



Sectorwatch: Artificial Intelligence

December 2018

Artificial Intelligence

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Overview

7MA provides Investment Banking & Advisory Services to the Business Services and Technology Industries globally. We advise on M&A and private capital transactions, and provide market assessments and benchmarking. As a close knit team with a long history together and a laser focus on our target markets, we help our clients sell their companies, raise capital, grow through acquisitions, and evaluate new markets. We publish our sectorwatch, a review of M&A and operational trends in the industries we focus.

Dashboard

- Summary metrics on the sector
- Commentary on market momentum by comparing the most recent 12-month performance against the last 3-year averages.



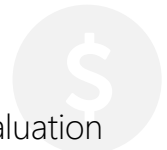
Public Basket Performance

- Summary valuation and operating metrics for a basket of comparable public companies



Valuation Comparison

- Graphical, detailed comparison of valuation multiples for the public basket



Recent Deals

- The most recently announced deals in the sector



Dashboard



Revenue Growth Momentum

↑0.1

1 - year revenue growth compared to revenue growth average for last 3 years

Current revenue growth rate exceeds the average of the last 3 years by this amount, indicating that market momentum is increasing

Pricing / Gross Margin Momentum

↑0.2%

1 - year gross profit % compared to gross profit % average for last 3 years

Current gross profit margin exceeds the average of the last 3 years gross profit margin by this amount, indicating supplier pricing power

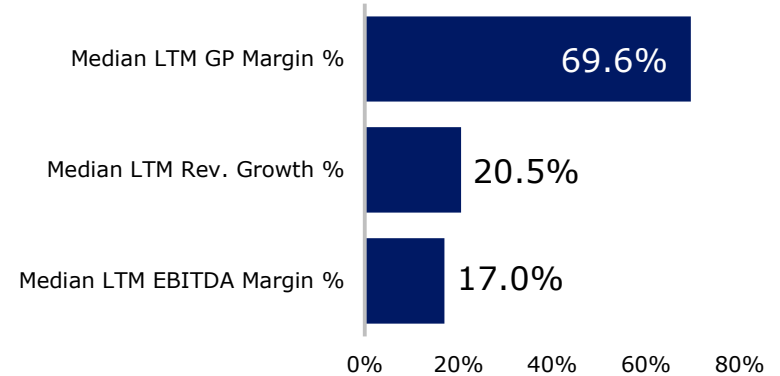
Profitability Momentum

↑3.7%

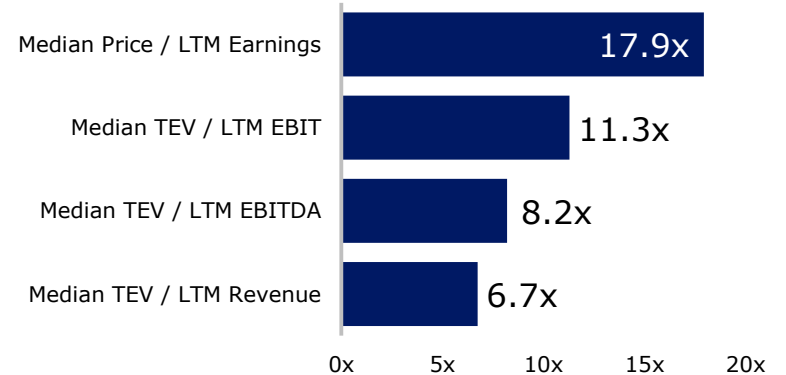
1 - year EBITDA % compared to EBITDA % average for last 3 years

Current EBITDA margin exceeds the average of the last 3 years EBITDA margin by this amount, a condition that may attract new entrants

Operating Metrics



Valuation



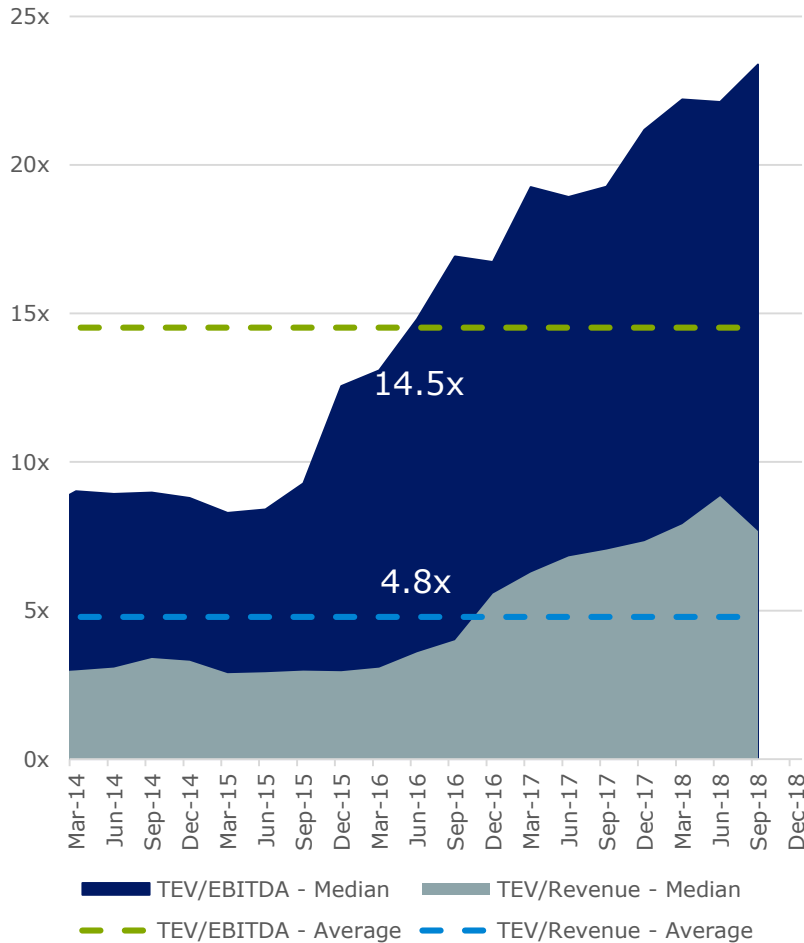
Public Basket



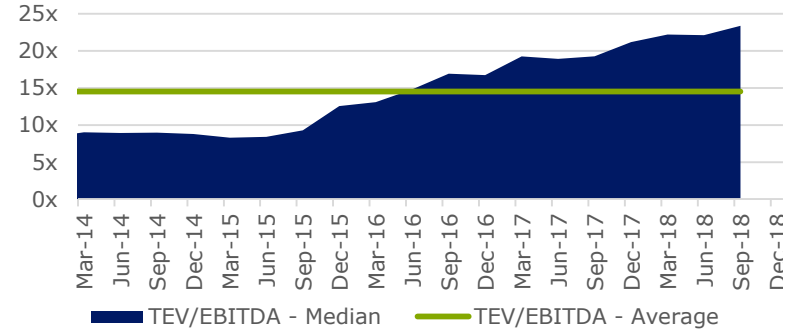
Company	TEV \$m	LTM Rev \$m	Rev Growth YoY	GP %	EBITDA %	TEV / Rev X	TEV / EBITDA X	# FTEs	Rev / FTE \$k
Veritone, Inc.	50	20	46%	84%	-277%	2.5	0.0	219	89
QuickLogic Corporation	80	12	2%	50%	-103%	6.4	0.0	89	139
BrainChip Holdings Limited	81	1	131%	100%	NA	126.7	0.0	26	25
Synopsys, Inc.	13,690	3,023	14%	79%	17%	4.5	26.6	11,686	259
Splunk Inc.	15,083	1,602	40%	80%	-16%	9.4	0.0	3,200	501
NVIDIA Corporation	98,123	12,422	38%	63%	39%	7.9	20.4	11,528	1,078
salesforce.com, inc.	111,216	12,484	25%	74%	9%	8.9	94.6	29,000	430
International Business Machines Corporation	146,597	80,373	3%	46%	21%	1.8	8.6	366,600	219
Intel Corporation	243,481	69,244	12%	63%	45%	3.5	7.8	102,700	674
Microsoft Corporation	812,584	114,906	16%	65%	41%	7.1	17.1	131,000	877
Average	144,098	29,409	33%	70%	-25%	17.9	17.5	65,605	429
Median	56,603	7,722	21%	70%	17%	6.7	8.2	11,607	345

share price as of 04Dec18

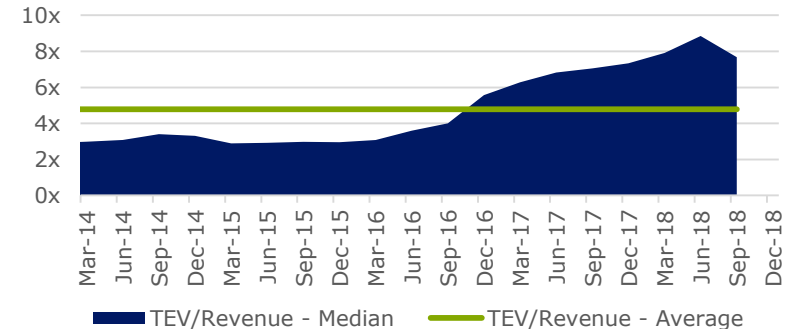
Public Basket Valuation Trends



Public EBITDA Multiples over Time



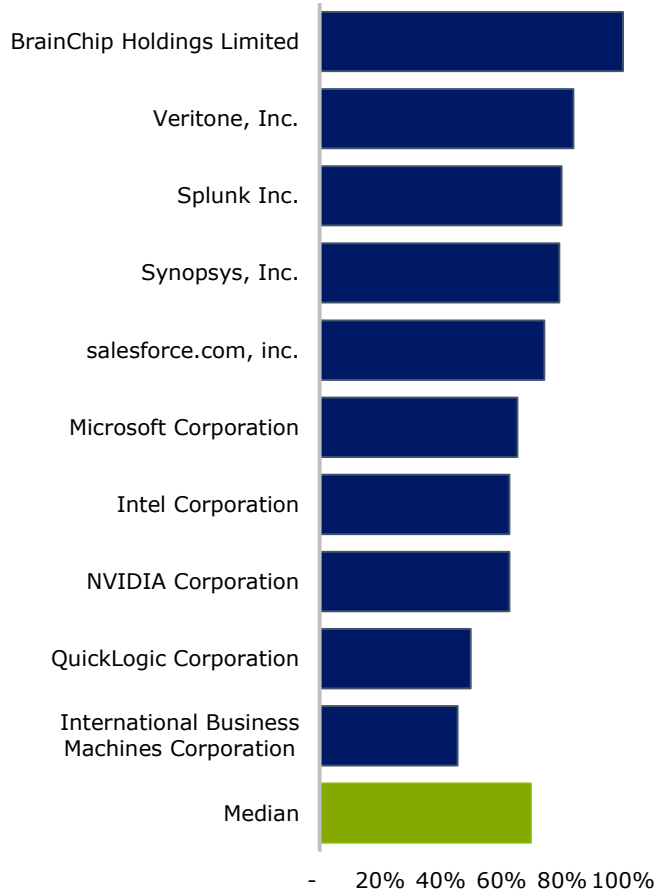
Public Revenue Multiples over Time



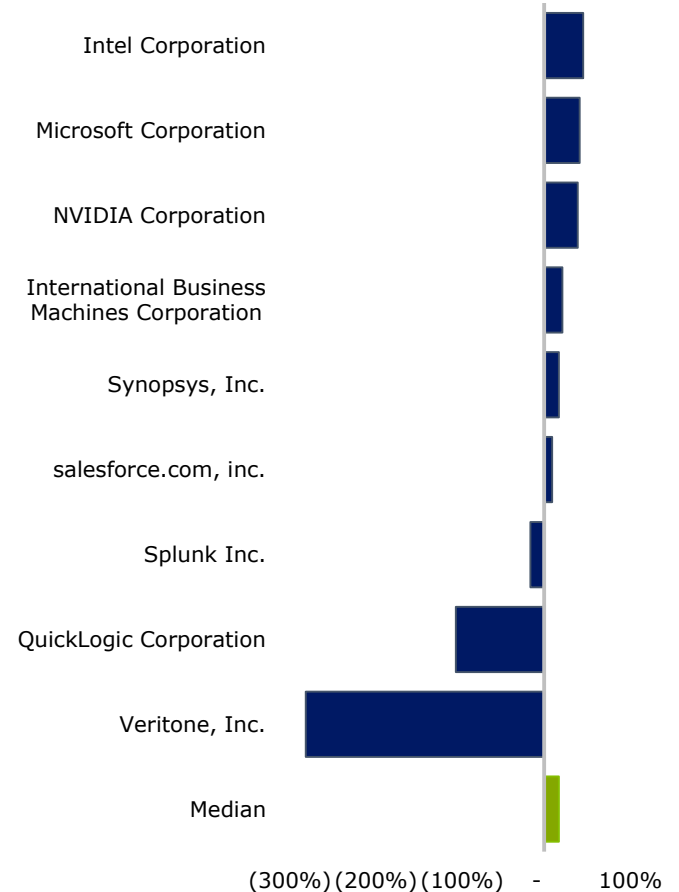
Operational Metrics



LTM Gross Profit Margin %



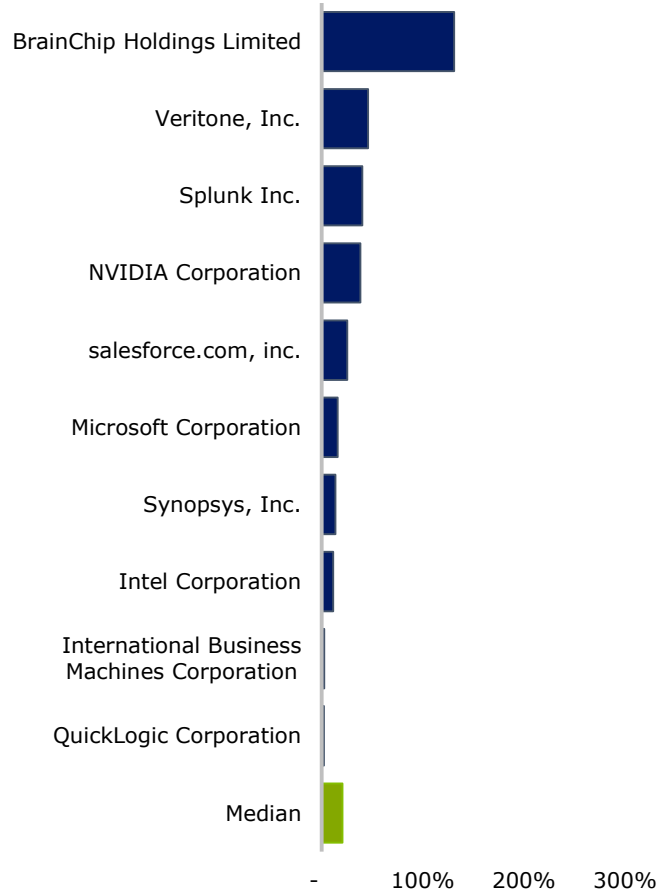
LTM EBITDA %



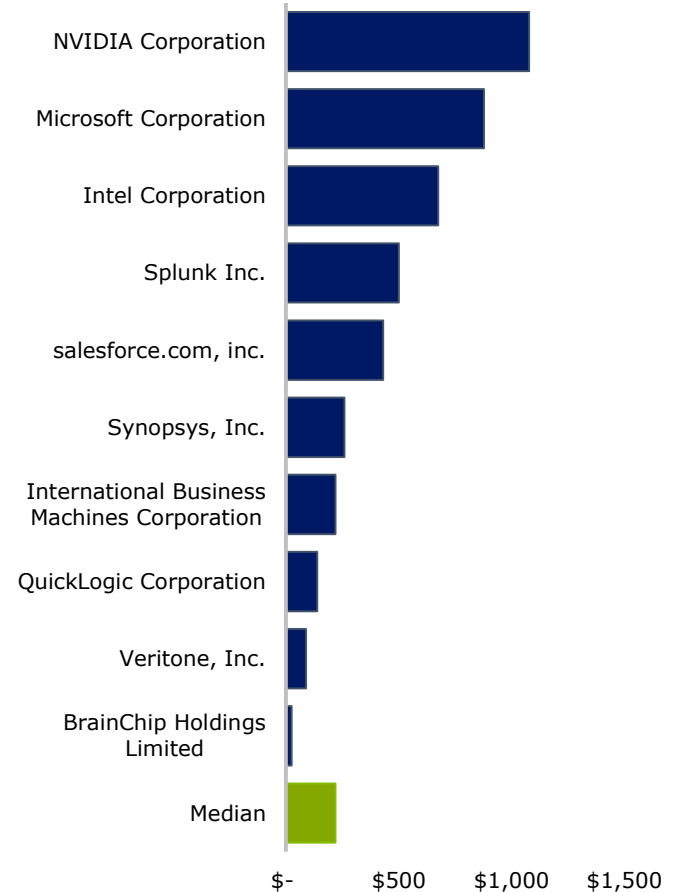
Operational Metrics



LTM Revenue Growth %



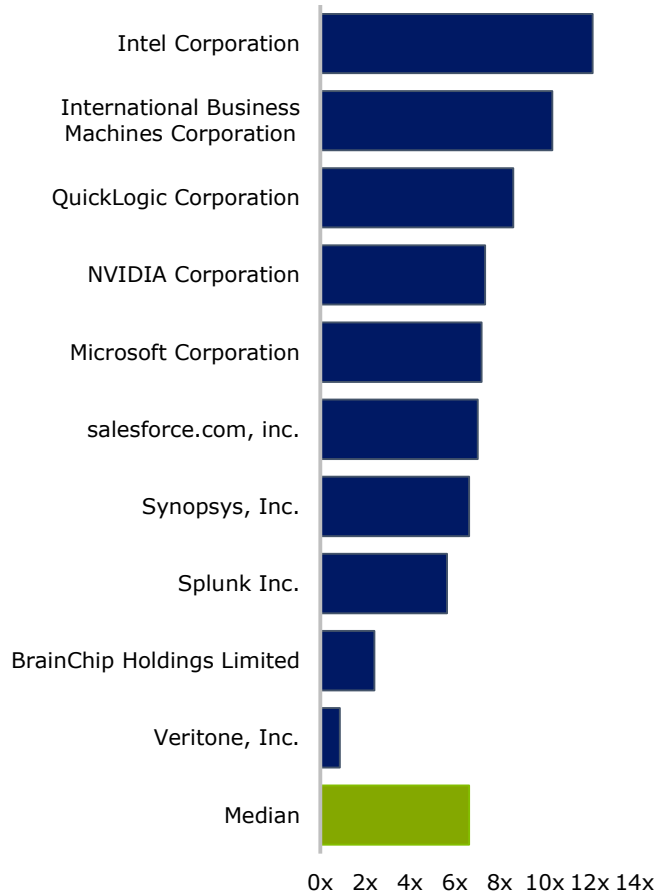
LTM Revenue per Full Time Employee x 000's



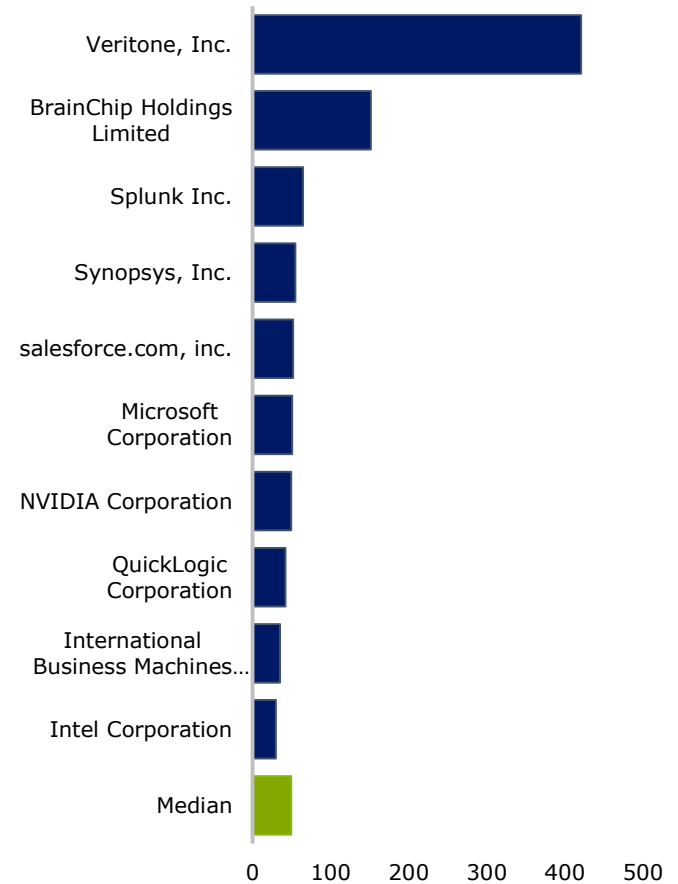
Operational Metrics



Accounts Receivable Turnover



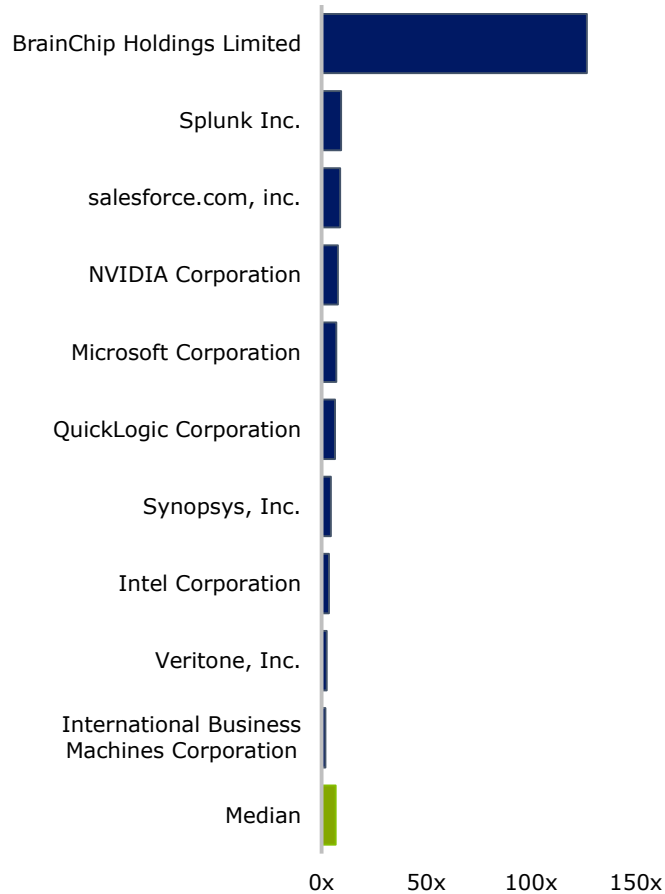
Average Days Sales Outstanding



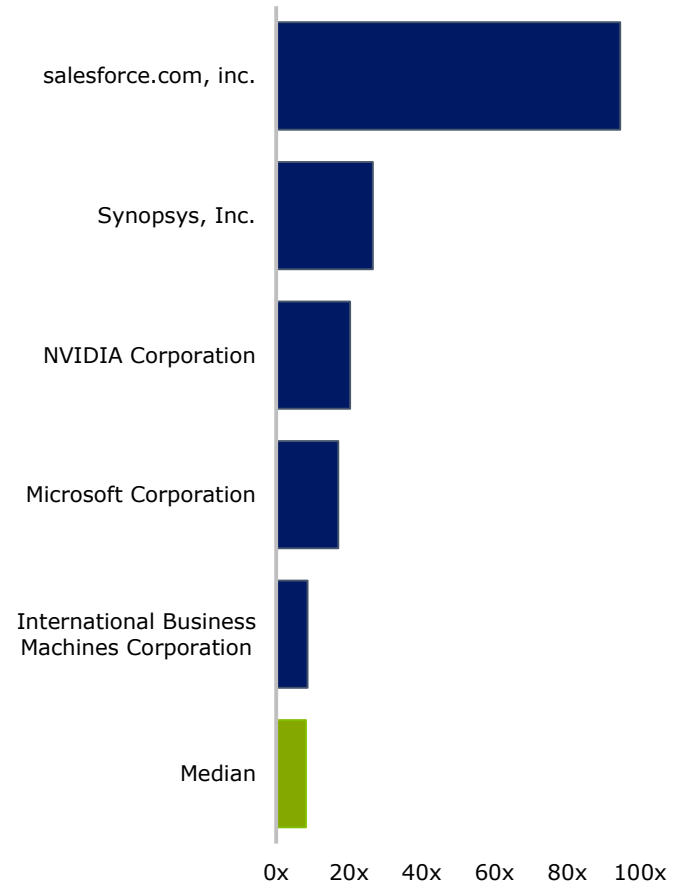
Valuation



TEV / LTM Revenue



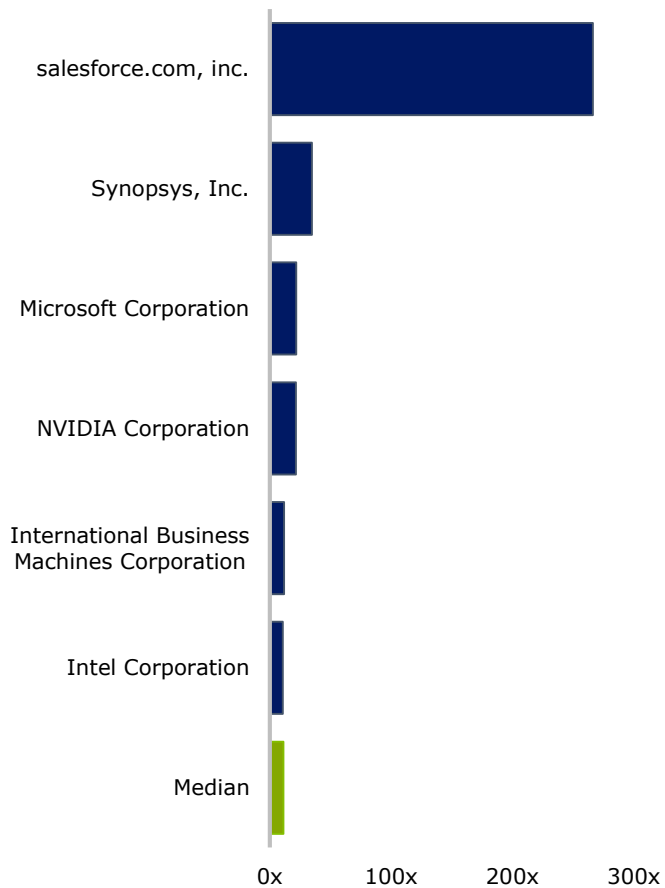
TEV / LTM EBITDA



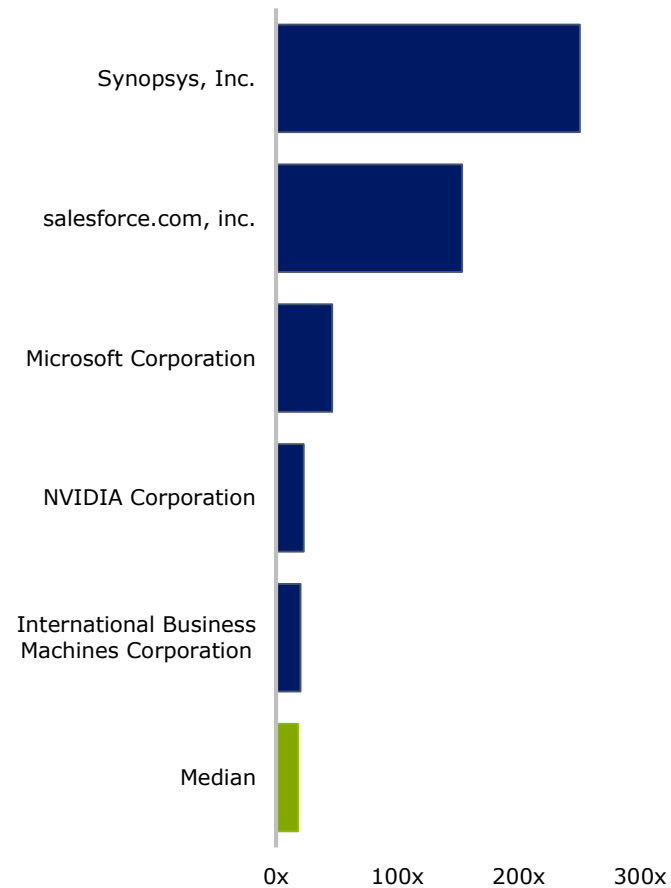
Valuation



TEV / LTM EBIT



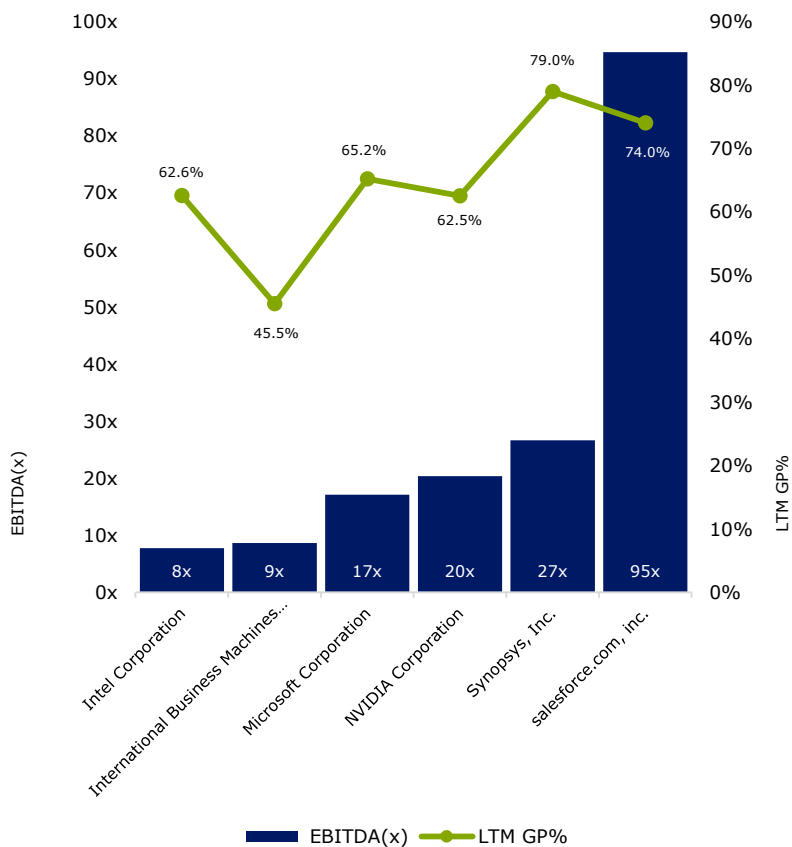
Price / LTM Earnings



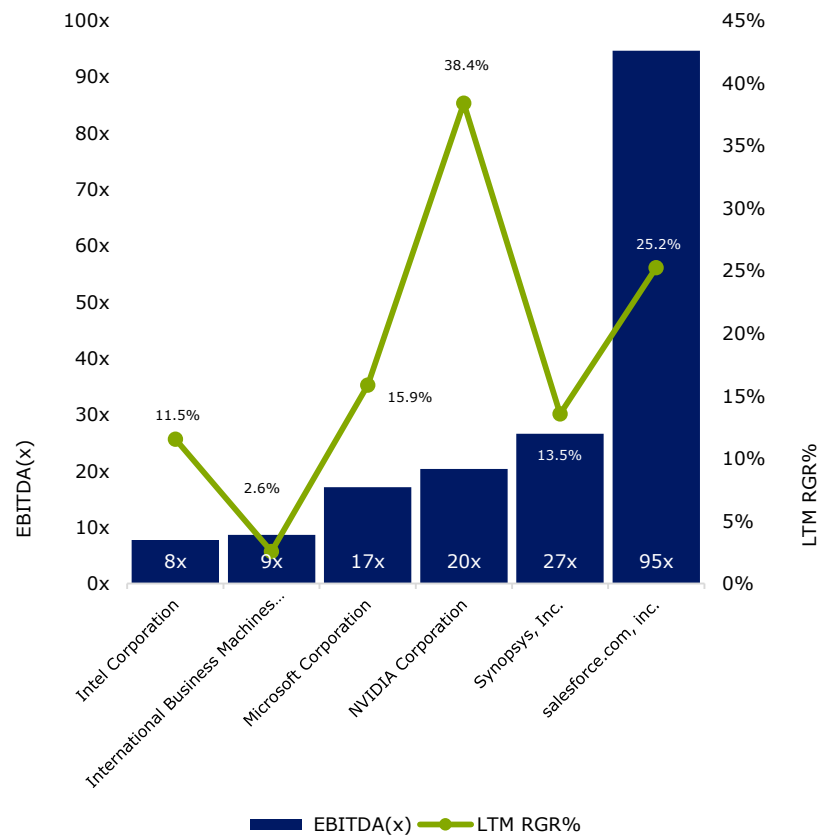
Valuation



Historical Valuation Multiples versus Gross Profit



Historical Valuation Multiples versus Revenue Growth Rate



Recent Transactions



Date	Target	Buyer / Investor	Total Transaction Value	Target Revenue	TEV / Revenue	TEV / EBITDA
19Nov18	Contextor SAS	SAP SE	-	-	-	-
22Oct18	DataFox Intelligence, Inc.	Oracle Corporation	-	-	-	-
12Jul18	Kogentix Inc.	Accenture plc	-	-	-	-
2Jul18	Blue Yonder GmbH	JDA Software, Inc.	-	-	-	-
20Jun18	Bonsai AI, Inc.	Microsoft Corporation	-	-	-	-
4Jun18	HeavyWater Solutions, Inc.	Black Knight, Inc.	-	-	-	-
4May18	ServiceNow, Inc.	-	-	2,093.48	-	-
1May18	Accompani, Inc.	Cisco Systems, Inc.	-	-	-	-
27Mar18	Asimmetric Inc.	HPE Aruba	-	-	-	-
30Jan18	Intelligens Ltda.	Conversica, Inc.	-	-	-	-
5Jan18	Niddel Corp.	Verizon Communications Inc.	-	-	-	-
19Dec17	Next IT Corporation and Next IT Innovation Labs, LLC	Verint Systems Inc.	51.00	-	-	-
28Nov17	Fluenty Inc.	Samsung Electronics Co., Ltd.	-	-	-	-
27Oct17	Princeton Lightwave, Inc.	Argo AI, LLC	-	-	-	-
16Aug17	Scyfer B.V.	Qualcomm Technologies, Inc.	-	-	-	-
8Jul17	Game Sparks Ltd	Amazon.com, Inc.	12.88	-	-	-
4Jul17	KITT.AI	Baidu, Inc.	-	-	-	-
11May17	MindMeld, Inc.	Cisco Systems, Inc.	125.00	-	-	-
13Apr17	Skytree, Inc.	Infosys Limited	-	-	-	-
14Mar17	Meerchant Inc.	ShopKeep.com Inc.	-	-	-	-
12Mar17	Mobileye N.V.	Intel Corporation	15,426.38	358.16	42.0x	108.1x
15Feb17	Do, Inc.	Amazon Web Services, Inc.	-	-	-	-
20Feb17	RealFace	Apple Inc.	-	-	-	-
23Jan17	Meta	Chan Zuckerberg Initiative	-	-	-	-
18Jan17	Intelligentsia.ai	Quartz Media LLC	-	-	-	-
13Jan17	Maluuba Inc	Microsoft Corporation	-	-	-	-
5Dec16	Geometric Intelligence Inc.	Uber Technologies, Inc.	-	-	-	-
6Oct16	Viv Labs, Inc.	Samsung Research America, Inc.	211.55	-	-	-
31May16	Tuplejump Software Private Limited	Apple Inc.	-	-	-	-
9Aug16	Nervana Systems	Intel Corporation	-	-	-	-
5Aug16	Turi Inc.	Apple Inc.	200.00	-	-	-
11Jul16	SalesPredict Ltd.	eBay Inc.	40.00	-	-	-
22Apr16	ReD Associates U.S., Inc.	Cognizant Technology Solutions Corporation	-	-	-	-
11Apr16	OpenSpan, Inc.	Pegasystems Inc.	52.30	-	-	-

Artificial Intelligence

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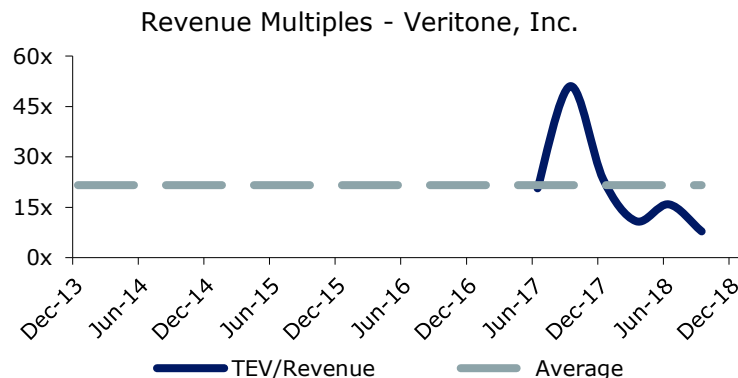
APPENDIX:
Public Basket
Constituents

Public Basket



Veritone, Inc.

Veritone, Inc. provides artificial intelligence (AI) and computing solutions in the United States and the United Kingdom. The company also provides media advertising agency services, including media planning and strategy, media buying and placement, campaign messaging, clearance verification and attribution, and custom analytics directly to advertisers through outbound sales networking, and client and partner referrals, as well as indirectly through advertising agencies or marketing consultants. It serves media owners and broadcasters; legal and compliance markets, including consulting firms, managed services providers, large law firms and corporate legal departments, financial services, and healthcare and other companies; state, local, federal, and international law enforcement agencies, intelligence agencies, and other governmental agencies, as well as resellers and system integrators; and politics market, including political parties, elected officials and political campaigns, political action committees, and special interest groups. The company was formerly known as Veritone Delaware, Inc. and changed its name to Veritone, Inc. in July 2014. Veritone, Inc. was founded in 2014 and is headquartered in Costa Mesa, California.



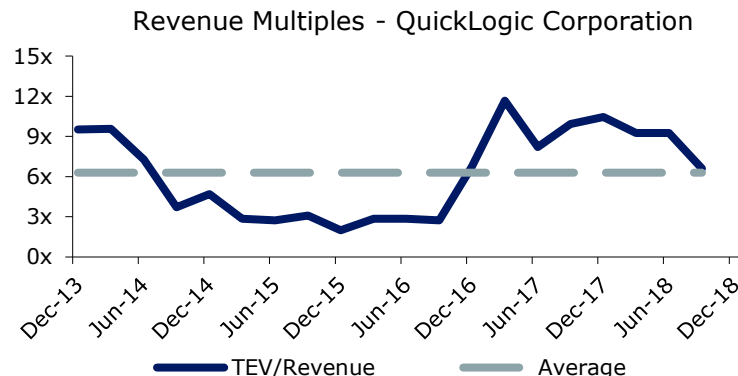
Date	Key Development Headline
9/9/18	Veritone, Inc. (NasdaqGM:VERI) acquired Machine Box Inc. for \$2.0 million, plus an earn-out of up to \$3.0 million.

Public Basket



QuickLogic Corporation

QuickLogic Corporation, a semiconductor company, designs, markets, and supports silicon solutions for smartphones, wearable and hearable devices, tablets, and the Internet-of-Things. The company also provides Field Programmable Gate Arrays (FPGAs), software drivers, and associated design software and programming hardware, as well as eFPGA intellectual property (IP), such as ArcticPro and ArcticPro 2. Its products include pASIC 3, QuickRAM, and QuickPCI. The company delivers its solutions through ultra-low power customer programmable System on Chip (SoC) semiconductor solutions, embedded software, and algorithm solutions for always-on voice and sensor processing, and enhanced visual experiences. It develops its solutions by incorporating various silicon platforms, such as EOS S3, ArcticLink III S2, ArcticLink III VX and BX, PolarPro 3, PolarPro II, PolarPro, and Eclipse II solution platforms, as well as packaging, IPs, custom logic, software drivers, and architecture consulting. In addition, it provides programming hardware and design software solutions; and licenses FPGA technology for use in other semiconductor companies SoCs. QuickLogic Corporation was founded in 1988 and is headquartered in Sunnyvale, California.



Date **Key Development Headline**

5/23/18 QuickLogic Seeks Acquisitions

Public Basket



BrainChip Holdings Limited

BrainChip Holdings Limited provides software and hardware solutions for artificial intelligence and machine learning applications in North America and Europe. It offers Spiking Neuron Adaptive Processor that has ability to learn autonomously, evolve, and associate information like the human brain. The company's technology is used in various applications, such as speech and speaker recognition, and extraction of speech and sound from a noisy background environment, as well as visual image recognition, robotics, and autonomous learning machines used in exploration and unmanned vehicles; and Internet of things and smartphone technology applications. BrainChip Holdings Limited was incorporated in 2011 and is based in Sydney, Australia.

Date	Key Development Headline
1/30/18	BrainChip and Gaming Partners International Sign Licensing, Development, and Revenue Sharing Agreement

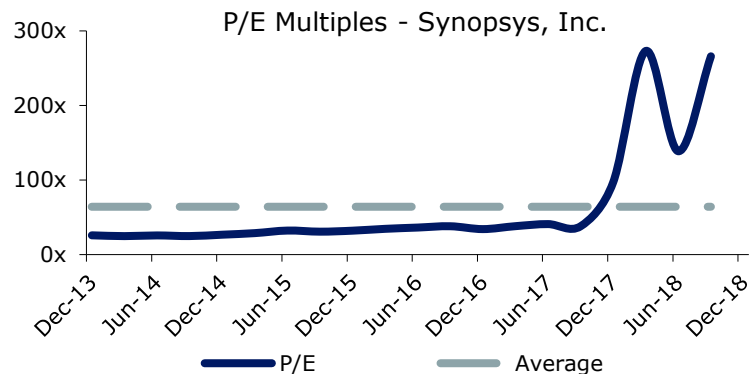
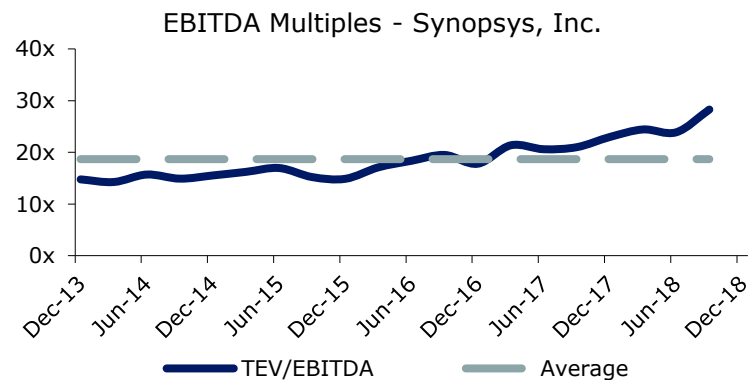
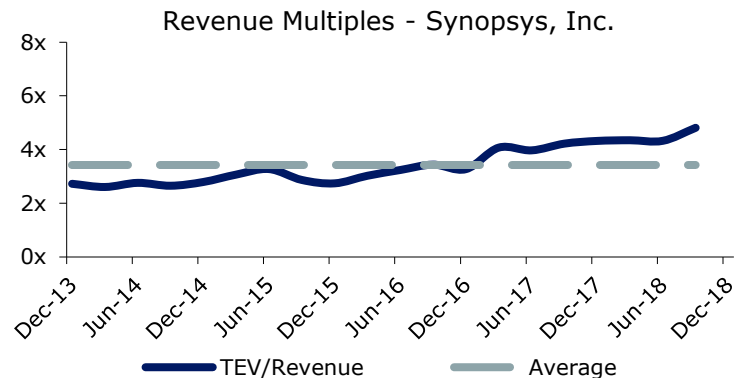
Public Basket



Synopsys, Inc.

Synopsys, Inc. provides electronic design automation (EDA) software products used to design and test integrated circuits (ICs). It offers Galaxy Design platform that offers IC design solutions; Verification Continuum Platform, which provides virtual prototyping, static and formal verification, simulation, emulation, field-programmable gate array (FPGA)-based prototyping, and debug solutions; and FPGA design products that are programmed to perform specific functions. Synopsys, Inc. was founded in 1986 and is headquartered in Mountain View, California.

Date	Key Development Headline
8/15/18	IBM and Synopsys, Inc. Accelerate 3-Nanometer Process Development with DTCO Innovations
7/3/18	Siemens and Synopsys Team Up to Expand and Extend EDA Collaboration
4/30/18	Synopsys and TSMC Collaborate to Deliver Designware Foundation IP for Ultra-Low Power TSMC 22-nm Processes
4/16/18	Synopsys, Inc. and Arm Extend Collaboration to Improve Power, Performance, and Time to Results for Arm's Latest IP and Synopsys Tools
3/20/18	Synopsys, Inc. (NasdaqGS:SNPS) acquired Silicon and Beyond Private Limited.

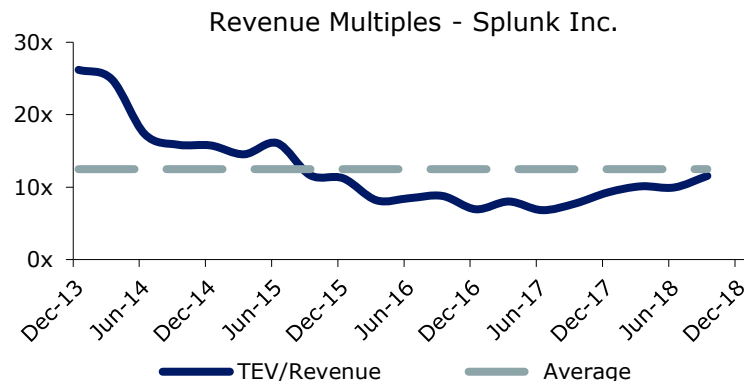


Public Basket



Splunk Inc.

Splunk Inc. provides software solutions that enable organizations to gain real-time operational intelligence in the United States and internationally. Its products enable users to collect, index, search, explore, monitor, correlate, and analyze data regardless of format or source. The company offers Splunk Enterprise, a machine data platform with collection, indexing, search, reporting, analysis, alerting, monitoring, and data management capabilities; and Splunk Cloud. The company also provides Splunk Light, which offers log search and analysis for small IT environments; and Splunk Analytics for Hadoop, a software for exploring, analyzing, and visualizing data stored in Hadoop and Amazon S3. Splunk Inc. was incorporated in 2003 and is headquartered in San Francisco, California.



Date	Key Development Headline
9/19/18	Splunk Seeks Acquisitions
7/31/18	Splunk Inc. (NasdaqGS:SPLK) acquired Krypton from True Ventures, Costanoa Venture Capital, Fuel Capital, Stanford University Venture Fund, and others.
6/24/18	Splunk Inc. (NasdaqGS:SPLK) completed the acquisition of VictorOps Inc. from Foundry Group, Costanoa Venture, Calibrate Ventures and others.
6/10/18	Splunk Inc. (NasdaqGS:SPLK) signed a definitive agreement to acquire VictorOps Inc. from Foundry Group, Costanoa Venture, Calibrate Ventures and others for approximately \$120 million.
4/8/18	Splunk Inc. (NasdaqGS:SPLK) completed the acquisition of Phantom Cyber Corporation.

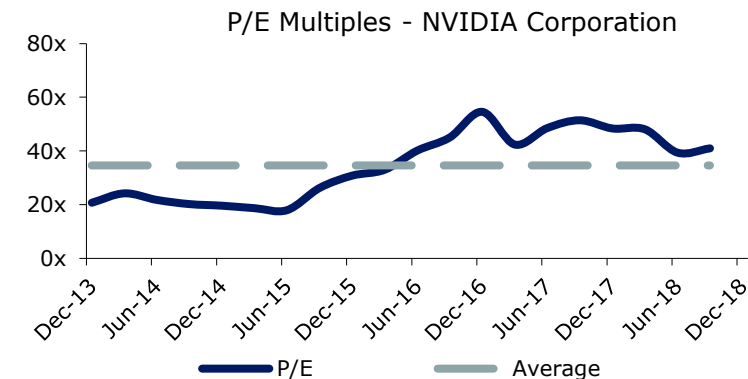
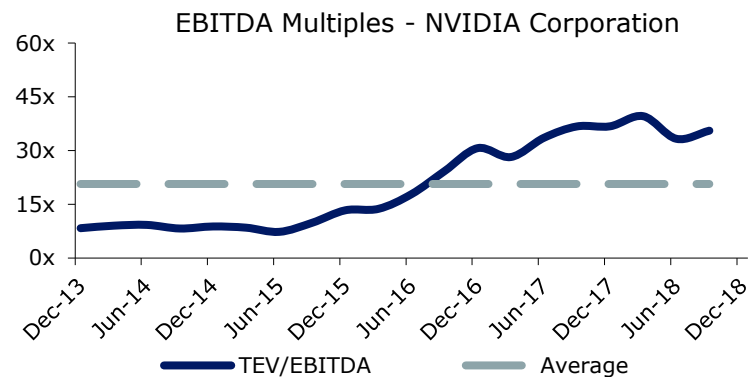
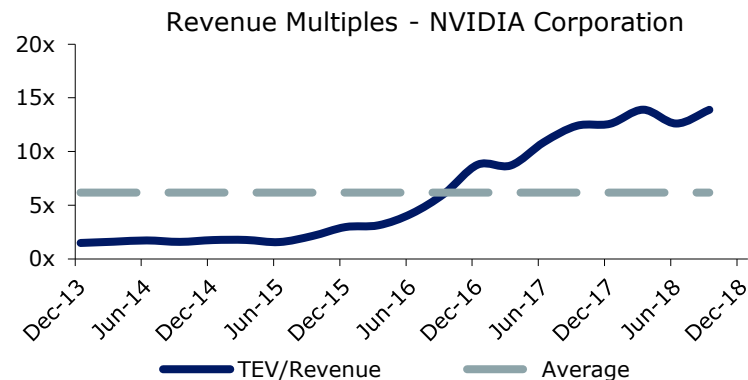
Public Basket



NVIDIA Corporation

NVIDIA Corporation operates as a visual computing company worldwide. It operates through two segments, GPU and Tegra Processor. The GPU segment offers processors, which include GeForce for PC gaming and mainstream PCs; GeForce NOW for cloud-based game-streaming service; Quadro for design professionals working in computer-aided design, video editing, special effects, and other creative applications; Tesla for AI utilizing deep learning, accelerated computing, and general purpose computing; GRID provides power of NVIDIA graphics through the cloud and datacenters; DGX for AI scientists, researchers, and developers; and cryptocurrency-specific graphics processing units. NVIDIA Corporation was founded in 1993 and is headquartered in Santa Clara, California.

Date	Key Development Headline
11/21/18	XPENG Motors Signs Strategic Partnership Agreement with Nvidia, and Desay SV
3/25/18	Blackberry and Jaguar Land Rover Sign Collaborative Supply Agreement
2/5/18	Continental and NVIDIA Partner to Enable Worldwide Production of Artificial Intelligence for Self-Driving Cars
1/8/18	NVIDIA Corporation and Aurora Collaborate to Build Next-Generation Autonomous Vehicle Compute Platform
1/8/18	NVIDIA, ZF and Baidu to Launch First AI Autonomous Vehicle Computer for China



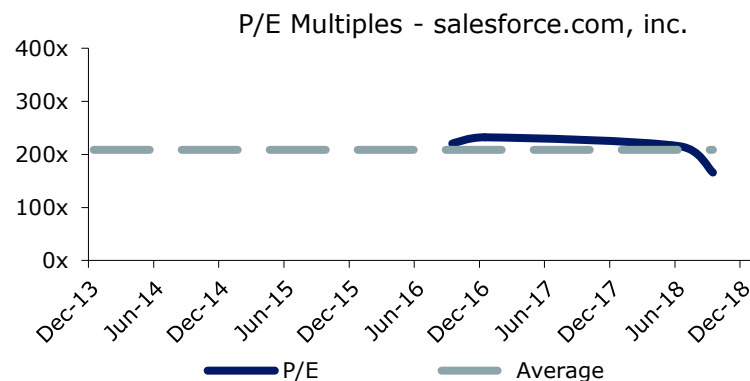
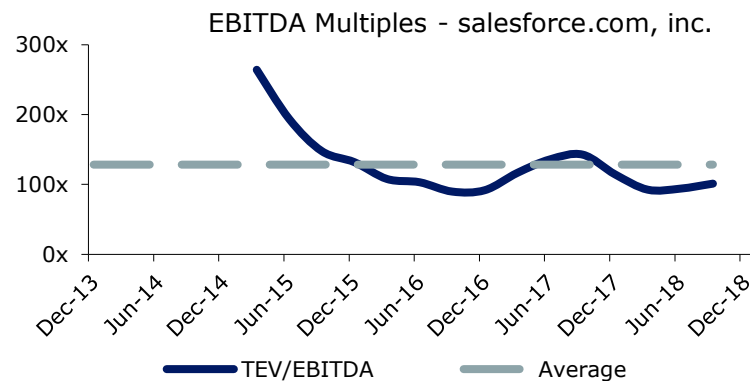
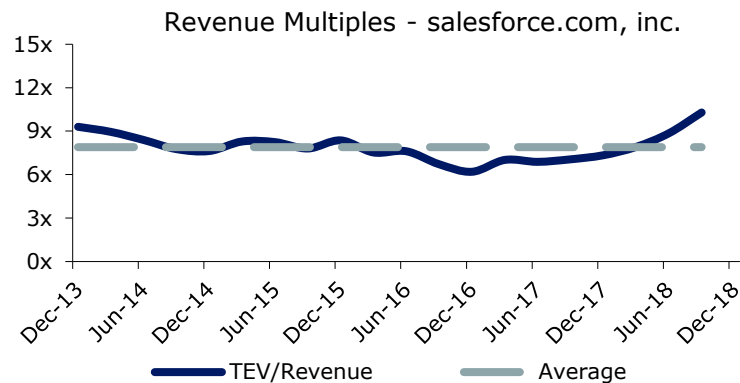
Public Basket



salesforce.com, inc.

salesforce.com, inc. develops enterprise cloud computing solutions with a focus on customer relationship management. The company offers Sales Cloud to store data, monitor leads and progress, forecast opportunities, and gain insights through analytics and relationship intelligence, as well as deliver quotes, contracts, and invoices. It also provides Service Cloud, which enables companies to deliver personalized customer service and support, as well as a field service solution that enables companies to connect agents, dispatchers, and mobile employees through a centralized platform, which helps to schedule and dispatch work, and track and manage jobs in real-time. The company was founded in 1999 and is headquartered in San Francisco, California.

Date	Key Development Headline
10/30/18	Vonage Holdings Corp. (NYSE:VG) completed the acquisition of NewVoiceMedia Limited from a consortium of sellers.
10/8/18	salesforce.com, inc. (NYSE:CRM) completed the acquisition of Rebel.
10/4/18	salesforce.com, inc. (NYSE:CRM) entered into a definitive agreement to acquire Rebel.
9/25/18	Salesforce and Amazon Web Services, Inc. Expand Global Strategic Alliance to Accelerate Enterprises' Digital Transformations
9/24/18	Apple and Salesforce Announce Strategic Partnership



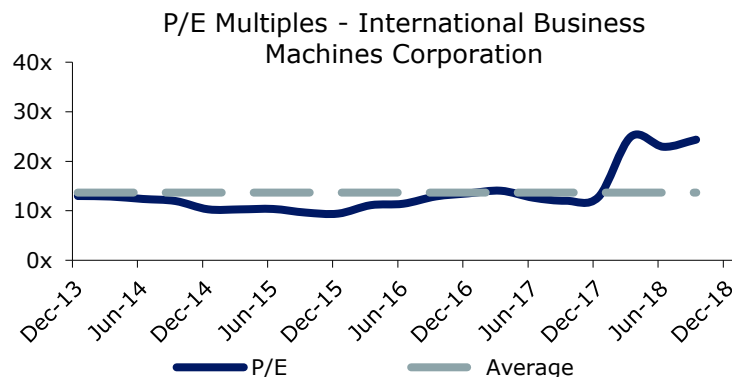
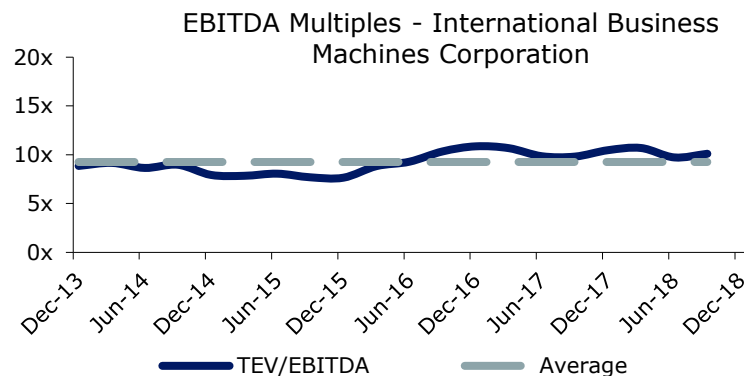
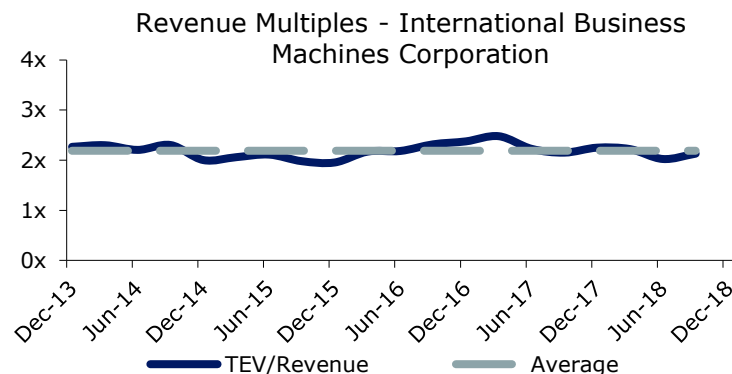
Public Basket



International Business Machines Corporation

International Business Machines Corporation operates as an integrated technology and services company worldwide. Its Cognitive Solutions segment offers Watson, a cognitive computing platform that interacts in natural language, processes big data, and learns from interactions with people and computers. This segment also offers data and analytics solutions, including analytics and data management platforms, cloud data services, enterprise social software, talent management solutions, and solutions tailored by industry; and transaction processing software that runs mission-critical systems in banking, airlines, and retail industries. International Business Machines Corporation was founded in 1911 and is headquartered in Armonk, New York.

Date	Key Development Headline
11/26/18	IBM Partners with IVADO to Combine Research and Industry Expertise in Artificial Intelligence
11/13/18	Seagate Technology plc and IBM Work Together to Help Reduce Global Hard Drive Counterfeiting with Blockchain Technology
11/8/18	TruSTAR Technology, LLC Announces Partnership with IBM and Rackspace for the Development of Cloud Fraud Exchange
11/5/18	Kronos and IBM Watson Announces Collaboration to Leverage Ai for the Hourly Workforce
10/29/18	International Business Machines Corporation, Red Hat, Inc. - M&A Call



Public Basket

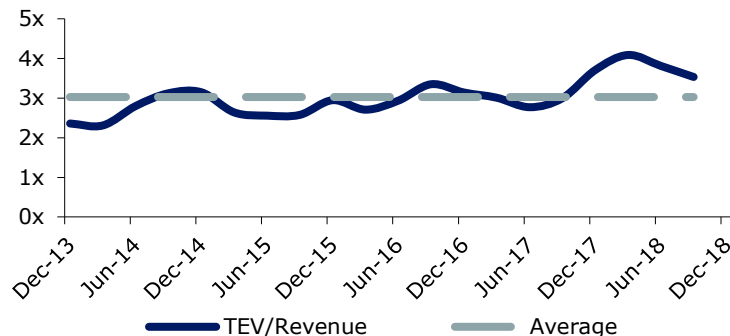


Intel Corporation

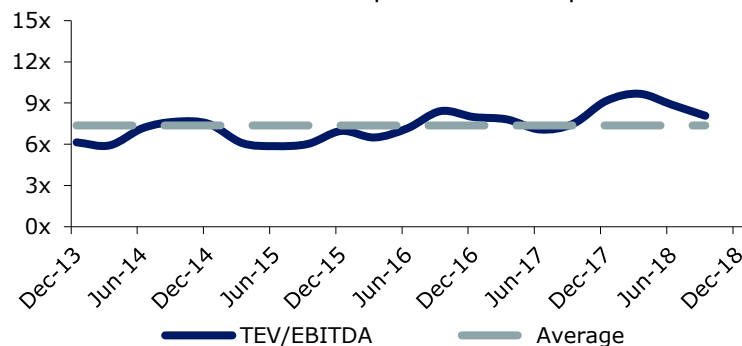
Intel Corporation designs, manufactures, and sells computer, networking, data storage, and communication platforms worldwide. The company operates through Client Computing Group, Data Center Group, Internet of Things Group, Non-Volatile Memory Solutions Group, Programmable Solutions Group, and All Other segments. Its platforms are used in notebooks, desktops, and wireless and wired connectivity products; enterprise, cloud, and communication infrastructure market segments; and retail, automotive, industrial, and various other embedded applications. The company was founded in 1968 and is based in Santa Clara, California.

Date	Key Development Headline
9/9/18	Intel Corporation (NasdaqGS:INTC) acquired Netspeed Systems, Inc.
7/11/18	Intel Corporation (NasdaqGS:INTC) agreed to acquire eASIC Corporation.
6/25/18	TPG Capital, L.P. completed the acquisition of Wind River Systems, Inc. from Intel Corporation (NasdaqGS:INTC).
6/23/18	DataDirect Networks, Inc. acquired Lustre File System business and related assets from Intel Corporation (NasdaqGS:INTC).
6/5/18	Tata Consultancy Services in Collaboration with Intel Corporation to Establish Center for Advanced Computing to Develop High Performance Computing Solutions
5/23/18	Institut Curie and Intel Initiate a Collaboration to Implement High-Performance Computing and Artificial Intelligence in Accelerating Genome Sequencing and Interpretation for Oncology

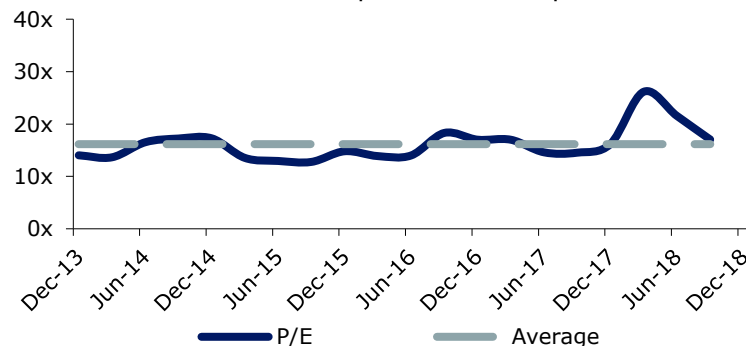
Revenue Multiples - Intel Corporation



EBITDA Multiples - Intel Corporation



P/E Multiples - Intel Corporation



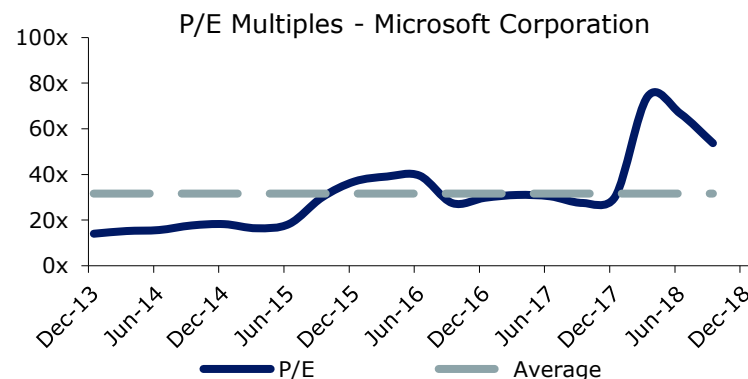
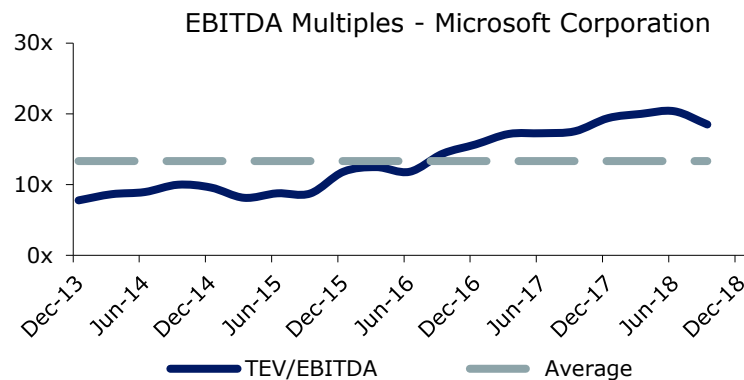
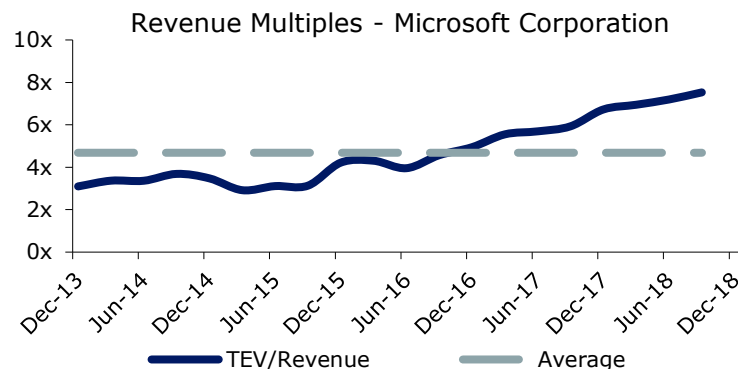
Public Basket



Microsoft Corporation

Microsoft Corporation develops, licenses, and supports software, services, devices, and solutions worldwide. Its company's Productivity and Business Processes segment offers Office 365 commercial products and services for businesses, such as Office, Exchange, SharePoint, Skype for Business, Microsoft Teams, and related Client Access Licenses (CALs); Office 365 consumer services, including Skype, Outlook.com, and OneDrive; LinkedIn online professional network; and Dynamics business solutions comprising financial management, enterprise resource planning, customer relationship management, supply chain management, and analytics applications for small and medium businesses, large organizations, and divisions of enterprises. The company was founded in 1975 and is headquartered in Redmond, Washington.

Date	Key Development Headline
12/3/18	Mastercard and Microsoft Join Forces to Advance Digital Identity Innovations
11/18/18	Microsoft Corporation (NasdaqGS:MSFT) acquired FSLogix, Inc.
11/13/18	Microsoft Corporation (NasdaqGS:MSFT) signed an agreement to acquire XOXCO, Inc.
11/13/18	Microsoft and Nielsen Announce Strategic Alliance
11/9/18	Microsoft Corporation (NasdaqGS:MSFT) acquired Obsidian Entertainment, Inc./inXile entertainment, Inc.
11/5/18	Walmart and Microsoft Announce Extension of Strategic Partnership



Contact Information

7MA provides Investment Banking & Advisory Services to the Business Services and Technology Industries globally. We advise on M&A and private capital transactions, and provide market assessments and benchmarking. As a close-knit team with a long history together and a laser focus on our target markets, we help our clients sell their companies, raise capital, grow through acquisitions, and evaluate new markets. Securities offered through 7M Securities LLC.

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