. The injury rate for software engineers is significantly lower than the US average. BI companies must also hire customer training and support employees with strong technical knowledge to ensure that users get the most out of complex self-service tools.

The shortage of qualified computer programmers in the US and lower labor costs outside the US have prompted many companies to hire software engineers from other English-speaking countries, notably India. Foreign engineers are often brought temporarily to the US through visas under the H-1B program. Additionally, companies may outsource routine programming work to contractors in countries where labor costs are lower.



Industry Employment Growth - Bureau of Labor Statistics



Average Hourly Earnings & Annual Wage Increase - Bureau of Labor Statistics

Executive Insight

Chief Executive Officer - CEO

Determining Areas for Future Development

Rapid changes in technology and market demand require software companies to develop a constant stream of new products. Companies must enhance or acquire products that meet changing customer needs and evolving industry standards. Product planning often looks out no further than a few years.

Navigating Fierce Competition

The BI software market is highly competitive. Large software companies with extensive resources dominate, making it harder for smaller companies to compete. Product development, marketing, and delivery strategies must be timely and cost-effective.

🗨️ How does the company plan future developments in the rapidly changing technology industry?

Companies must quickly develop new products that achieve market acceptance.

🗨️ How does the company compete against larger market players?

Product development, marketing, and delivery strategies must be timely and cost effective.

Chief Financial Officer - CFO

Managing Seasonal Revenue

Companies typically experience increased license sales and renewals in the fourth quarter. Managing fixed expenses with fluctuating revenue can be challenging. Additionally, BI software companies that have experienced rapid growth upon entering the market can experience substantial dips in revenue due to changes in corporate spending or competitive conditions.

Planning for Uneven Cash Flow

The typical cash cycle for a software product includes large cash outflows as a product is being developed, and heavy cash inflows when development is finished and sales have begun. The development period for a new product may last a year or longer, while strong sales may last less than six months. Companies that provide custom programming have a smoother cash flow but may have revenue gaps between projects.

How does the company manage seasonality in product sales?

Managing fixed expenses with fluctuating revenue can be challenging.

How does the company balance cash flow cycles as new software products are developed?

The typical cash cycle for software products includes large cash outflows as a product is developed, and heavy cash inflows when sales begin.

Chief Information Officer - CIO

Maintaining Data Security

Users of BI software, who often analyze customer or sales prospect data, must meet rigorous compliance standards. Data breaches caused by hacker attacks or faulty coding can destroy a company's reputation. Software providers must allocate resources to developing and maintaining security measures and provide security training and support programs to customers.

Supporting Self-Service Analytics

New BI platforms are focused on business-led analytics and away from IT-led solutions. Users typically want agile, easy-to-use platforms for quick analysis of customer, partner, and employee data. Customers also demand mobile solutions.

What security support services does the company offer?

Software providers must allocate resources to developing and maintaining security measures and provide security training and support programs to customers

How is the company meeting demand for self-service analytics?

BI providers are enhancing data discovery and analysis tools to become more enterprise-capable as the user base expands from IT experts to everyday business users.

Human Resources - HR

Hiring Project Programmers

Many software companies hire programmers only for the length of a project, which may extend for several months or several years. Programmers with knowledge of specific development languages or development tools may be difficult to find. Average hourly industry earnings are significantly higher than the national average.

Evaluating Outsourcing Options

Because development, maintenance, and customer support for software need not be done at a central location, software companies can contract with outside parties to perform some or all of these functions. The project nature of software development makes outsourcing a good alternative to hiring and then firing

workers who are no longer needed when a project is finished. The lower cost of workers in countries like India or China has encouraged rapid growth of foreign software outsourcing firms.

How is the company challenged by hiring programmers on a project basis?

Companies often hire programmers only for the length of a project, even if the programmers' knowledge of specific development languages or tools is difficult to replace.

What opportunities does the company see in outsourcing development, maintenance, and customer support functions?

The project nature of software development makes outsourcing a good alternative to hiring and firing workers who are no longer needed when a project is done.

VP Sales/Marketing - Sales

Coordinating Digital Marketing

Many software companies invest heavily in search-engine marketing (SEM) and other digital campaigns. Services such as Google's AdWords help companies make their products more visible in online search results and tailor advertising content to potential customers with specific sets of interests. Some publishers allow users to download free trial versions of certain products through their websites.

Soliciting Product Reviews

Software sales depend significantly on favorable reviews from third-party experts. Due to the high volume of new software titles released each year, companies often invest considerable resources to get their products into the hands of influential reviewers at various technology websites and trade publications. Company websites often feature testimonials from satisfied customers.

How important is internet marketing to the company's sales?

Companies use search-engine marketing to reach potential customers with specific sets of interests.

What is the company's strategy for soliciting reviews of new products?

Software sales depend significantly on favorable reviews from third-party experts; company websites often feature testimonials from satisfied customers.

Challenges, Trends & Opportunities

Business Challenges

Uneven Revenue Stream

Revenue for business intelligence software companies comes mainly from licensing fees and technical support contracts and may fluctuate during the year. New sales and renewals tend to be highest in the fourth quarter, while expenses remain fixed throughout the year. Additionally, business intelligence companies that have experienced rapid growth upon entering the market can experience substantial dips in revenues due to changes in corporate spending or competitive conditions.

Competitive Technology Environment

The rapid development of new business intelligence products creates a highly competitive marketplace. Customer demands and industry standards also evolve quickly. Failure to develop new products or delays in upgrading existing products can significantly impact revenue. Because of rapid development of new products and technologies, software has a relatively short shelf-life and the effective sales period is limited.

Data Security

Business intelligence software companies must take care to secure customer data sets. Users of BI software, who often analyze customer or sales prospect data, must meet rigorous compliance standards. Data breaches caused by hacker attacks or faulty coding can destroy a company's reputation. Software providers must allocate resources to developing and maintaining security measures and provide security training and support programs to customers.

Large Competitors Dominate Market

The dominance of large multispecialty software companies in the business intelligence market makes it difficult for smaller companies to compete. Large companies can leverage extensive programming resources, broad distribution networks, and larger marketing budgets to fend off competition from smaller software development firms. The top five companies in the business intelligence software market -- Microsoft, SAP, IBM, SAS, and Oracle -- together account for about 40% of the market, according to IDC.

Business Trends

Data Scalability

Data is generated in increasingly large volumes, and the ability to capture and store the bulk of transactional and interactional data is keeping pace. This "big data" trend creates both opportunities and challenges for business intelligence providers. Customers need to be able to make productive use of massive data stores, and BI software providers must scale capabilities accordingly.

Mobile Devices

Explosive growth in the use of smartphones and other internet-enabled mobile devices helps shape demand for BI software. Companies in the industry focus on enhancing functionality, graphics, performance, interactivity, support, and security for mobile users.

Industry Opportunities

Data Discovery Visualization

Customer preference is driving demand for visual data discovery tools over traditional business intelligence outputs. Where report generation has previously been the standard, ad-hoc querying and other tools are becoming more commonplace methods of viewing data analysis. Self-service data discovery tools allow business users -- instead of IT departments -- to drive data discovery and analysis.

Cloud Computing

As technology advances, cloud-based business intelligence software is an increasingly viable way for development companies to meet customer demand for off-premise solutions. Under the cloud computing model, applications and documents are stored on a remote server rather than a local computer, allowing for better processing, storage, and sharing capabilities.

Broader Use of Analytics

More types of users are taking advantage of tools to analyze data. Where BI reports were previously used by analysts or managers, interactive dashboards and tools allow executives, customer service representatives, suppliers, external customers, and other users to benefit from insights provided through business analytics. Growing acceptance of internet data sources and adoption of mobile devices can also open new user categories.

Call Prep Questions

► Talking Points

💬 How does the company mitigate fluctuations in revenue from licensing fees?

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💬 What key factors differentiate the company from its competition?

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💬 How has the emergency of cloud computing affected the company's development strategy?

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Financial Information

Company Benchmark Trends

Quick Ratio by Company Size

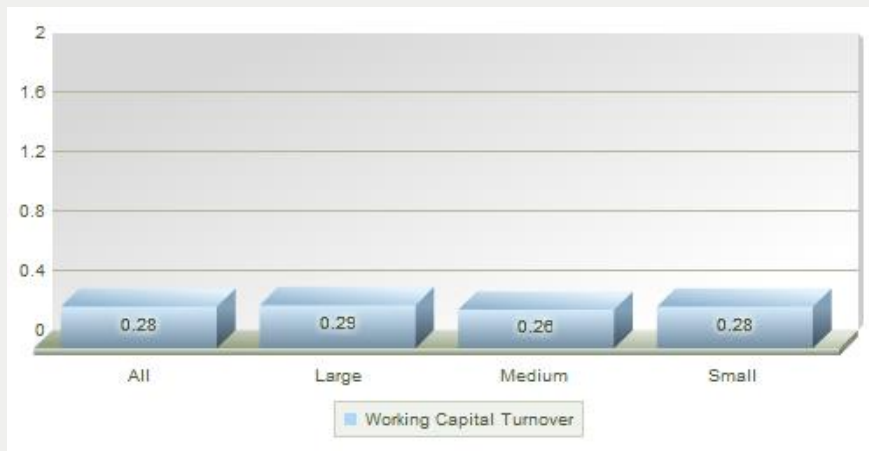
The quick ratio, also known as the acid test ratio, measures a company's ability to meet short-term obligations with liquid assets. The higher the ratio, the better; a number below 1 signals financial distress. Use the quick ratio to determine if companies in an industry are typically able to pay off their current liabilities.



Financial industry data provided by MicroBilt Corporation collected from 32 different data sources and represents financial performance of over 4.5 million privately held businesses and detailed industry financial benchmarks of companies in over 900 industries (SIC and NAICS). More data available at www.microbilt.com.

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Current Liabilities to Net Worth by Company Size

The ratio of current liabilities to net worth, also called current liabilities to equity, indicates the amount due creditors within a year as a percentage of stockholders' equity in a company. A high ratio (above 80 percent) can indicate trouble.



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Company Benchmark Information

NAICS: 511210

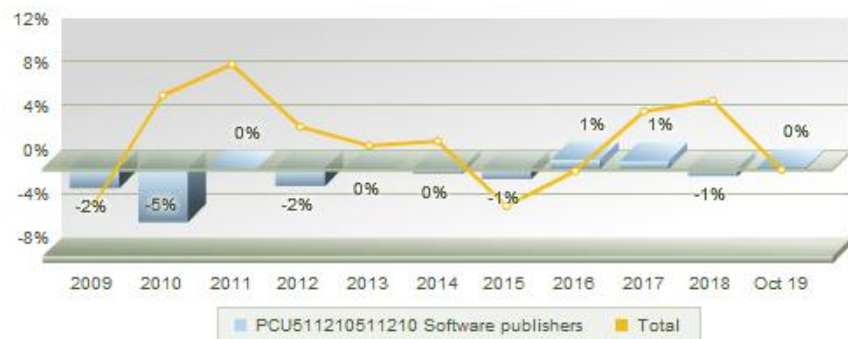
Data Period: 2017	Last Update March 2019			
Table Data Format	Mean			
Company Size	All	Large	Medium	Small
Size by Revenue		Over \$50M	\$5M - \$50M	Under \$5M
Company Count	14976	21	300	14655
Income Statement				
Net Sales	100%	100%	100%	100%
Gross Margin	79.0%	79.2%	79.5%	78.5%
Officer Compensation	4.6%	4.2%	4.5%	4.9%
Advertising & Sales	2.4%	2.5%	2.5%	2.4%
Other Operating Expenses	71.4%	72.0%	72.0%	70.5%
Operating Expenses	78.3%	78.7%	79.0%	77.7%
Operating Income	0.6%	0.5%	0.5%	0.8%
Net Income	0.2%	0.2%	0.2%	0.3%
Balance Sheet				
Cash	30.1%	29.7%	31.6%	29.6%
Accounts Receivable	19.6%	19.6%	20.1%	19.2%
Inventory	1.0%	0.9%	1.0%	1.0%
Total Current Assets	62.8%	62.5%	65.4%	61.7%
Property, Plant & Equipment	7.3%	7.1%	7.4%	7.4%
Other Non-Current Assets	29.9%	30.4%	27.3%	30.9%

Total Assets	100.0%	100.0%	100.0%	100.0%
Accounts Payable	6.6%	6.4%	6.8%	6.8%
Total Current Liabilities	36.7%	35.5%	36.8%	37.8%
Total Long Term Liabilities	24.7%	22.6%	23.7%	26.9%
Net Worth	38.6%	42.0%	39.5%	35.4%
Financial Ratios				
Quick Ratio	1.44	1.49	1.50	1.38
Current Ratio	1.71	1.76	1.78	1.63
Current Liabilities to Net Worth	95.1%	84.5%	93.2%	106.8%
Current Liabilities to Inventory	x38.26	x37.33	x37.16	x38.92
Total Debt to Net Worth	x1.59	x1.38	x1.53	x1.83
Fixed Assets to Net Worth	x0.19	x0.17	x0.19	x0.21
Days Accounts Receivable	74	81	68	72
Inventory Turnover	x21.11	x19.53	x22.28	x21.47
Total Assets to Sales	105.3%	115.4%	94.7%	104.1%
Working Capital to Sales	27.4%	31.1%	27.0%	24.9%
Accounts Payable to Sales	6.8%	7.2%	6.3%	7.0%
Pre-Tax Return on Sales	0.4%	0.3%	0.3%	0.6%
Pre-Tax Return on Assets	0.4%	0.3%	0.3%	0.5%
Pre-Tax Return on Net Worth	1.0%	0.6%	0.8%	1.5%
Interest Coverage	x0.41	x0.35	x0.37	x0.48
EBITDA to Sales	4.4%	4.5%	4.3%	4.3%
Capital Expenditures to Sales	4.8%	5.2%	4.6%	4.5%

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Economic Statistics And Information

Change in Producer Prices - Bureau of Labor Statistics



Valuation Multiples

Business Intelligence Software

Acquisition multiples below are calculated medians using at least 3 US private industry transactions completed between 1/2007 and 10/2018 and are based on middle-market transactions where the market value of invested capital (the selling price) was less than \$1B. Data updated annually. Last updated: December 2018.

Valuation Multiple	MVIC/Net Sales	MVIC/Gross Profit	MVIC/EBIT	MVIC/EBITDA
Median Value	N/A	N/A	N/A	N/A

MVIC (Market Value of Invested Capital) = Also known as the selling price, the MVIC 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.

Net Sales = Annual Gross Sales, net of returns and discounts allowed, if any.

Gross Profit = Net Sales - Cost of Goods Sold

EBIT = Operating Profit

EBITDA = Operating Profit + Noncash Charges



SOURCE: DealStats (formerly Pratt's Stats), 2019 (Portland, OR: Business Valuation Resources, LLC). Used with permission. DealStats is available at <https://www.bvresources.com/learn/dealstats>

Industry Websites & Acronyms

Industry Websites

[Business Software Alliance](#)

[Computerworld](#)

[PC Magazine](#)

[Software & Information Industry Association](#)

Glossary of Acronyms

BI	business intelligence
CPM	corporate performance management
OEM	original equipment manufacturer

Industry Codes

Associated Industry Codes

NAICS 2017 Codes

511210 Software Publishers

SIC Codes

7372 Prepackaged software

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