



Sectorwatch: Software Engineering

January 2019

Software Engineering

January 2019

- Sector Dashboard [4]
- Public Basket Performance [5]
- Operational Metrics [7]
- Valuation Comparison [10]
- Recent Deals [13]
- Appendix [15]

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.



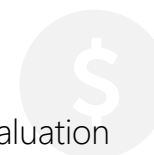
Public Basket Performance

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



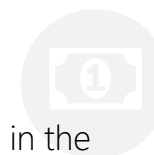
Valuation Comparison

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



Recent Deals

- The most recently announced deals in the sector



Dashboard



Revenue Growth

↓ -0.01

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

Current revenue growth rate is less than the average of the last 3 years, indicating that the market may be flattening or declining

Pricing / Gross Margin

↓ -1.16%

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

Current gross profit margin is less than the average of the last 3 years gross profit margins, indicating customer pricing power

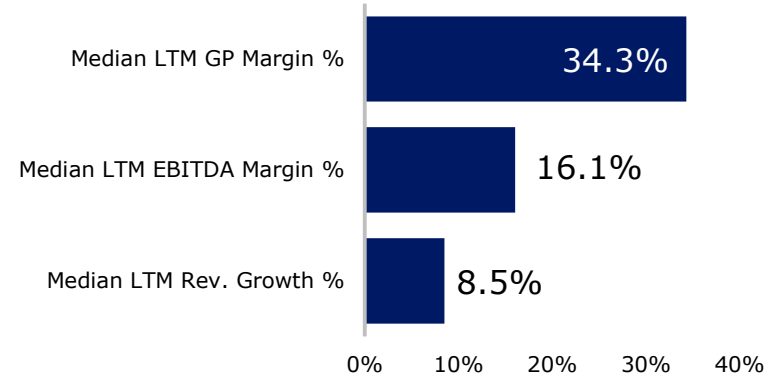
Profitability Momentum

↑ 1.0%

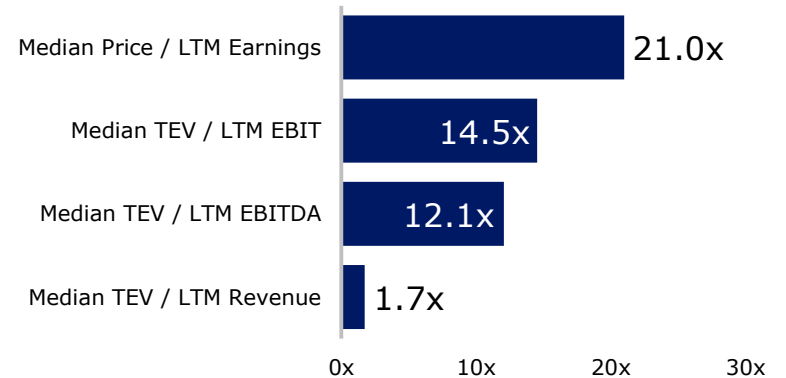
1 - year EBITDA % compared to EBITDA % average for last 3 years

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



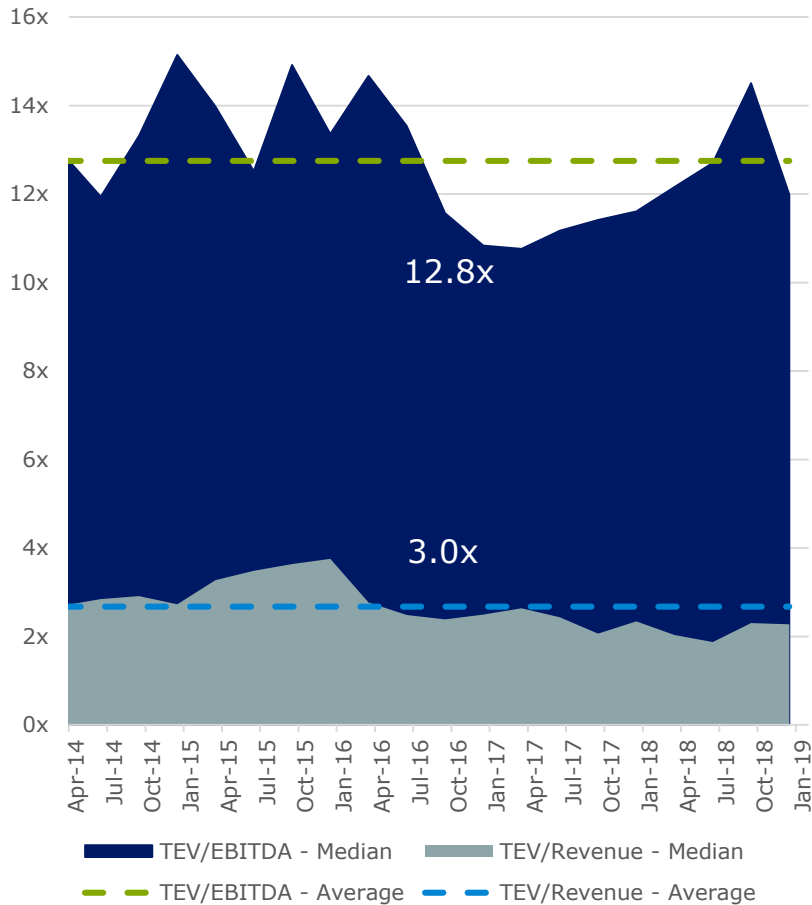
Public Basket



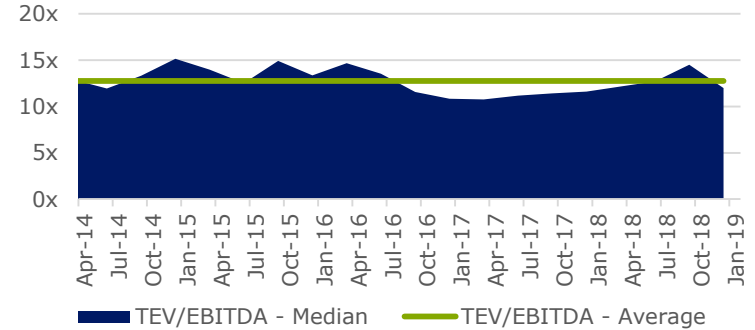
Company	TEV \$m	LTM Rev \$m	Rev Growth YoY	GP %	EBITDA %	TEV / Rev X	TEV / EBITDA X	# FTEs	Rev / FTE \$k
R Systems International Limited	60	91	12%	30%	7%	0.6	9.6	2,353	39
Persistent Systems Limited	492	443	9%	31%	16%	1.1	6.9	8,265	54
Luxoft Holding, Inc.	1,867	911	7%	37%		2.0	19.0	12,898	71
Globant S.A.	2,367	498	29%	38%	16%	4.8	29.2	6,753	74
EPAM Systems, Inc.	6,944	1,737	27%	35%	15%	4.0	26.5	25,962	67
Wipro Limited	18,895	8,239	5%	30%	18%	2.3	12.8	163,827	50
Capgemini SE	20,789	15,143	3%	26%	12%	1.4	11.3	199,698	76
Infosys Limited	41,070	11,545	8%	34%	26%	3.6	13.9	204,107	57
Tata Consultancy Services Limited	95,267	20,191	16%	44%	27%	4.8	17.7	394,998	51
Average	20,861	6,533	13%	34%	17%	2.7	16.3	113,207	60
Median	6,944	1,737	9%	34%	16%	2.3	13.9	25,962	57

share price as of 26Jan19

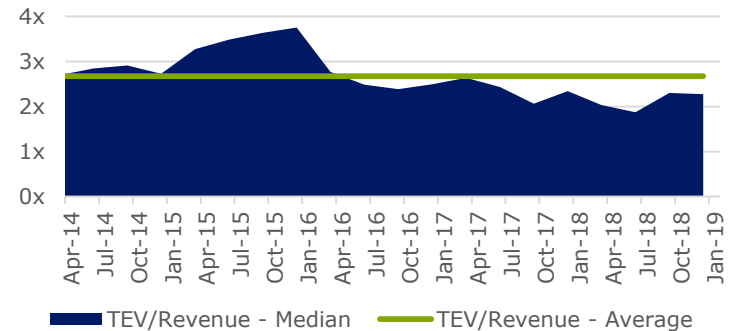
Public Basket Valuation Trends



Public EBITDA Multiples over Time



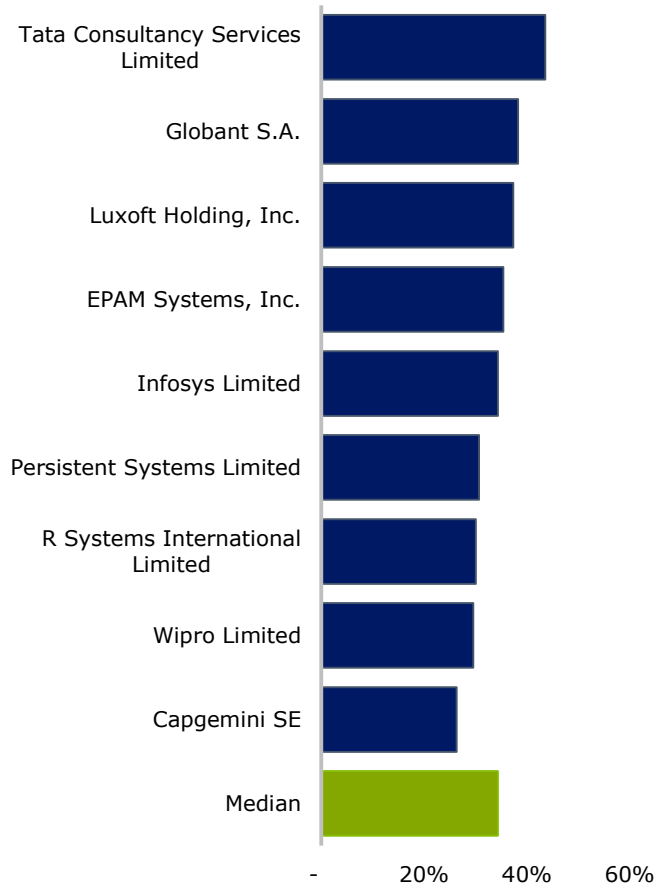
Public Revenue Multiples over Time



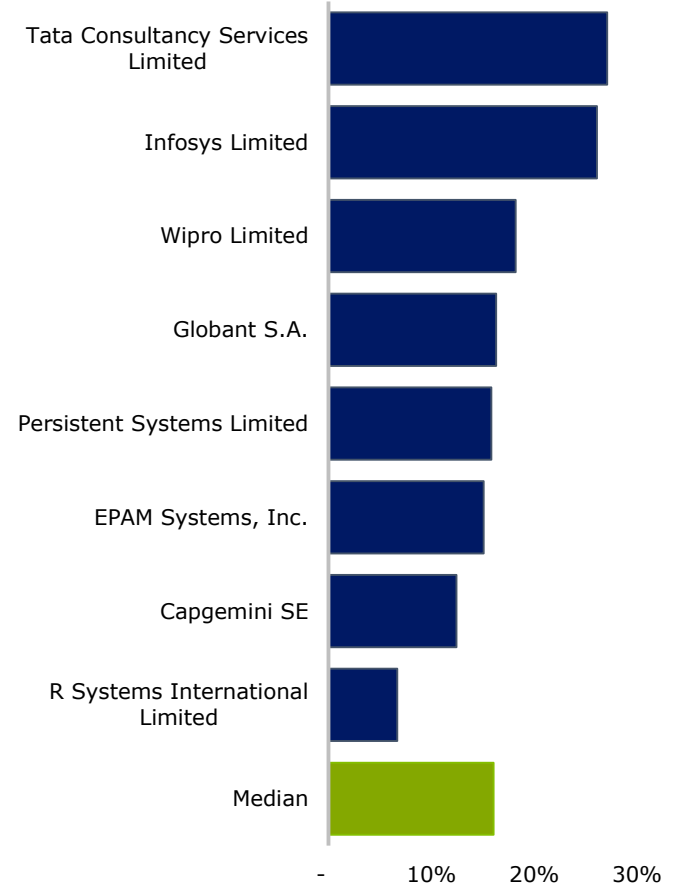
Operational Metrics



LTM Gross Profit Margin %



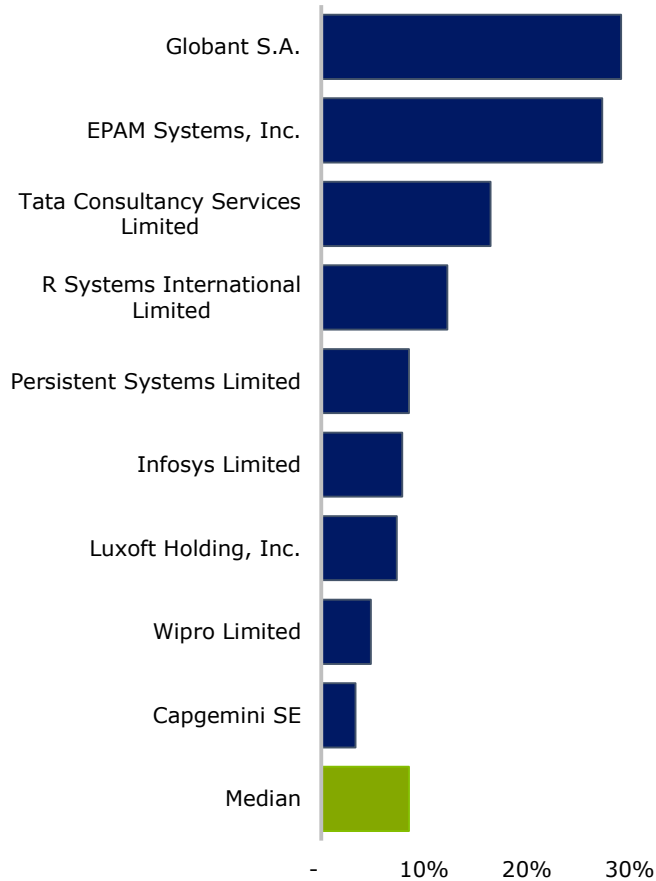
LTM EBITDA %



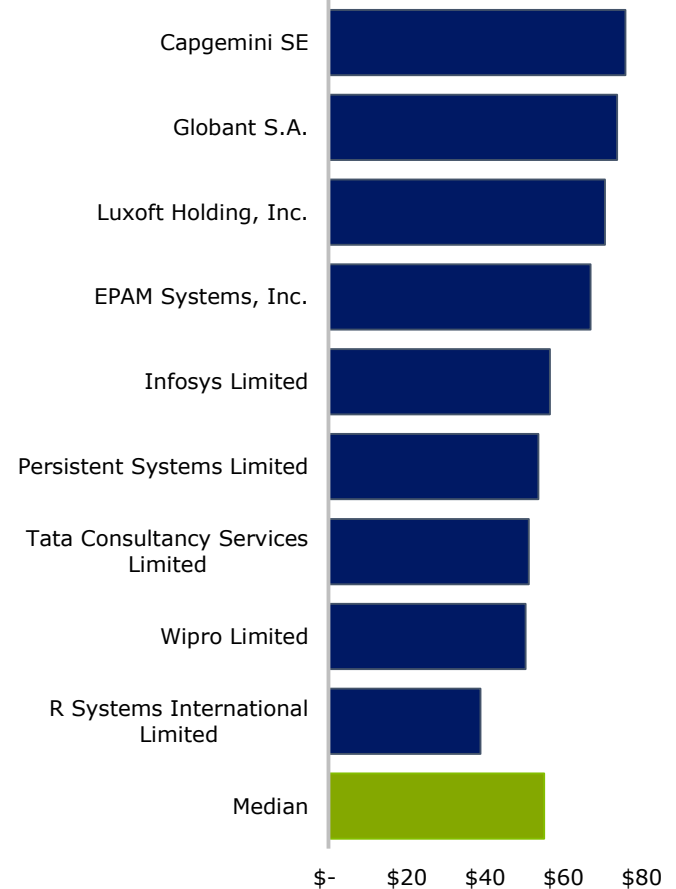
Operational Metrics



LTM Revenue Growth %



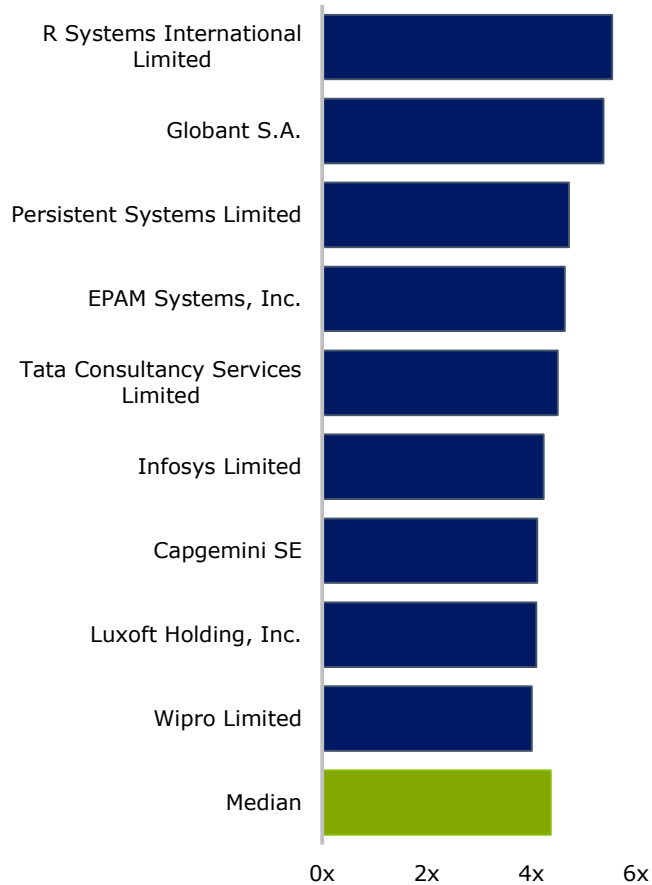
LTM Revenue per Full Time Employee x 000's



Operational Metrics



Accounts Receivable Turnover



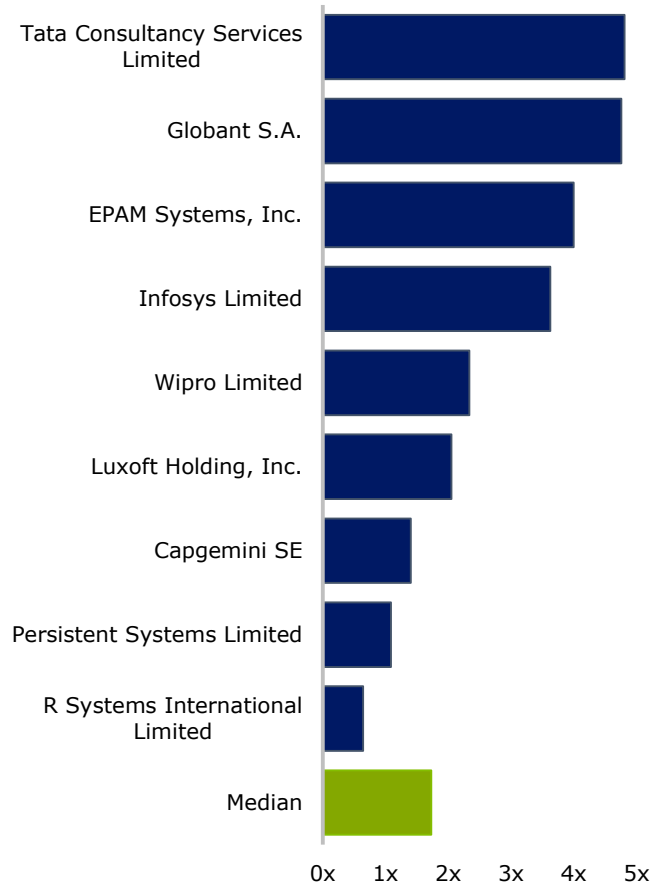
Average Days Sales Outstanding



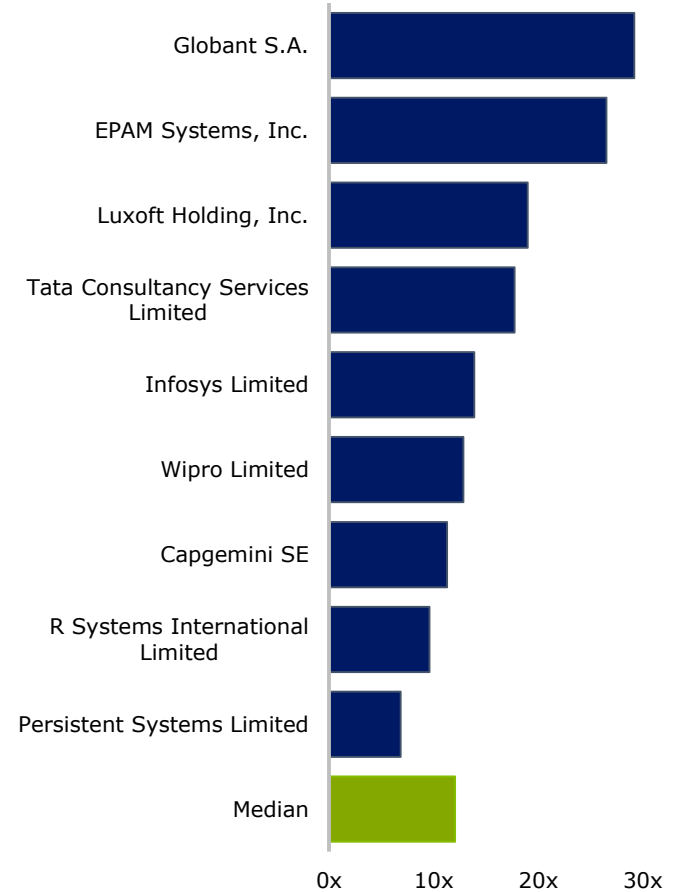
Valuation



TEV / LTM Revenue



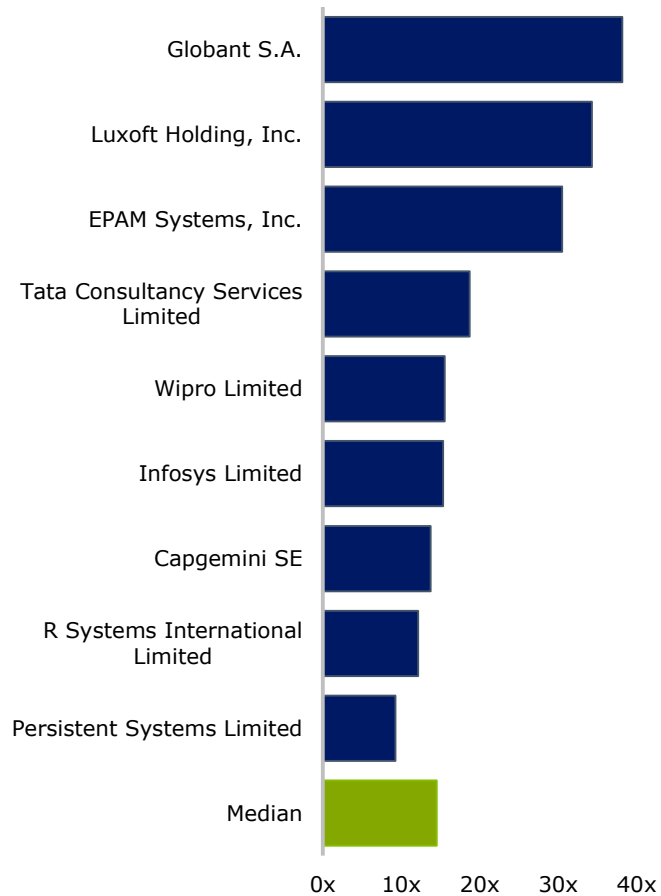
TEV / LTM EBITDA



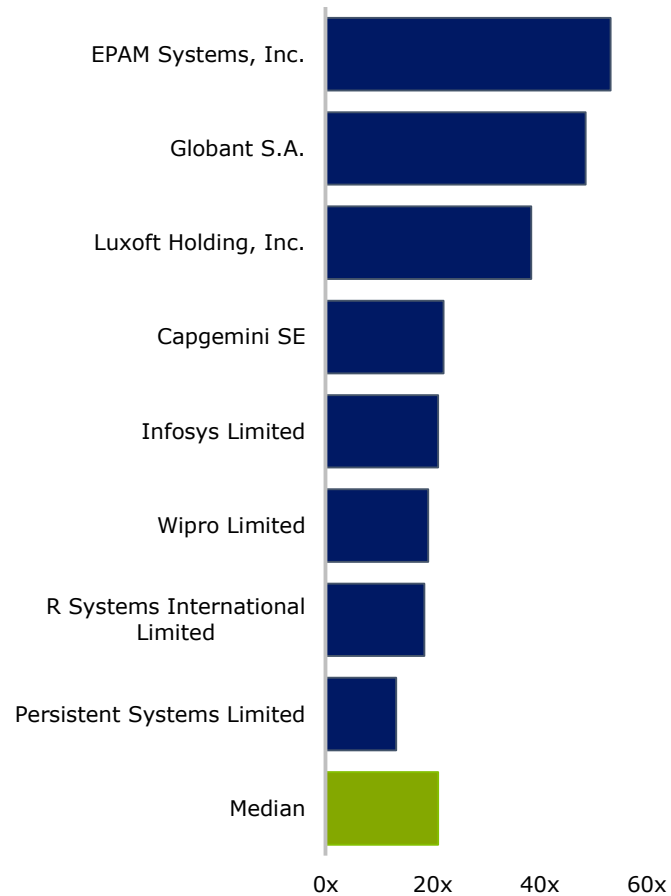
Valuation



TEV / LTM EBIT



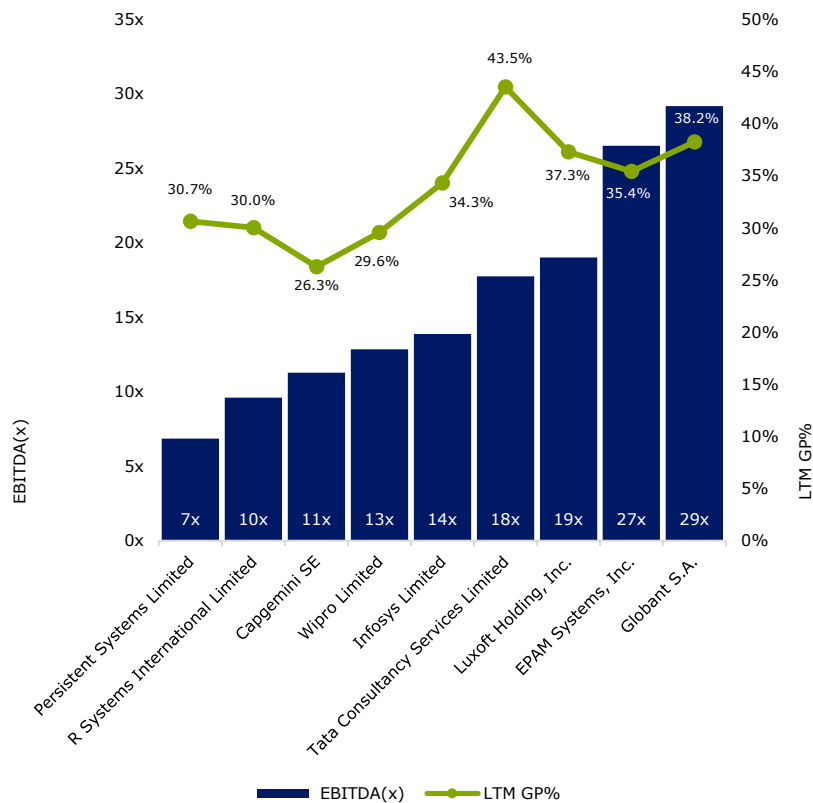
Price / LTM Earnings



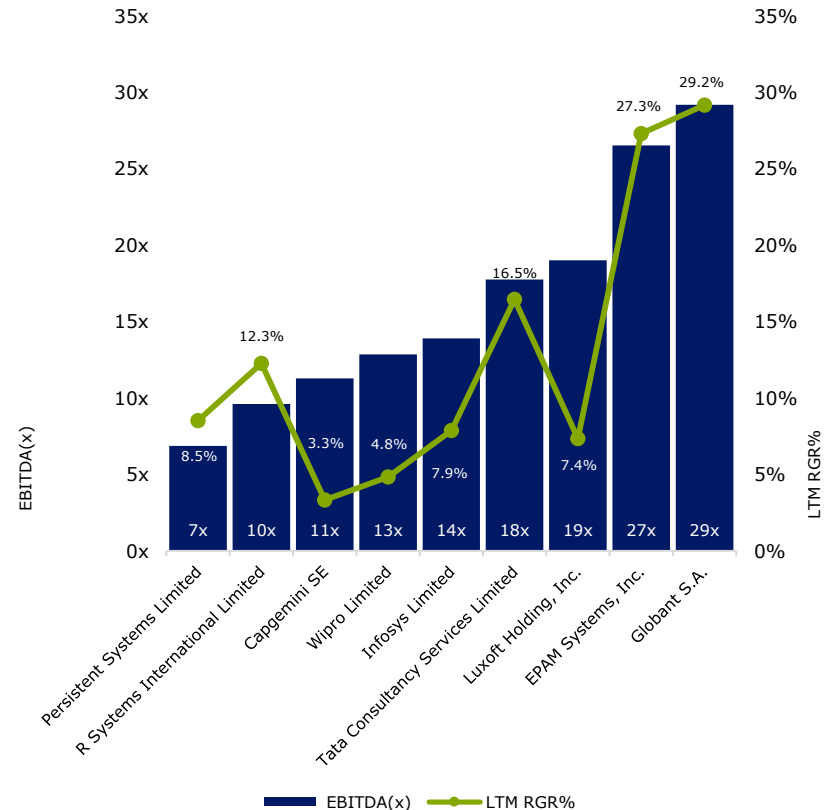
Valuation



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
6Jan19	Luxoft Holding, Inc.	DXC Technology Company	2,078.38	910.70	2.2x	20.1x
20Dec18	DevOps Research and Assessment LLC	Alphabet Inc.	-	-	-	-
11Dec18	4th Source, LLC	AN Global	-	-	-	-
1Nov18	Assembla, LLC	IDERA, Inc.	-	-	-	-
12Oct18	Nexii Labs Inc.	GSS Infotech, Inc.	1.36	1.80	0.8x	-
8Oct18	Perfecto Mobile Ltd.	Perforce Software Inc.	200.00	-	-	-
20Oct18	Dev9, LLC	Nortal AS	-	-	-	-
17Sep18	Kinex Inc.	Planned Systems International, Inc.	-	-	-	-
13Aug18	iQuest GmbH & Co KG	Allgeier SE	-	34.24	-	-
9Aug18	Pillar Technology Group LLC	Accenture plc	-	52.00	-	-
9Aug18	Mindtribe Product Engineering Inc.	Accenture plc	-	-	-	-
1Aug18	POSTIS, LLC	Fluence Automation, LLC	-	-	-	-
24Jul18	KWR Technologies Limited	Aprose Solutions Limited	-	-	-	-
11Jul18	CA, Inc.	Broadcom Inc.	21,776.02	4,148.00	4.4x	16.4x
28Jun18	Adelante S.r.l.	Wit S.p.A.	12.52	8.11	1.5x	12.0x
31May18	Altran-Beyondsoft (Beijing) Technologies Co., Ltd.	Altran China Limited	5.13	22.28	0.8x	-
24May18	QUALITEST UK 4 LIMITED	QualiTest Ltd.	4.81	-	-	-
21May18	GlobalLogic Inc.	Canada Pension Plan Investment Board	2,000.00	-	-	-
2Apr18	CATS CO.,LTD.	NTT DATA Corporation; NEXTY Electronics Corporation	-	-	-	-
20Mar18	Goyello Group B.V.	Aspire Systems (India) Pvt. Ltd.	-	-	-	-
12Mar18	eTouch Systems Corp.	Virtusa Corporation	132.08	86.96	1.3x	9.1x
18Jan18	Solekai Systems Corporation	Fairway Technologies, Inc.	-	-	-	-
16Jan18	Pillar Technology Group LLC	NewSpring Capital; NewSpring Mezzanine Capital, L.P.	-	-	-	-
29Dec17	Velocity Partners, LLC	Endava Limited (nka:Endava plc)	60.50	34.68	-	-
6Dec17	Well Placed Cactus Pty Ltd	Deloitte Digital Pty Ltd.	-	-	-	-
24Oct17	VMC Consulting, Inc.	Keywords International Limited	49.80	-	-	-
29Sep17	Telepathy	ServiceNow, Inc.	-	-	-	-
28Aug17	Blue Agility, LLC	cPrime Inc.	-	-	-	-

Software Engineering

January 2019

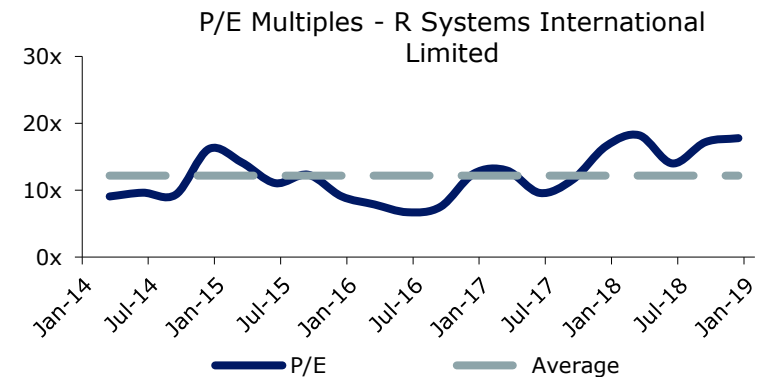
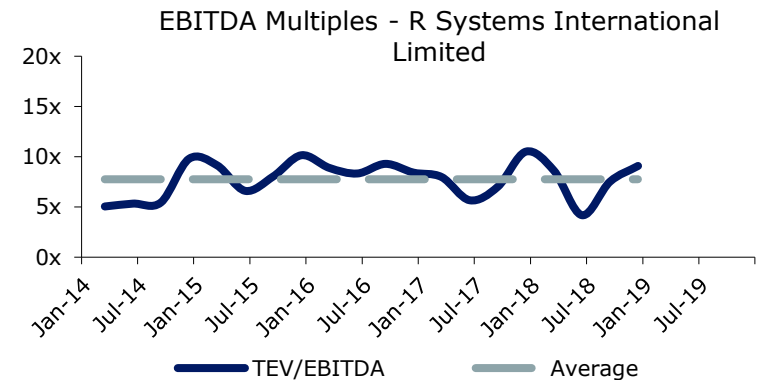
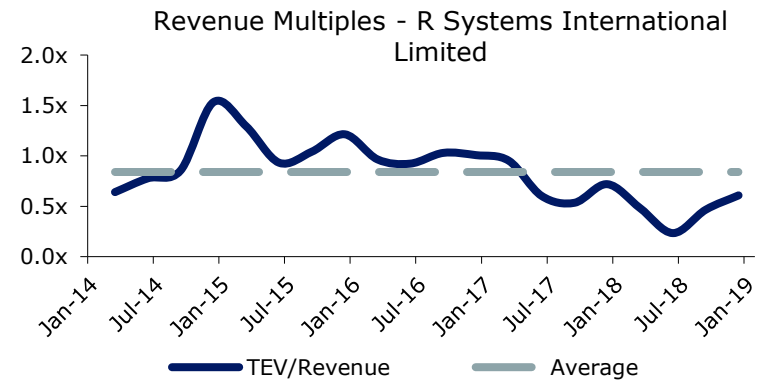
APPENDIX:
Public Basket
Constituents

Public Basket



R Systems International Limited

R Systems International Limited provides information technology (IT) solutions and business process outsourcing (BPO) services worldwide. The company offers Computaris Convergent Charging solution to converge real-time rating, charging, and billing; mobile broadband management solutions; Computaris mobile virtual network operator (MVNO) in a White Box solution for MVNOs business exigencies; and value added services, as well as product development and maintenance, system integration, technical support and managed, BPO, and testing services to the telecom and digital media industries. It also provides services in area of card less/NFC based transactions; mobile/tablet applications; product customization/ maintenance/ support; ATM management; third-party and customer relationship management integration; ATM on cloud; deposit automation; and passbook printing solutions to financial institutes and software companies. In addition, the company offers OPD-integrated product lifecycle management services, domain consultancy, enterprise application integration, independent testing, implementation, offshore product development, software re-engineering, requirement engineering and GAP analysis. The company was founded in 1993 and is headquartered in Noida, India.



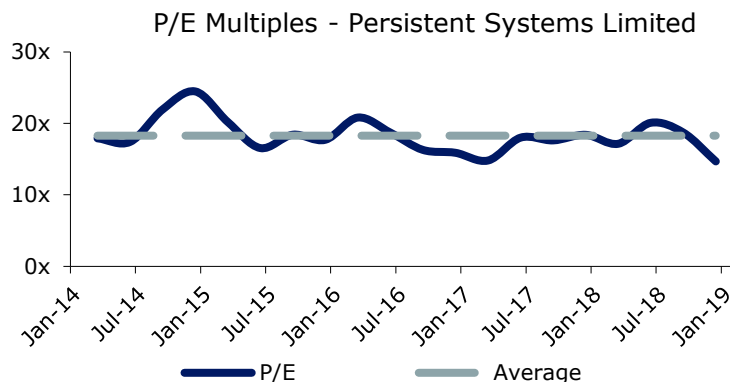
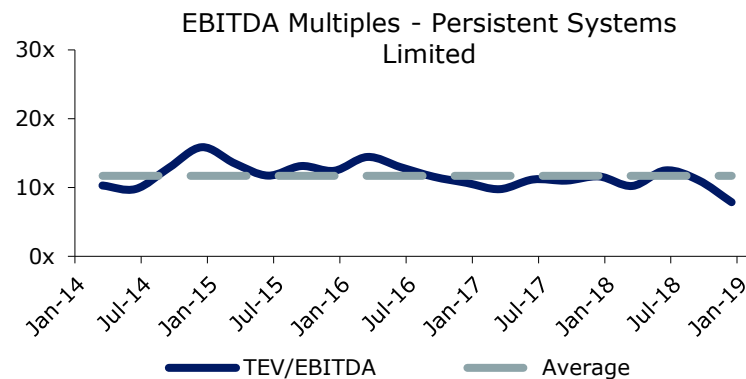
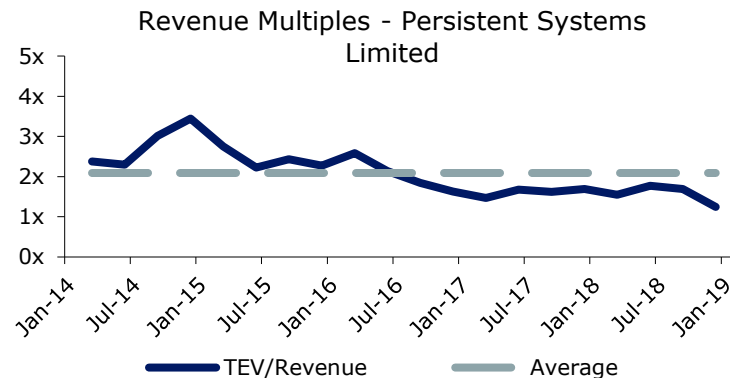
Public Basket



Persistent Systems Limited

Persistent Systems Limited provides computer programming, consultancy, and related services. It operates in four segments: Services, Digital, Alliance, and Accelerite. The company engages in providing software development, professional, and marketing services; technology solutions in the life sciences, telecom, product lifecycle management, and digital practice domains; and the delivery and maintenance of IT software and services. It is also involved in the business of a telecommunication API gateway for defining, exposing, controlling, and monetizing telecom services to partners and application developers; and operating an Internet of Things service creation platform that allows enterprises to add a service layer to the basic APIs exposed to by connected devices, and to expose and monetize these APIs. It serves the banking, financial services, insurance, healthcare and life sciences, and software and technology industries. Persistent Systems Limited was incorporated in 1990 and is based in Pune, India.

Date	Key Development Headline
10/22/18	Outsystems, Inc. Recognizes Persistent Systems as Global Partner
10/17/18	Partners Healthcare Launches New Center of Excellence in Collaboration with Persistent Systems Limited, Partners Healthcare Pivot Labs
8/13/18	Persistent Systems Seeks Acquisitions



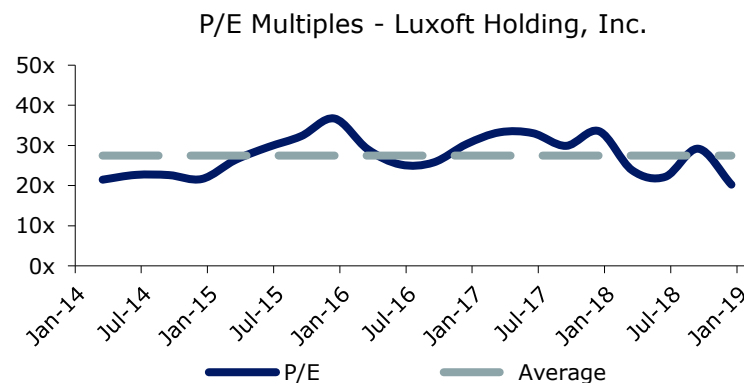
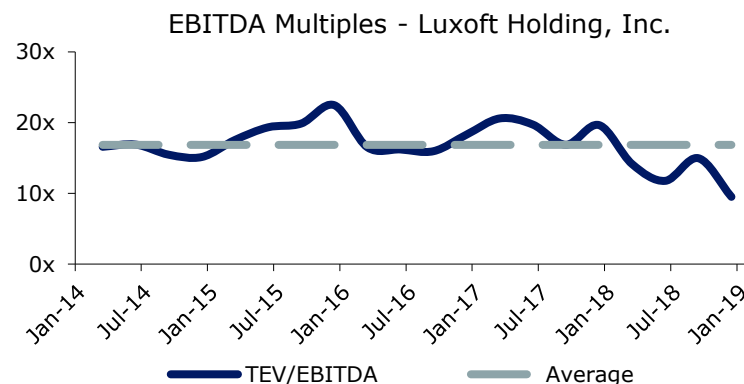
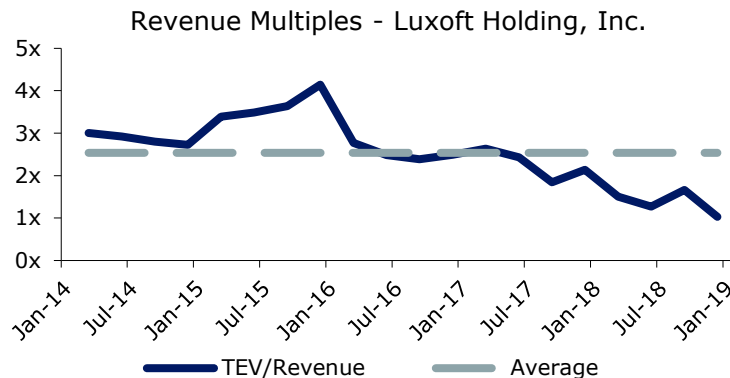
Public Basket



Luxoft Holding, Inc.

Luxoft Holding, Inc., together with its subsidiaries, provides software development services and IT solutions to multinational corporations primarily in Europe and the United States. It offers application software development, software architecture design, performance engineering, optimization and testing, process consulting, and software quality assurance services; functional specification and mock-up, product design, engineering, automated testing, maintenance, support, and performance engineering services; and IT strategy, software engineering process, and data security consulting services. The company's products and platforms include Teora, a suite of developer tools designed to enable automotive human machine interface (HMI) developers build the logic of their user interface; Populus, a tool chain for HMI design and development, and the deployment of automotive user interfaces for distributed embedded systems; and AllView, a user-experience demonstrator that links instrument cluster, head unit, head-up display, and mobile devices. The company was founded in 2000 and is headquartered in Zug, Switzerland.

Date	Key Development Headline
1/7/19	DXC Technology Company, Luxoft Holding, Inc. - M&A Call
1/6/19	DXC Technology Company (NYSE:DXC) entered into a definitive agreement to acquire Luxoft Holding, Inc. (NYSE:LXFT) from IBS Group Holding Limited, Codeffroy Ltd., Awosting Ltd. and others for \$2.1 billion.



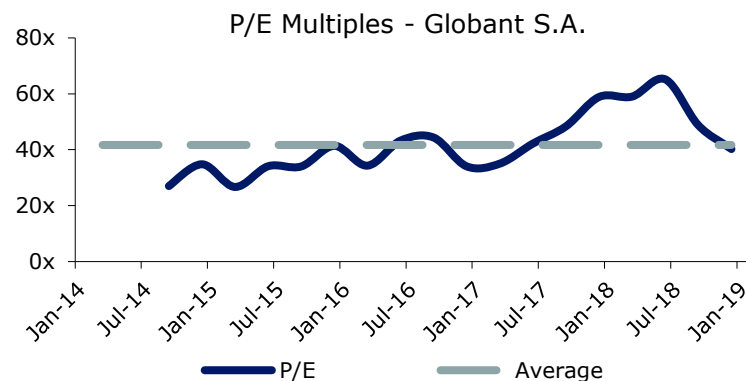
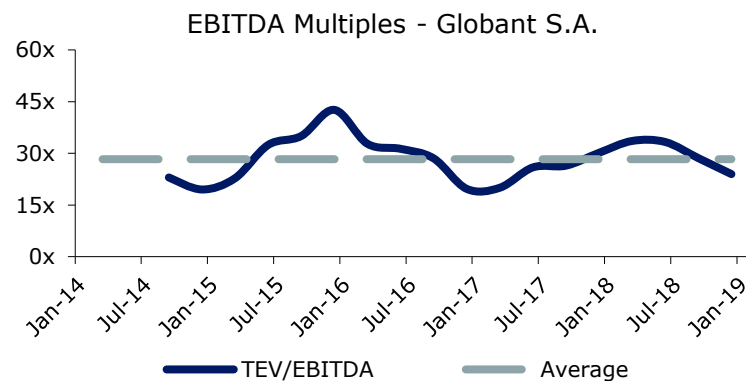
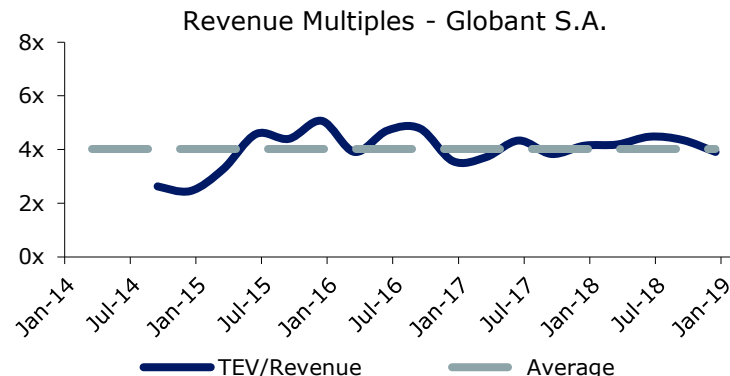
Public Basket



Globant S.A.

Globant S.A., a technology services company, provides services related to application development, testing, infrastructure management, and application maintenance worldwide. The company offers machine learning, pattern recognition, natural language understanding, future of organizations, customer insight, behavioral change, product innovation, design thinking, product management discovery and delivery, and product coaching services. It also provides process appraisal, automated, process evolution, delivery management, agile consultancy, management consulting, user experience, visual and service, industrial design, mobile engineering, fast prototyping, and mobile and product strategy services. In addition, the company offers game engineering and experience, digital platform, virtual and augmented reality, graphics engineering, 3D and 2D art, e-Sports, data architecture, data science, distributed platform, data integration, data visualization, and blockchain services. Globant S.A. was founded in 2003 and is based in Luxembourg City, Luxembourg.

Date	Key Development Headline
1/17/19	Globant S.A. (NYSE:GLOB) entered into a binding agreement to acquire Avanxo Colombia for \$48.6 million.
2/15/18	Globant Mulls Acquisitions



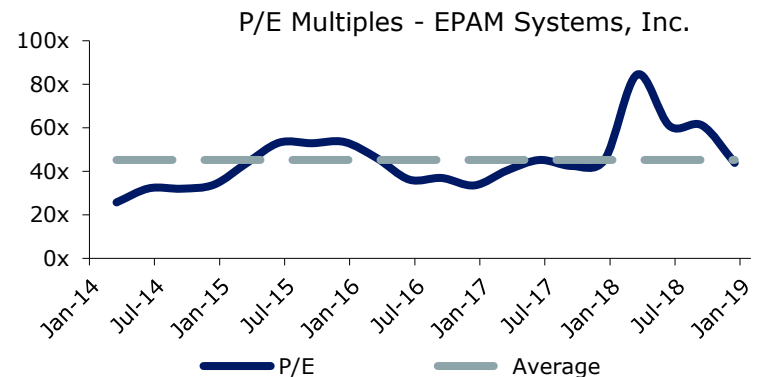
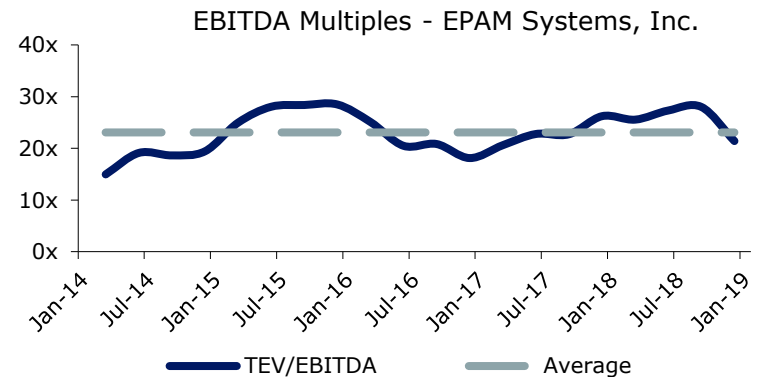
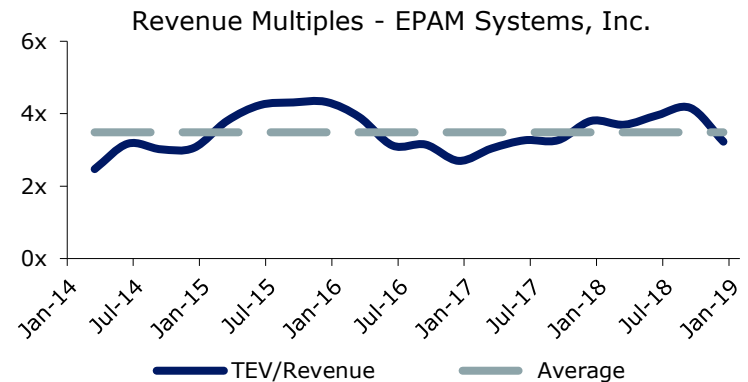
Public Basket



EPAM Systems, Inc.

EPAM Systems, Inc. provides software product development and digital platform engineering services primarily in North America, Europe, Asia, and Australia. It offers software product development services, including product research, customer experience design, prototyping, program management, component design and integration, lifecycle software testing, product deployment, end-user customization, performance tuning, product support and maintenance, managed services, and porting and cross-platform migration. The company provides custom application development services, such as business and technical requirement analysis, user experience design, solution architecture creation and validation, development, component design and integration, quality assurance and testing, deployment, performance tuning, support and maintenance, legacy applications re-engineering/refactoring, porting and cross-platform migration, and documentation. The company was founded in 1993 and is headquartered in Newtown, Pennsylvania.

Date	Key Development Headline
10/31/18	EPAM Systems, Inc. (NYSE:EPAM) acquired Think Limited.
9/17/18	EPAM Systems, Inc. Partners with Positive, on Research-Driven Cybersecurity R&D Lab
3/14/18	EPAM Systems, Inc. (NYSE:EPAM) acquired Continuum LLC.
1/11/18	Epam Systems and Black Box Create In-Store Dynamic Advertising Solution Using Instant Facial Recognition



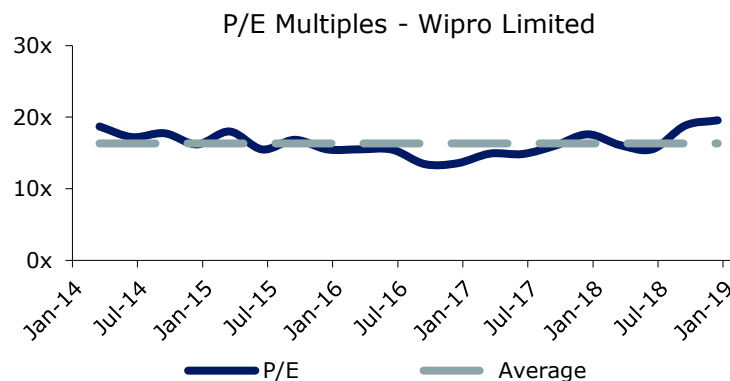
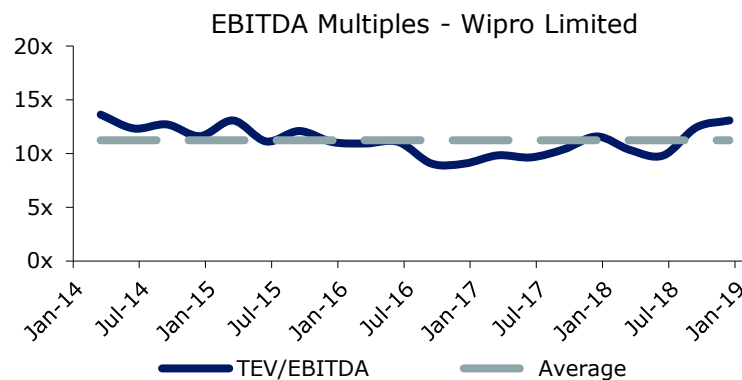
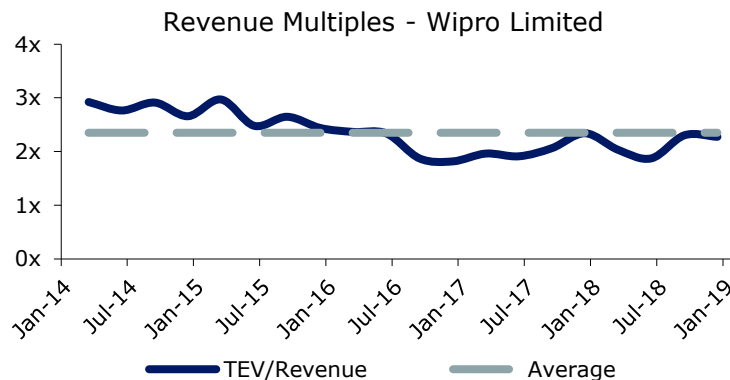
Public Basket



Wipro Limited

Wipro Limited operates as an information technology (IT), consulting, and business process services (BPS) company worldwide. The company's IT Services segment offers a range of IT and IT-enabled services, including digital strategy advisory, customer centric design, technology consulting, IT consulting, custom application design, development, re-engineering and maintenance, systems integration, package implementation, infrastructure services, analytics services, BPS, research and development services, and hardware and software design services to various enterprises. Wipro Limited was founded in 1945 and is headquartered in Bengaluru, India.

Date	Key Development Headline
8/30/18	Wipro Limited (BSE:507685) completed the acquisition of Alight HR Services India Pvt Ltd from Alight Solutions.
7/27/18	Wipro Seeks Acquisitions
7/19/18	Wipro Limited (BSE:507685) signed an agreement to acquire Alight HR Services India Pvt Ltd from Alight Solutions for approximately \$120 million.
6/26/18	Ensono Holdings, LLC completed the acquisition of Wipro Data Centre and Cloud Services, Inc. and Portion of Datacenter Business In Germany and UK from Wipro Limited (BSE:507685).
4/5/18	Antariksh Softech Private Limited acquired 63% stake in Wipro Airport IT Services Limited from Wipro Limited (BSE:507685) for INR 31.5 million.



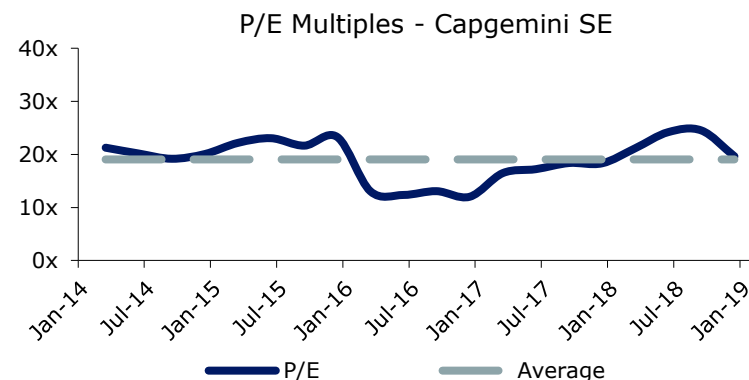
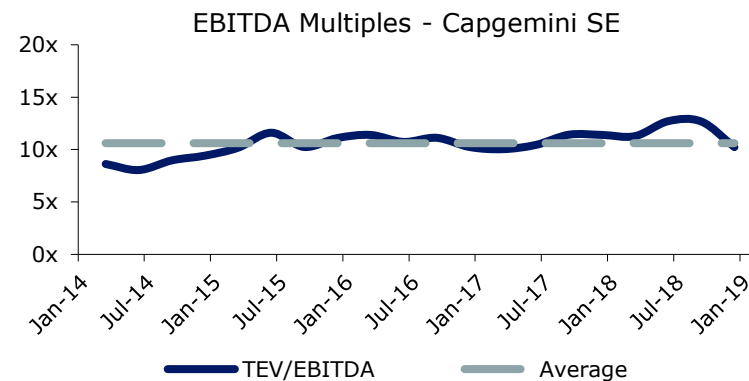
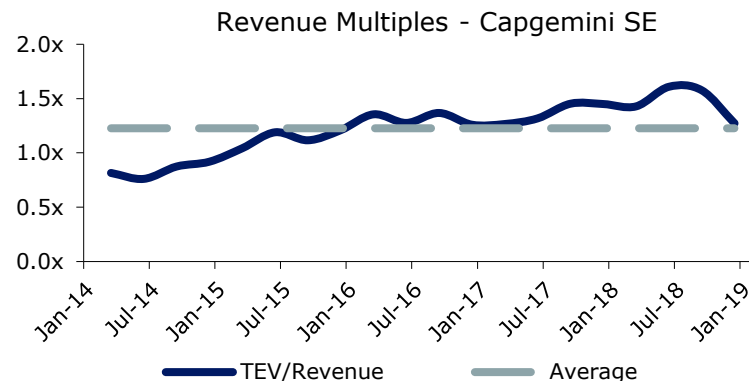
Public Basket



Capgemini SE

Capgemini SE provides consulting, technology, and digital transformation services. It addresses clients' opportunities in the world of cloud, digital, and platforms, as well as enables organizations to realize business ambitions through an array of services from strategy to operations. The company's Consulting Services segment offers strategy and transformation consulting services primarily in digital transformation that enhance the performance of organizations based on intimate client relationships, and the knowledge of client industries and processes. Its Technology & Engineering Services segment provides assistance and support to internal IT teams of client companies. The company's Application Services segment designs, develops, implements, and maintains IT applications, including system integration and application maintenance services. Capgemini SE was founded in 1967 and is based in Paris, France.

Date	Key Development Headline
6/21/18	Capgemini Seeks Acquisitions in India
6/6/18	Capgemini SE (ENXTPA:CAP) entered into an agreement to acquire Leidos Cyber, Inc.
6/4/18	SAP SE to Team with Accenture, Capgemini and Deloitte to Accelerate Customer Adoption of SAP S/4Hana(R) Cloud in Target Industries
3/8/18	Indosuez Wealth Management and Capgemini Collaborate on Wealth Platform
3/7/18	Capgemini Seeks Acquisitions



Public Basket

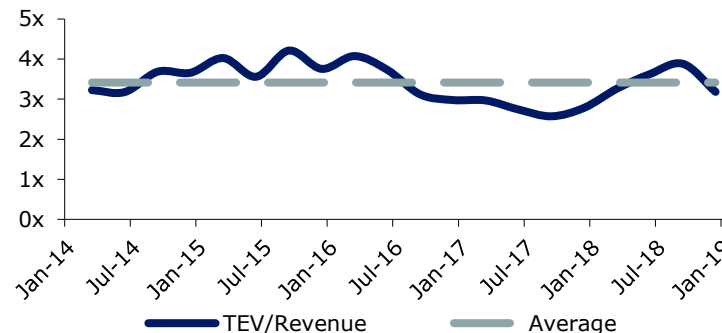


Infosys Limited

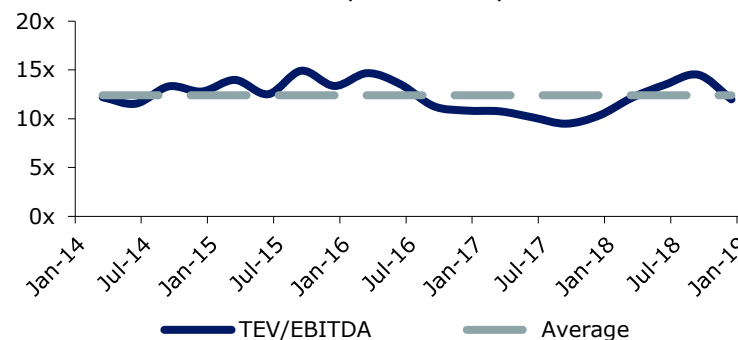
Infosys Limited, together with its subsidiaries, provides consulting, technology, and outsourcing services in North America, Europe, India, and internationally. It provides business information technology services, including application development and maintenance, independent validation, infrastructure management, and business process management services, as well as engineering services, such as engineering and life cycle solutions; and consulting and systems integration services comprising consulting, enterprise solutions, systems integration, and advanced technologies. Infosys Limited was founded in 1981 and is headquartered in Bengaluru, India.

Date	Key Development Headline
1/11/19	Infosys Drops Plan To Sell Panaya, Skava and Kallidus
1/9/19	Amazon Web Services, Inc. completed the acquisition of CloudEndure Ltd. from Infosys Limited (NSEI:INFY) and others.
12/26/18	Infosys Seeks Investments
12/14/18	Amazon Web Services, Inc. entered into an agreement to acquire CloudEndure Ltd. from Infosys Limited (NSEI:INFY) and others.
12/13/18	Infosys Announces Joint Venture with Hitachi, Panasonic and Pasona in Japan

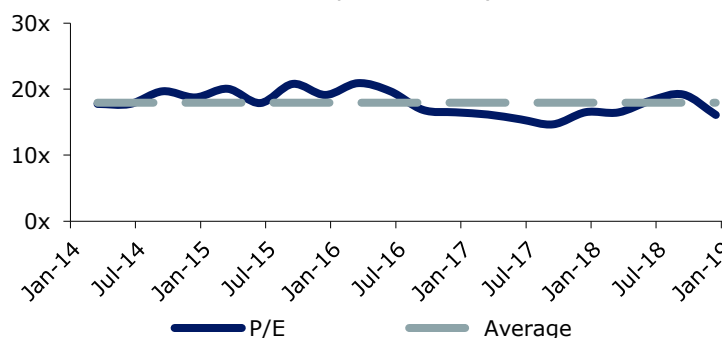
Revenue Multiples - Infosys Limited



EBITDA Multiples - Infosys Limited



P/E Multiples - Infosys Limited

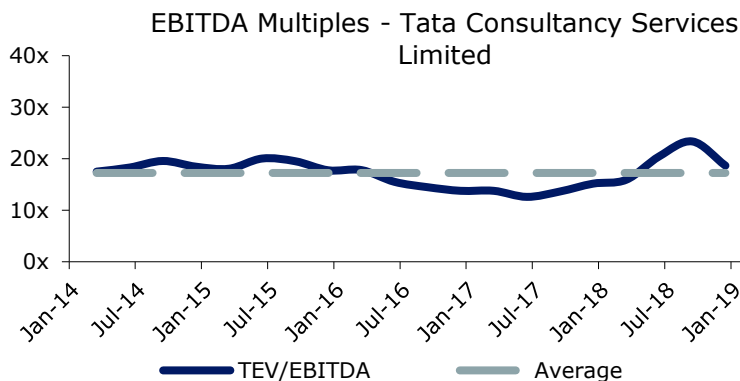
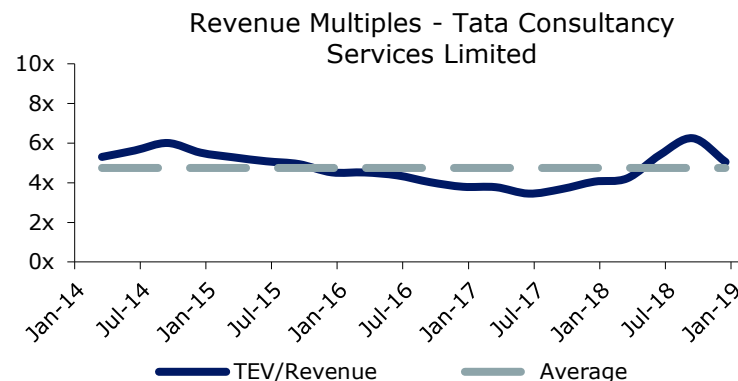


Public Basket



Tata Consultancy Services Limited

Tata Consultancy Services Limited provides information technology (IT) and IT enabled services worldwide. The company offers CHROMA, a cloud-based talent management solution that enables organizations to drive transformational employee experiences; ignio, a cognitive automation system; iON, an assessment solution; TAP, a cloud solution, including TAP contract management, purchasing, accounts payable, and supplier management solutions; and TCS MasterCraft, a digital platform to automate and manage IT processes. It also provides customer intelligence and insight solutions to deliver personalized retail, banking, and communications experiences; Intelligent Urban Exchange, an enterprise software to accelerate smart city transportation, water, and energy programs for cities. Tata Consultancy Services Limited is a subsidiary of Tata Sons Limited.



Date	Key Development Headline
1/10/19	TCS Seeks Acquisitions
12/18/18	Tata Consultancy Services Extends Collaboration with Red Hat to Build Microservices-Based Open Source Solutions and Frameworks
11/27/18	Tata Consultancy Services Limited (NSEI:TCS) acquired Assets of BridgePoint Group, LLC.
11/20/18	Tata Consultancy Services Partners with SAP to Build Intelligent Rail Digital Maintenance
11/11/18	Tata Consultancy Services Partners with ENGIE Laborelec to Protect Critical Infrastructures Against Cyber Attacks

CONTACT INFO

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.

Leroy Davis, Partner	704.899.5962	leroy@7mileadvisors.com
Tripp Davis, Partner	704.899.5762	tripp@7mileadvisors.com
Andy Johnston, Partner	704.899.5961	andy@7mileadvisors.com
Ben Lunka, Managing Director	704.496.2995	ben@7mileadvisors.com
Jeff Stoecklein, Managing Director	312.796.9330	jeff@7mileadvisors.com
Mark Landry, Managing Director	561.972.0609	mark@7mileadvisors.com
Kristina Sergueeva, Director	704.899.5149	kristina@7mileadvisors.com
Neil Churman, Director	281.742.9340	neil@7mileadvisors.com
John Cooper, Director	704.973.3996	john@7mileadvisors.com
Tim Frye, Director	704.973.3994	tim@7mileadvisors.com
Nicholas Prendergast, Financial Analyst	704.973.3995	nicholas@7mileadvisors.com
Ariail Siggins, Marketing Director	704.981.2908	ariail@7mileadvisors.com
Sydney Larese, Associate	704.973.3998	sydney@7mileadvisors.com
Marty Johnson, Associate	704.973.3999	marty@7mileadvisors.com
Rory Julyan, Associate	704.981.2520	rory@7mileadvisors.com
Garth Martin, Associate	704.973.3997	garth.martin@7mileadvisors.com
Dennis Fox, Associate	704.706.9168 x 119	dennis@7mileadvisors.com
Steve Buffington, Associate	704.960.1828	steve@7mileadvisors.com