



Sectorwatch: Software Engineering

July 2018

Software Engineering

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Sector Dashboard [4]

Public Basket Performance [5]

Operational Metrics [7]

Valuation Comparison [10]

Recent Deals [13]

Appendix [14]

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.

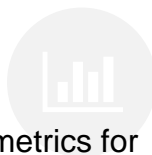
Dashboard

- 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

↓ -0.02

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 Momentum

↓ -0.7%

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

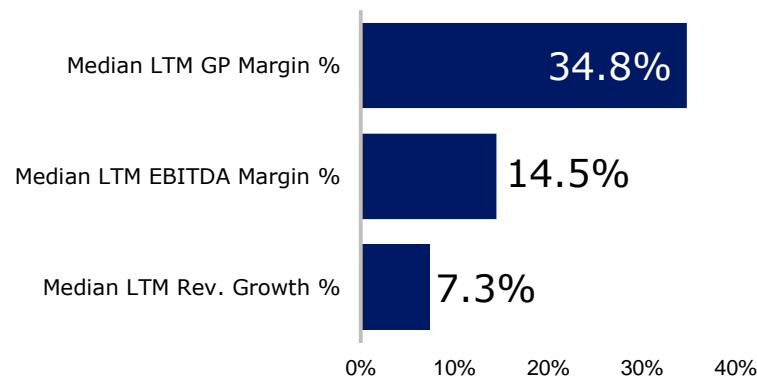
Profitability Momentum

↓ -0.5%

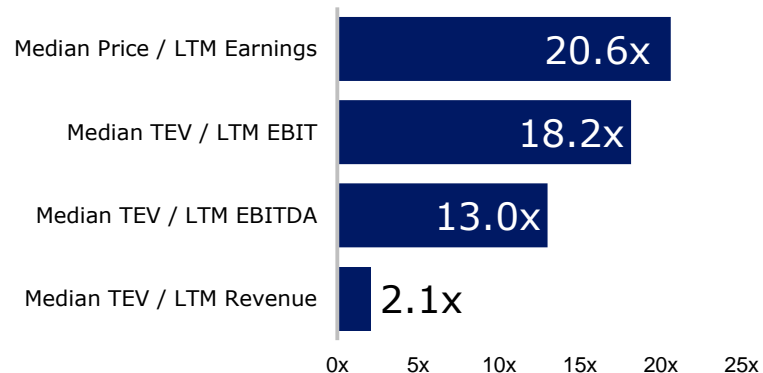
1 - year EBITDA % compared to EBITDA % average for last 3 years

Current EBITDA margin is less than the average of the last 3 years EBITDA margins, which may signal further consolidation

Operating Metrics



Valuation



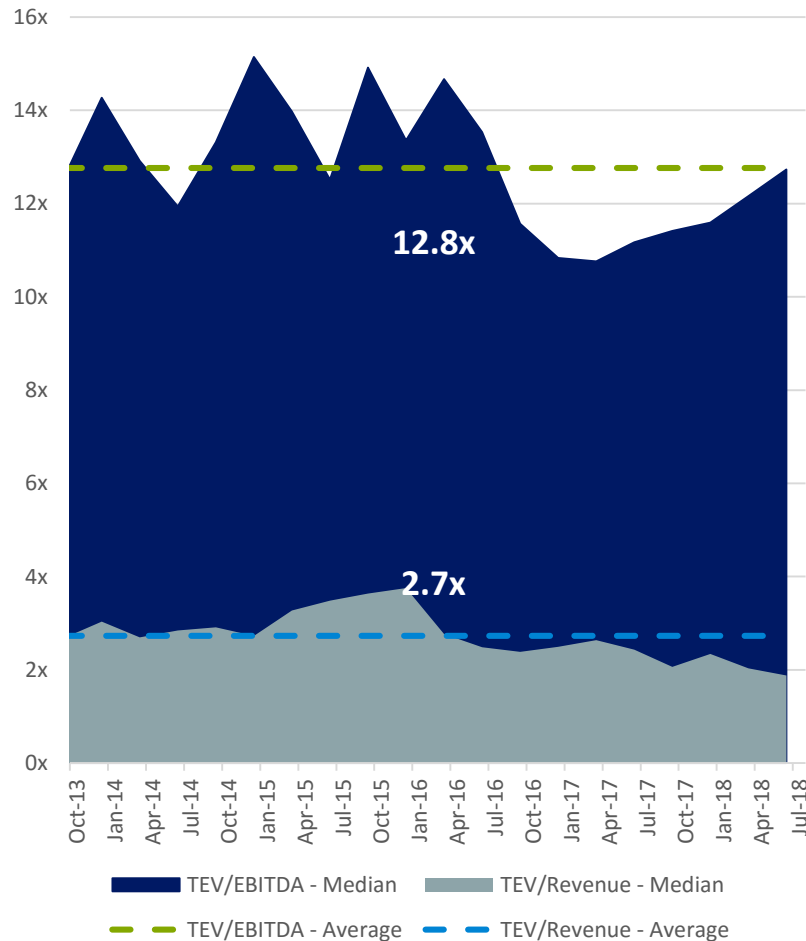
Public Basket



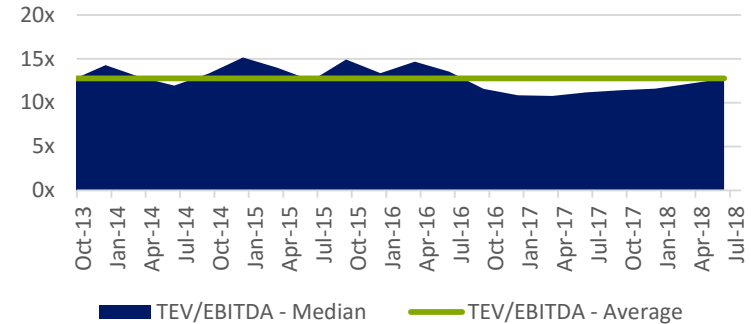
Company	TEV \$m	LTM Rev \$m	Rev Growth YoY	GP %	EBITDA %	TEV / Rev X	TEV / EBITDA X	# FTEs	Rev / FTE \$k
R Systems International Limited	28	92	2%	27%	6%	0.3	5.7	2,353	39
Persistent Systems Limited	836	466	5%	29%	15%	1.9	13.0	8,265	56
Luxoft Holding, Inc.	1,199	907	15%	37%	11%	1.3	12.3	12,898	70
Globant S.A.	2,057	444	31%	37%	13%	4.6	34.4	6,753	66
EPAM Systems, Inc.	6,606	1,550	27%	36%	14%	4.3	29.5	25,962	60
Wipro Limited	16,427	8,373	-1%	29%	19%	2.1	10.8	163,827	51
Capgemini SE	24,515	15,360	2%	26%	13%	1.6	13.0	199,698	77
Infosys Limited	38,528	11,119	7%	35%	27%	3.5	13.0	204,107	54
Tata Consultancy Services Limited	106,277	18,660	8%	44%	27%	5.7	21.3	394,998	47
Average	21,830	6,330	11%	33%	16%	2.8	17.0	113,207	58
Median	6,606	1,550	7%	35%	14%	2.1	13.0	25,962	56

share price as of 18Jul18

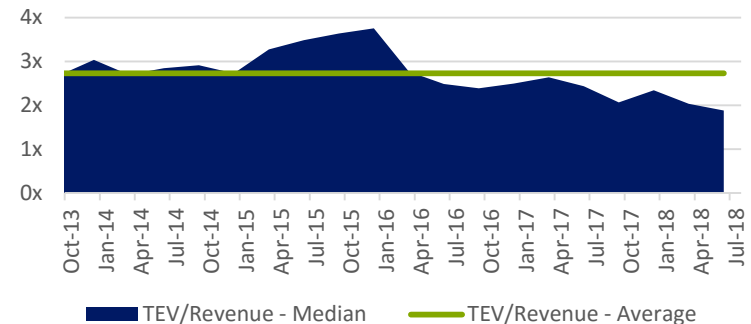
Public Basket Valuation Trends



Public EBITDA Multiples over Time



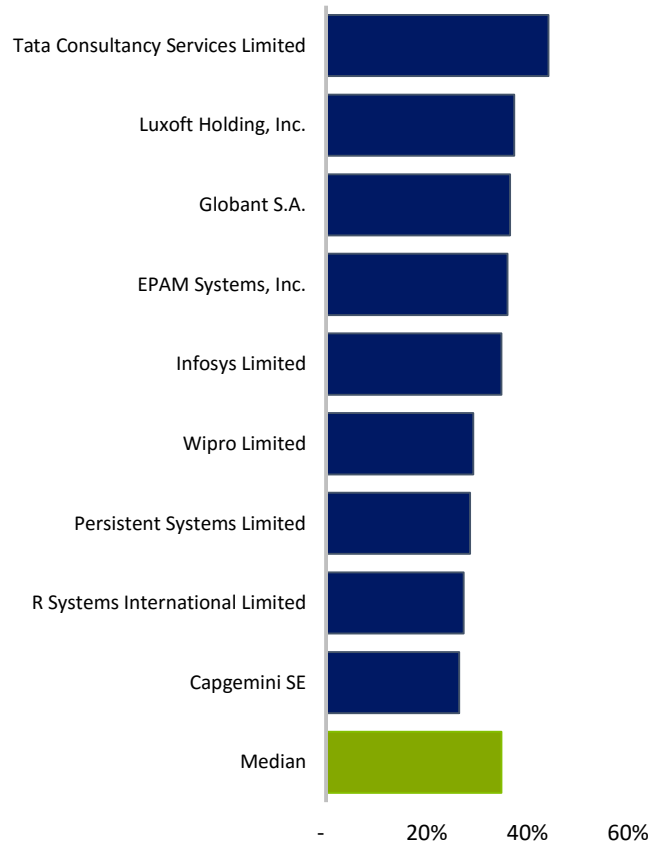
Public Revenue Multiples over Time



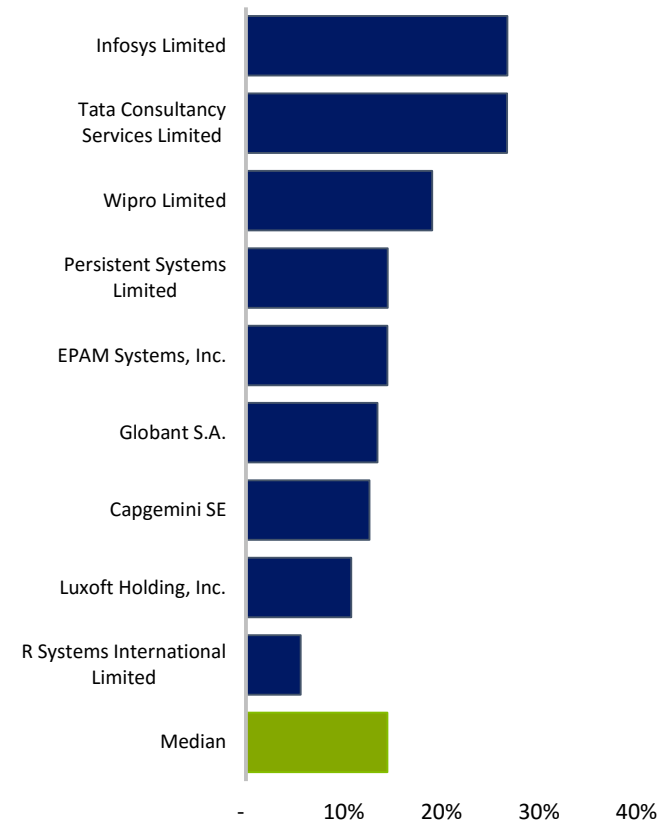
Operational Metrics



LTM Gross Profit Margin %



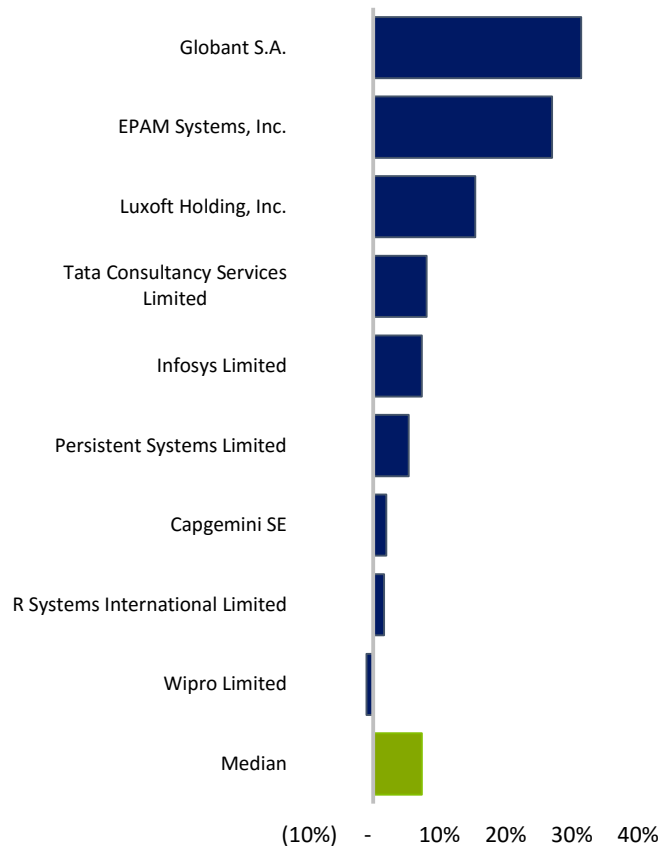
LTM EBITDA %



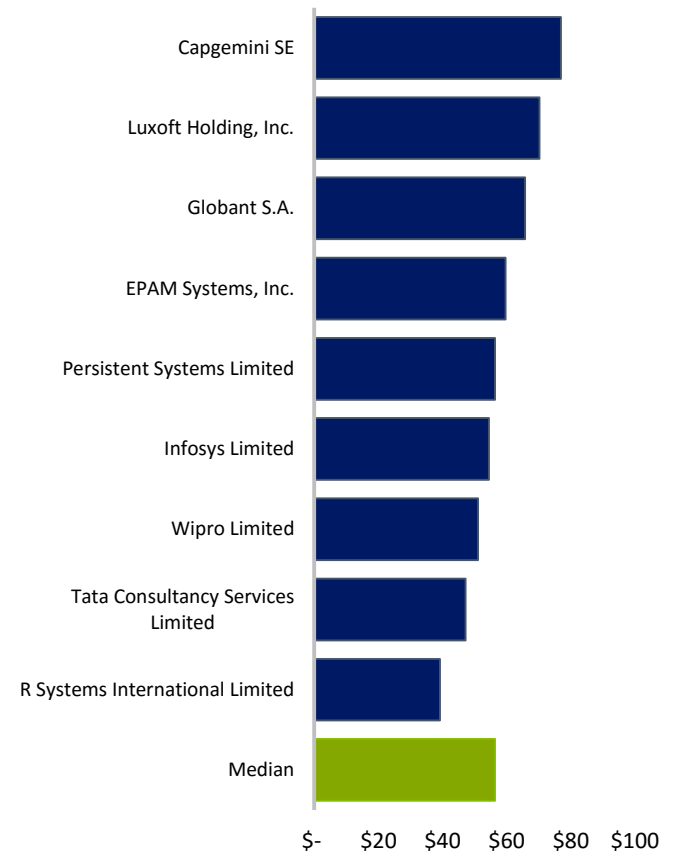
Operational Metrics



LTM Revenue Growth %



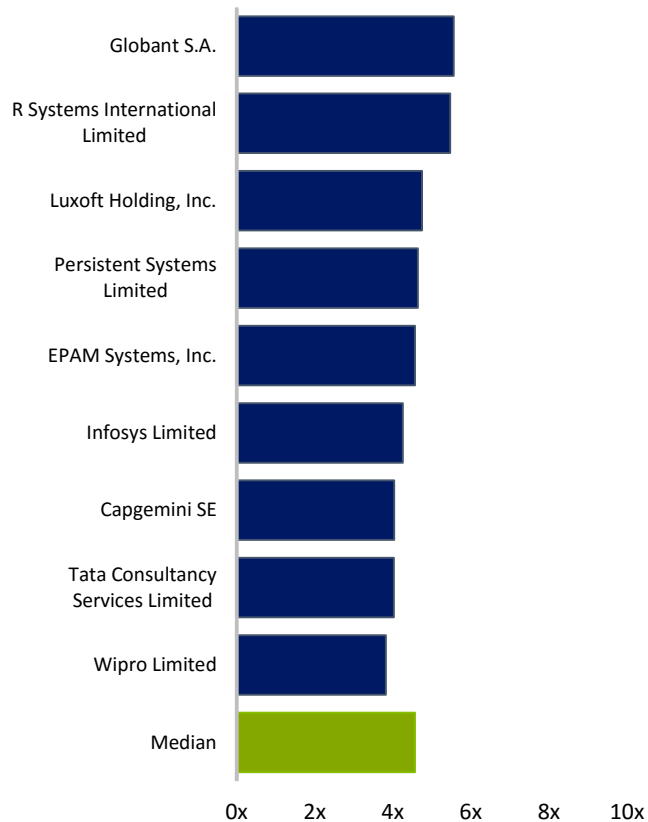
LTM Revenue per Full Time Employee x 000's



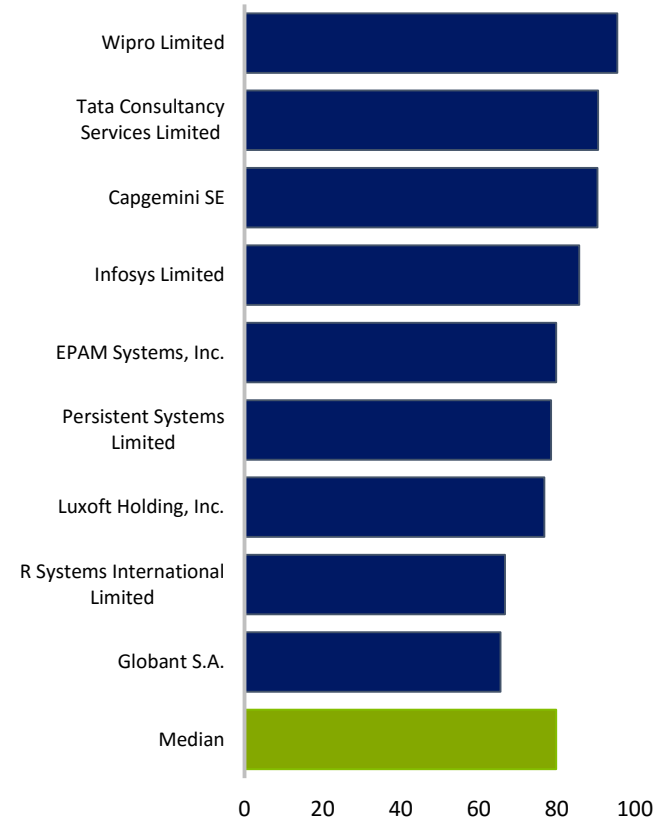
Operational Metrics



Accounts Receivable Turnover



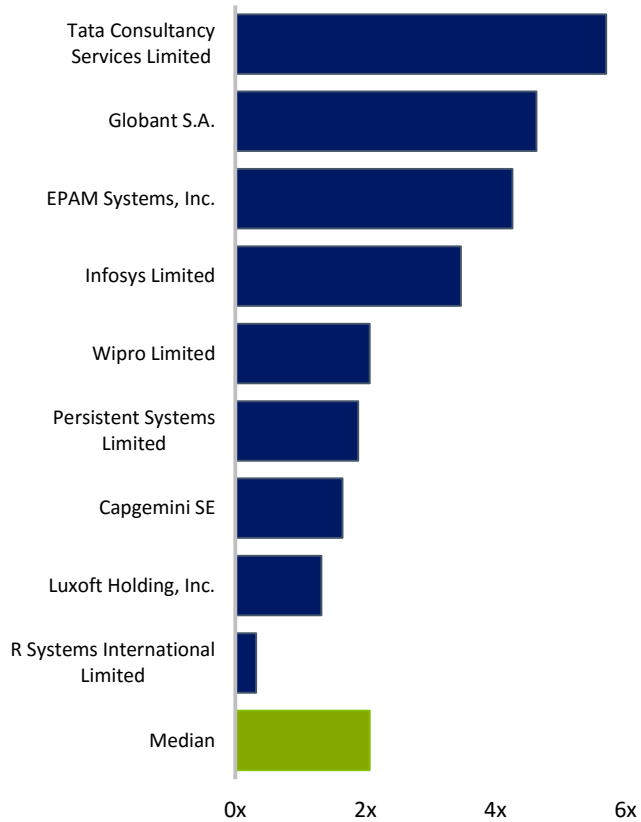
Average Days Sales Outstanding



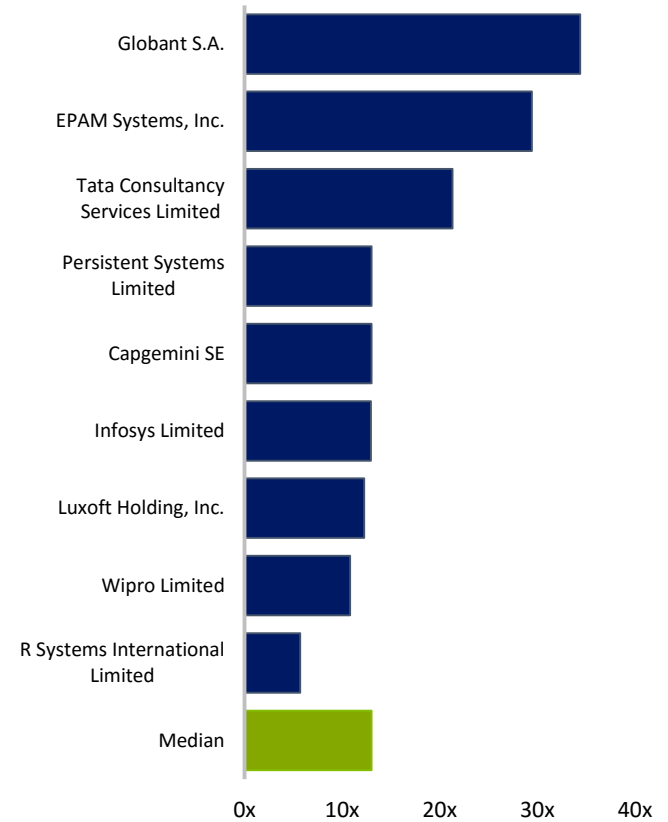
Valuation



TEV / LTM Revenue



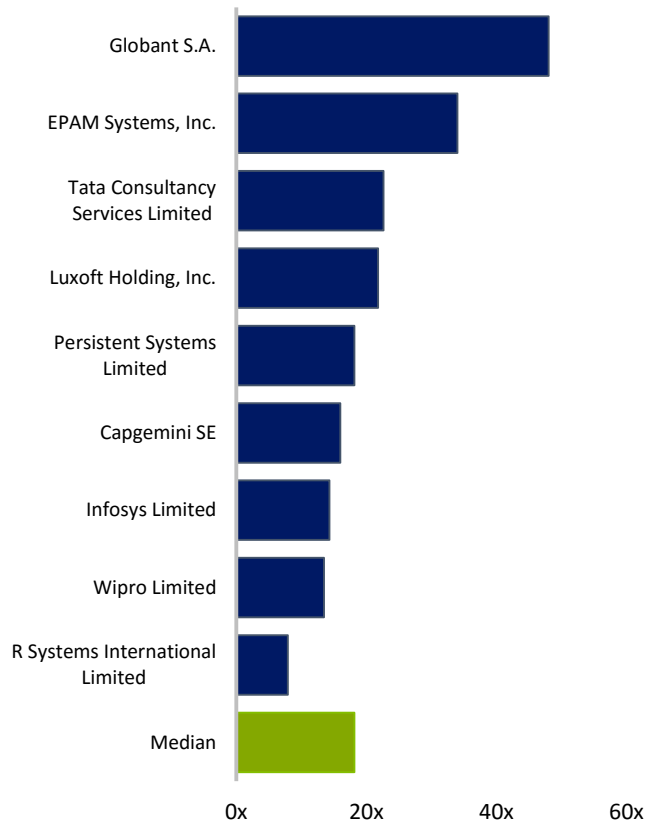
TEV / LTM EBITDA



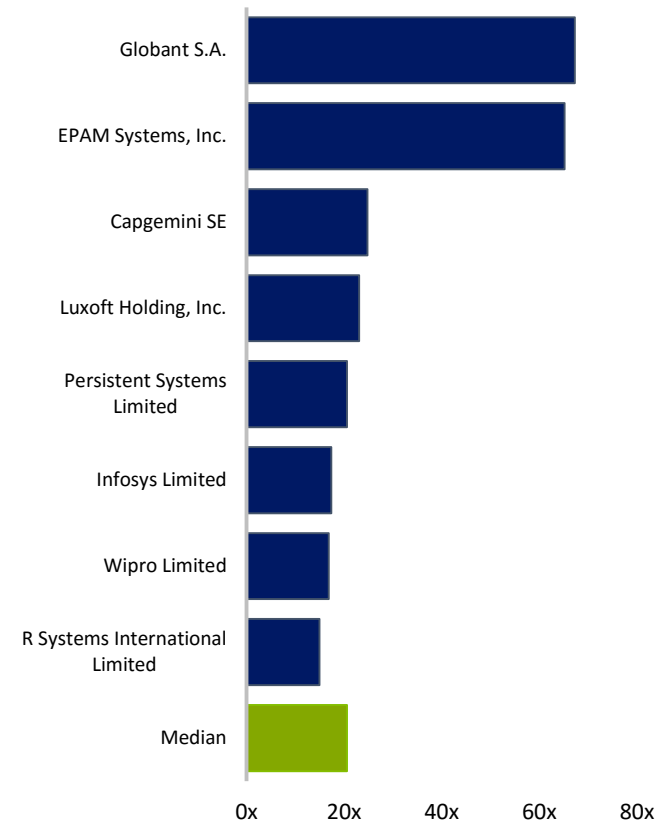
Valuation



TEV / LTM EBIT



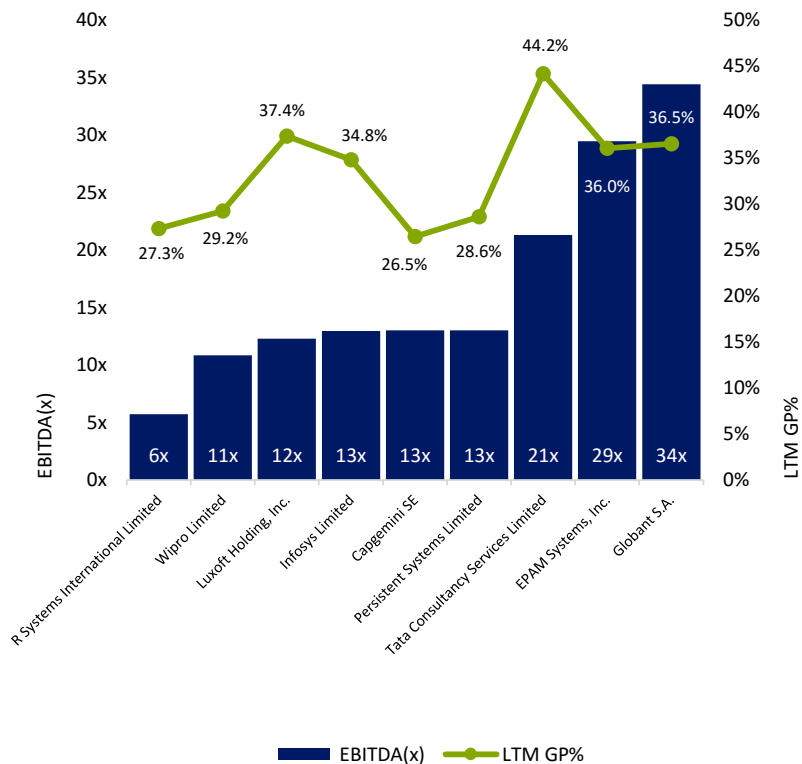
Price / LTM Earnings



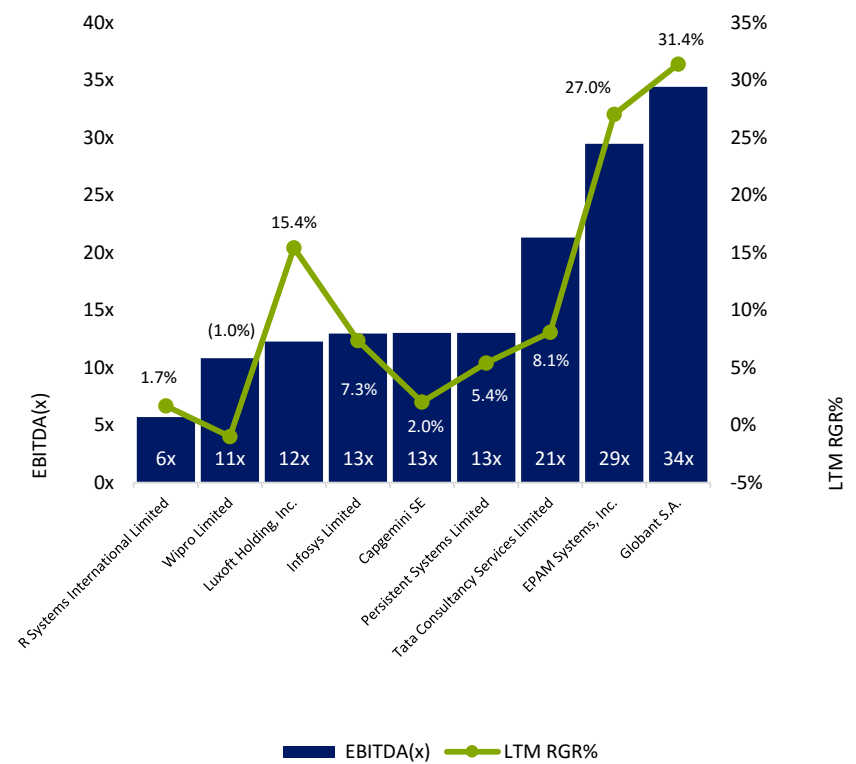
Valuation



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
11Jul18	CA, Inc.	Broadcom Inc.	21,777.02	4,235.00	4.3x	13.9x
28Jun18	Adelante S.r.l.	WIIT 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	NCC Group SDLC 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.	-	-	-	-
22Aug17	Summa Technologies, Inc.	CGI Group Inc.	-	-	-	-
8Aug17	BAMTECH LLC	The Walt Disney Company	1,580.00	-	-	-
21Jul17	Accel Frontline Limited	-	-	91.51	-	-
1Jul17	TechJini Solutions Private Limited	Datamatics Global Services Limited	6.05	5.42	1.6x	-
30Jun17	Threesixty Logica Testing Services Private Limited	Saksoft Limited	1.08	-	-	-
1Jun17	PointSource, LLC	Globant S.A.	28.00	-	-	-
1May17	AIM Consulting Group, LLC	Addison Group, LLC	-	-	-	-
19Apr17	Computer Technology Solutions, Inc.	CGI Group Inc.	-	-	-	-
28Apr17	ECommerce Systems, Inc.	CGI Group Inc.	-	-	-	-
28Apr17	Grossum	App Solutions LLC	-	-	-	-
21Apr17	EXCELTO Solutions LLC	Trimax Americas	-	-	-	-
18Apr17	InfoReliance Corporation	ECS Federal, LLC	-	-	-	-
13Apr17	Innovative Computer Solutions, Inc.	Jonas Operating Group	-	-	-	-
3Apr17	Zycron, Inc.	BG Staffing, LLC	22.99	38.30	0.6x	-
24Mar17	Big Drop PVT LTD	Appworks Technologies Private Limited	-	-	-	-
23Mar17	derivIT Solutions Pte Ltd.	Luxoft International Company Limited	18.36	-	-	-
28Feb17	Infusion Development Corporation	Avanade Inc.	-	-	-	-
24Jan17	Sequence LLC	salesforce.com, inc.	26.00	-	-	-
22Dec16	Driven, Inc.	Xplenty Ltd.	-	-	-	-
10Nov16	Test Direct Limited	QualiTest Ltd.	-	-	-	-
1Nov16	Boulder Technology LLC	Centerline Solutions, LLC	-	-	-	-
17Oct16	ameria GmbH	CEMA AG	-	-	-	-

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APPENDIX: Public Basket Constituents

Public Basket

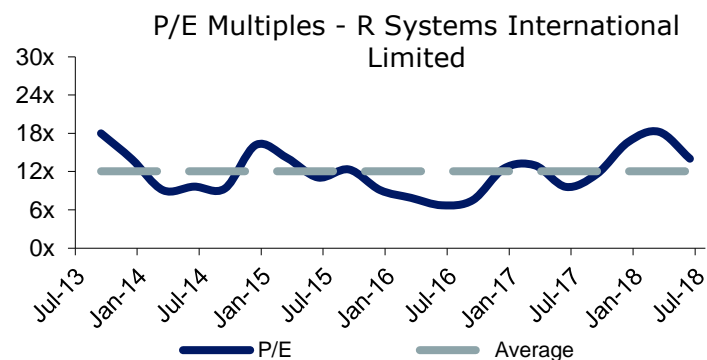
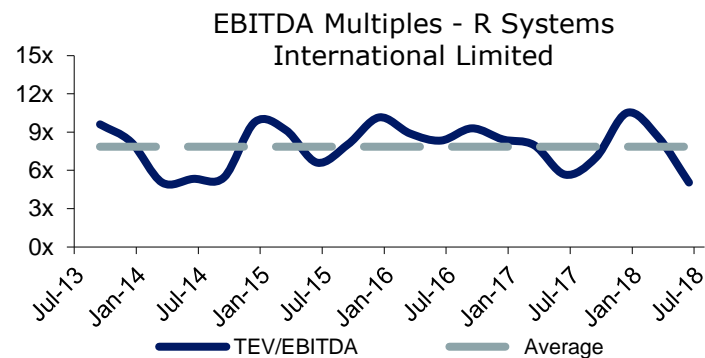
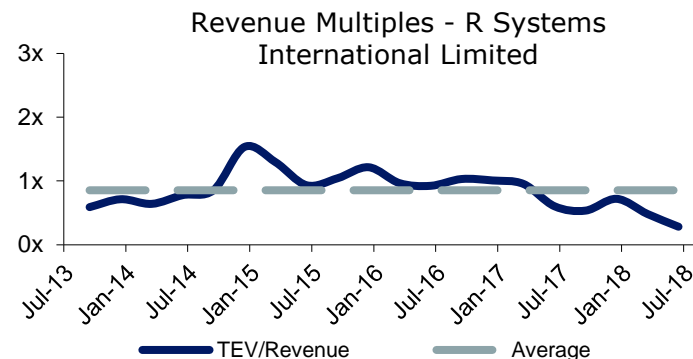


R Systems International Limited

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.

Date	Key Development Headline
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9/24/17	R Systems International Limited (BSE:532735) agreed to acquire GM Solutions Private Limited.
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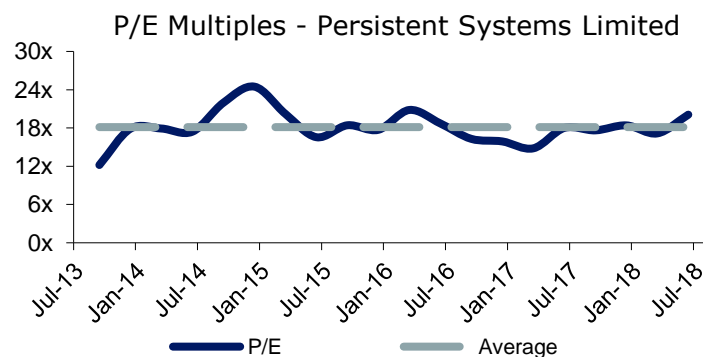
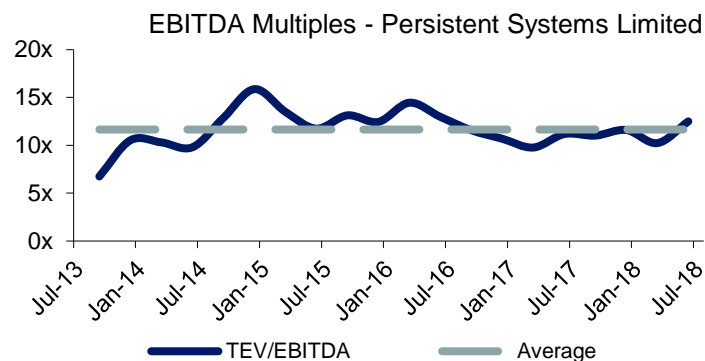
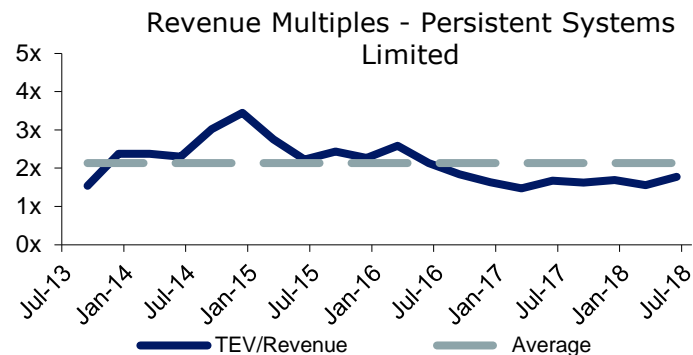
Public Basket



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. The company has operations in South Africa, Japan, Israel, Malaysia, Singapore, Sri Lanka, Australia, England, France, Germany, Ireland, the Netherlands, Switzerland, Canada, Mexico, and the United States. Persistent Systems Limited was incorporated in 1990 and is based in Pune, India.

Date	Key Development Headline
1/29/18	Persistent Systems Seeks Acquisition
7/21/17	Persistent Systems Mulls Acquisitions



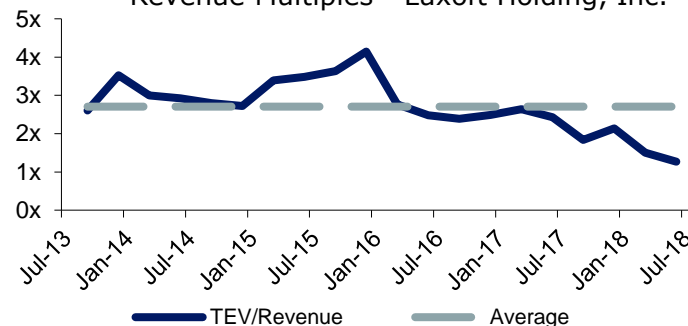
Public Basket



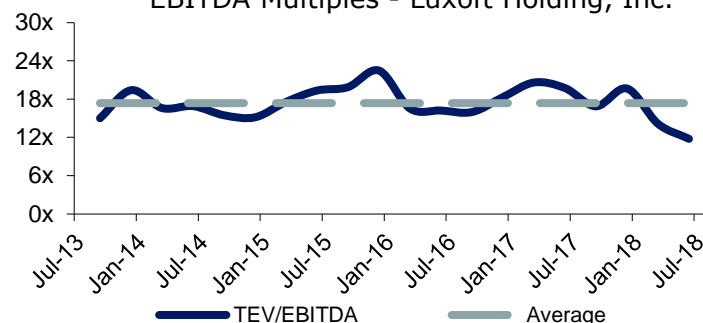
Luxoft Holding, Inc.

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. It serves financial services, automotive and transport, travel and aviation, technology, telecom, healthcare and pharmaceutical, energy, and other industries. The company was founded in 2000 and is headquartered in Zug, Switzerland.

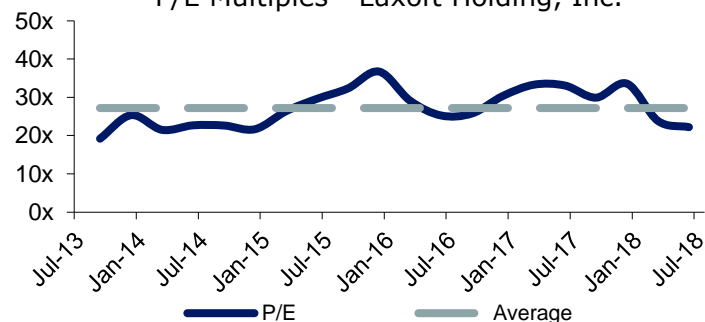
Revenue Multiples - Luxoft Holding, Inc.



EBITDA Multiples - Luxoft Holding, Inc.



P/E Multiples - Luxoft Holding, Inc.



Date Key Development Headline

6/17/18 Luxoft Holding, Inc. (NYSE:LXFT) acquired Smashing Ideas, Inc. from Penguin Random House LLC.

11/17/17 Luxoft Holding, Inc. Seeks Acquisitions

Public Basket

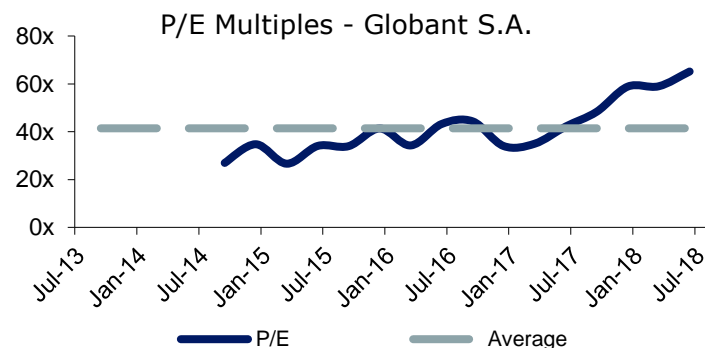
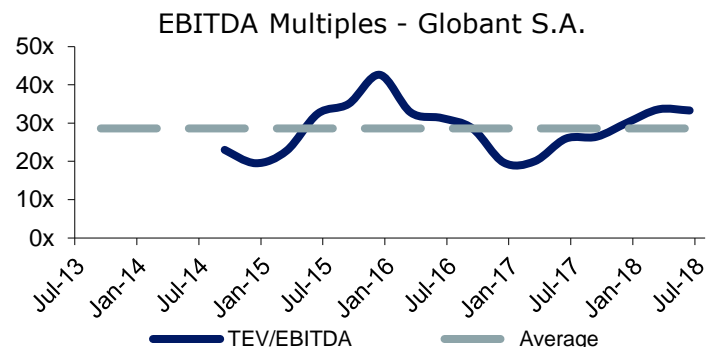
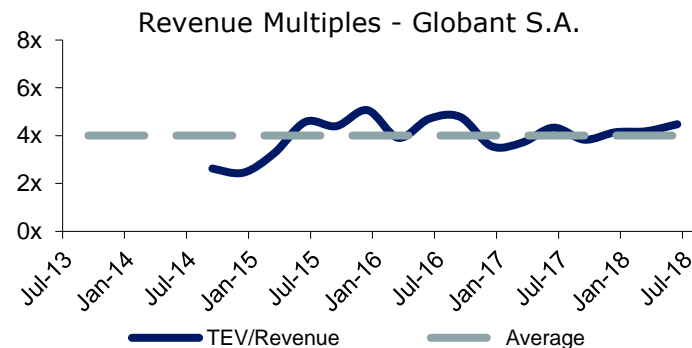


Globant S.A.

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. Further, it provides Internet of things experience and consultancy, platform, hardware integration, content management system, e-learning, video content production, OTT, and Cloud Ops Studio services. Globant S.A. was founded in 2003 and is based in Luxembourg City, Luxembourg.

Date Key Development Headline

2/15/18 Globant Mulls Acquisitions



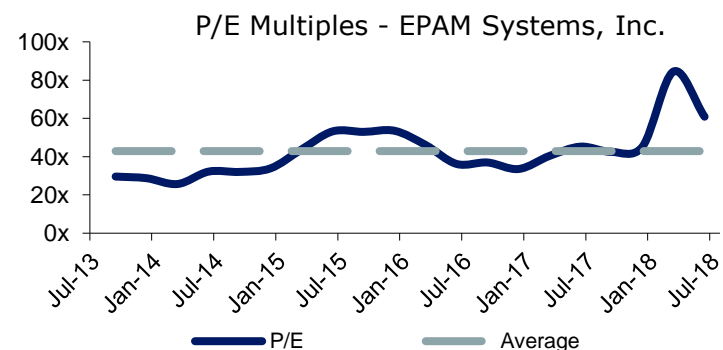
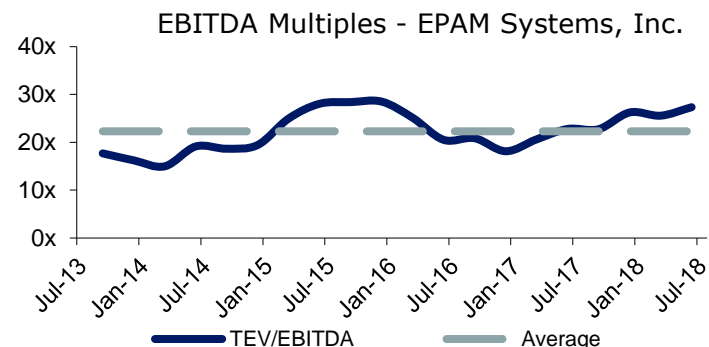
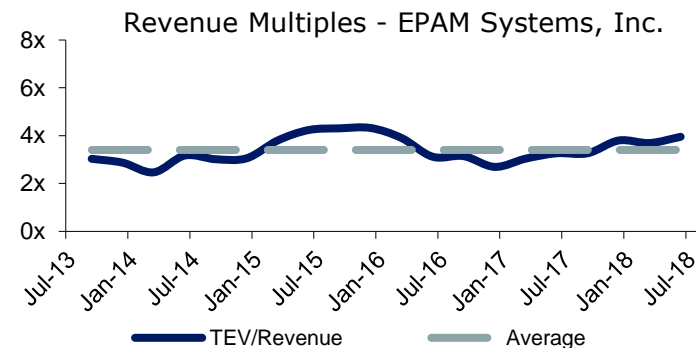
Public Basket



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
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
11/2/17	EPAM Systems Seeks Acquisitions



Public Basket

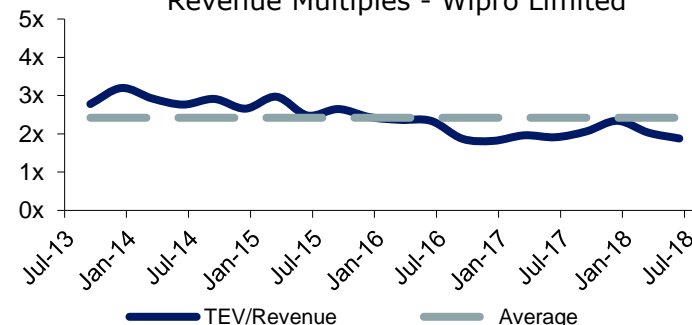


Wipro Limited

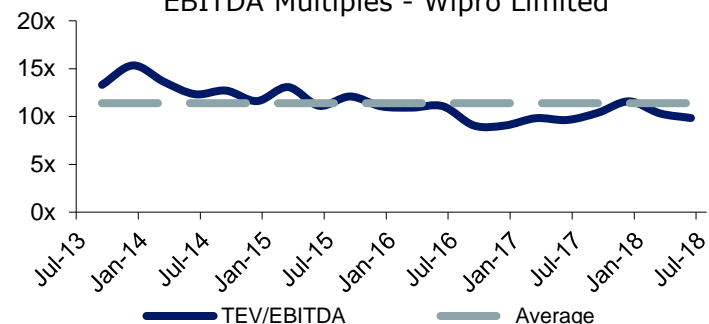
Wipro Limited operates as an information technology (IT), consulting, and business process services (BPS) company worldwide. The company's IT Services segment offers a range of IT and IT-enabled services, including digital strategy advisory, customer centric design, technology consulting, IT consulting, 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
4/5/18	Antariksh Softtech Private Limited acquired 63% stake in Wipro Airport IT Services Limited from Wipro Limited (BSE:507685) for INR 31.5 million.
3/14/18	Trintech and Wipro Limited Announces Strategic Partnership to Deliver Digital Solutions to Simplify and Automate Business Finance Functions at Enterprises
3/13/18	Ensono Holdings, LLC signed a definitive agreement to acquire Wipro Data Centre and Cloud Services, Inc. and Portion of Datacenter Business In Germany and UK from Wipro Limited (BSE:507685) for approximately \$410 million.
1/29/18	Harte Hanks, Inc. and Wipro LLC Announces Joint Go-To-Market Strategy

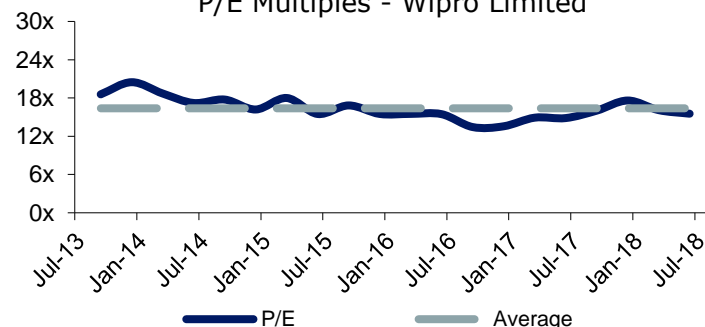
Revenue Multiples - Wipro Limited



EBITDA Multiples - Wipro Limited



P/E Multiples - Wipro Limited



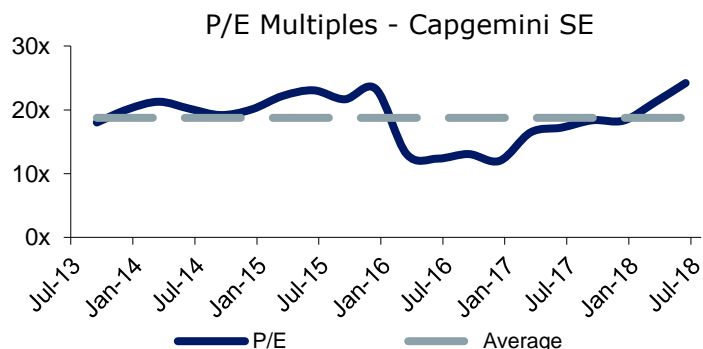
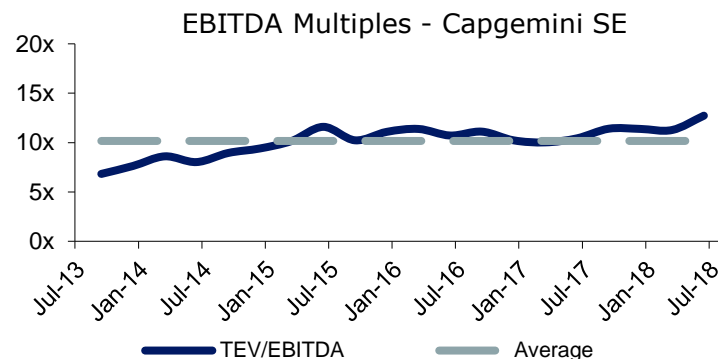
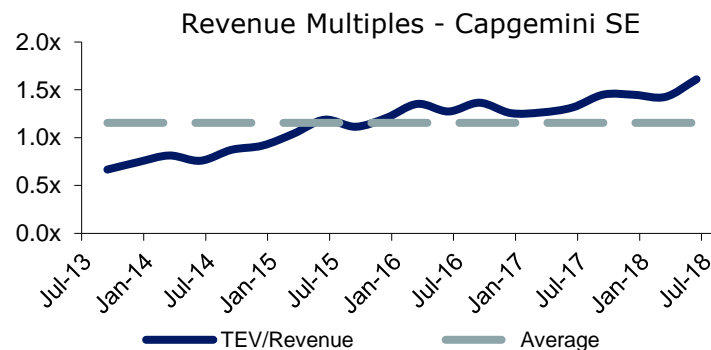
Public Basket



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

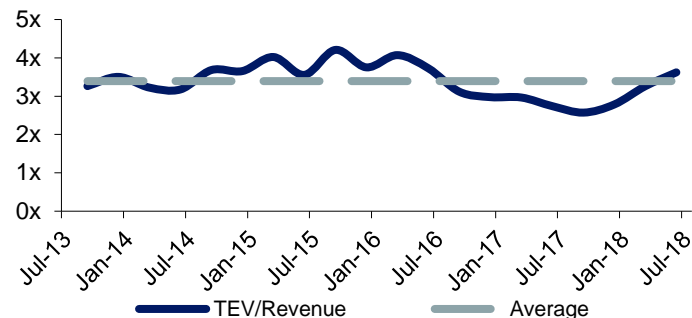


Infosys Limited

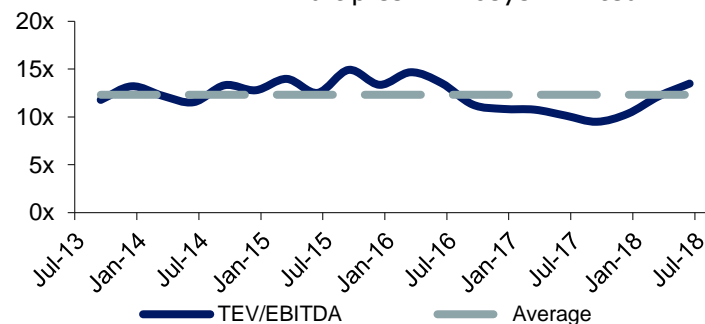
Infosys Limited, together with its subsidiaries, provides consulting, technology, and outsourcing services in North America, Europe, India, and internationally. It provides business information technology services, including application development and maintenance, independent validation, infrastructure 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. The company's products include Finacle, a banking solution that provides analytics, core banking, consumer e-banking, corporate e-banking, Islamic banking, mobile banking, origination, payments, SME enable, treasury, wealth management, and youth banking solutions. Infosys Limited was founded in 1981 and is headquartered in Bengaluru, India.

Date	Key Development Headline
7/5/18	Infosys Limited Partners with Siemens to Develop Advanced IoT Engineering Solutions on MindSphere
5/29/18	Infosys Limited (NSEI:INFY) completed the acquisition of Wongdoody Holding Company, Inc.
5/2/18	Infosys and Astound Partner to Deliver Better Service Experience Through an AI Enhanced Enterprise Service Management Café
4/18/18	Infosys Mulls Acquisitions
4/13/18	Infosys Seeks Sell Of Panaya and Skava

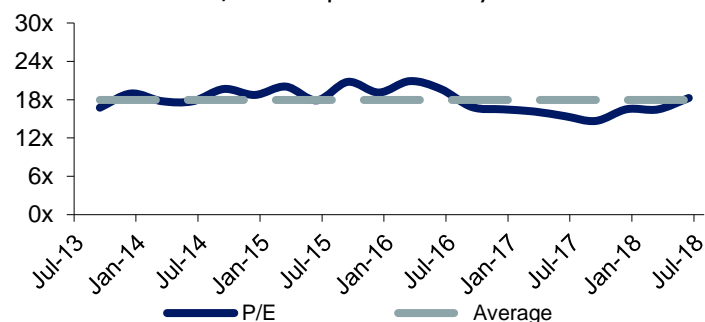
Revenue Multiples - Infosys Limited



EBITDA Multiples - Infosys Limited



P/E Multiples - Infosys Limited

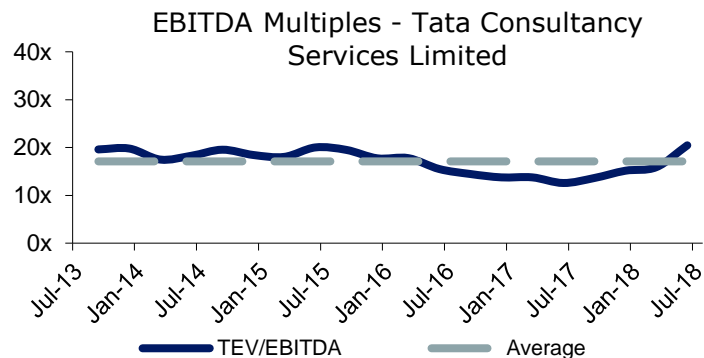
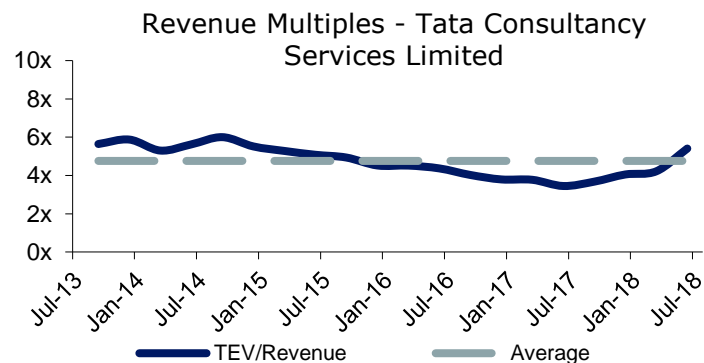


Public Basket



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
6/19/18	NCR Corporation and Tata Consultancy Services Limited Enter into Strategic Alliance
6/15/18	TCS Seeks Acquisitions
4/22/18	Tata Consultancy Services Open To Acquisitions In Digital Space
3/5/18	Virgin Atlantic Extends Strategic Partnership with Tata Consultancy Services Limited
10/26/17	Tata Consultancy Services and ACORD Collaborate on Digital Transformation Enhancements for the Insurance Industry
10/25/17	National University Signs Pact with Tata Consultancy Services to Enhance Filipinos' Employability Skills

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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