

Luxoft (LXFT)

Premier Software Developer with Cost-Effective Eastern European Talent – Long-Term Potential to Compound at 20%

"We were impressed with the quality of Luxoft's people. More than 70% of Luxoft employees are senior specialists with over 7 years of experience, and over 80% are educated to Master's or Ph.D. level. At Luxoft we've found teams of experts ready to grill you with tough questions. And that's what you need on complex projects." – [Daniel Marovitz, Former COO at DB's global banking unit](#)

We are long shares of Luxoft as we believe the company is poised to double revenue over the next five years, and then do so again over the subsequent five. Luxoft's stock has declined in 2016 as investors have become concerned with slowing growth. The recent move by the U.K. to leave the European Union exacerbated the weakness as the European banks (including Deutsche Bank, Luxoft's largest customer) are being pushed to multi-year lows. However, Luxoft remains a premium vendor whose services are mission critical for clients. The recent renewal of a five-year Master Services Agreement (MSA) with Deutsche Bank illustrates customers' reliance on Luxoft despite a challenging market environment.

With a revenue base of over \$680 million, Luxoft resembles Cognizant (CTSH) 10 years ago, highlighted by a comparable growth trajectory. Cognizant's revenue exhibited a remarkable 37% CAGR over a 15-year period, developing from a modest \$89 million in 1999 to a \$10 billion offshore powerhouse. We think LXFT can grow at a similarly high rate over the next 10 years. Our view is underpinned by management's recent guidance of 20% compounded revenue growth, \$1.5 billion in revenue by FY 2020, and a resulting market capitalization of \$3 billion within five years. In fact, we think that forecast is conservative. A more likely scenario: LXFT multiplies its revenue base by 4-5x supported by its position as a best-in-class provider of high-end software developers serving a massive total addressable market. Our DCF analysis suggests shares are worth ~\$108 today (105% upside) and likely more in time.

Luxoft's differentiated focus on high-end software development is executed via engagement of leading programming talent in the science-centric Central and Eastern European (CEE) region. Unlike the large Indian vendors deriving value primarily from labor arbitrage, LXFT's value proposition is predicated on an exceptionally skilled employee base to deliver sophisticated domain expertise. LXFT employs nearly 9,000 offshore programmers in the CEE geography, a region deeply rooted in science and technology; these emerging economies produce nearly one million engineering graduates annually. The company has already achieved success with this strategy, growing revenue at a 27% CAGR over the last five years while building out proficiency in sectors such as financial services and automotive. Furthermore, Luxoft commands a premium bill rate and generates the highest revenue per employee within the offshore industry. In an industry that competes aggressively for talent, LXFT boasts the lowest attrition rate among its peers.

The offshore IT services industry is well-positioned to grow, fueled by a significant enduring cost differential between U.S. and non-U.S. IT employees. The current climate of hyper-paced digital advancements within every industry, coupled with a shortage of talent in the U.S., will result in

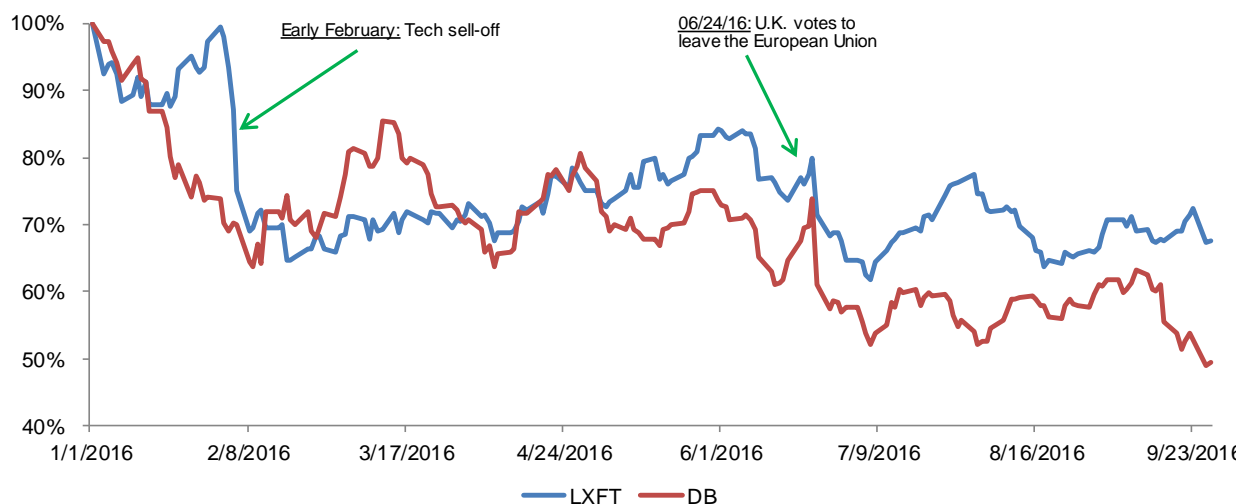
continued outsourcing of labor to countries with a cheaper and more abundant workforce. While the total offshore IT industry is expected to grow at 9% through 2019, the application outsourcing sub-segment in which Luxoft operates is projected to grow at 14%. Luxoft's ~9,000 IT employees represent a mere fraction of the hundreds of thousands employed by the Indian vendors, and its LTM revenue of \$681 million is a tiny portion of a thriving \$60 billion industry. If LXFT and its CEE peers attain a quarter of the success realized by their Indian counterparts in the late 90s and early 2000s, LXFT will not remain a \$1.7bn, or even \$10bn, company for much longer.

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I. Situation Overview

Weakness in Luxoft's shares began in early 2016 due to concerns of slowing growth and the perceived risk of losing Deutsche Bank (DB), Luxoft's largest customer. The sell-off of Luxoft was exacerbated by Brexit and the overall weakness of the banking sector, leading to all-time lows for DB shares. The market now completely ignores fundamentals and Luxoft's significant growth opportunity evident by the recent direct correlation of Luxoft's shares with DB. We believe these concerns are overblown. Even in the most turbulent times (financial crisis of 2008-2009 and European debt crisis of 2012) Luxoft managed to grow within its largest clients. We believe over the long-term, current concerns around Luxoft's relationship with DB will prove to be short-lived as the business continues to execute, grow and diversify.

2016 YTD Stock Price Performance: DB and LXFT



Luxoft's projects for Deutsche Bank are mission critical

Luxoft focuses on Deutsche Bank's front-office rather than back-office functions, with its projects supporting entire processes that are critical for operations. Furthermore, as a result of increased regulations, the majority of Luxoft's services help to keep Deutsche Bank in compliance with regulatory bodies in both the EU and the U.S. An example of a project that Luxoft assists with Deutsche Bank is Arena. Arena was a platform that was co-developed by Luxoft about 10 years ago and is a critical trading platform used for equities (acts as order management system for DB's equity traders). This has been an on-going project for years and is just one of many that Luxoft's ~2,600 engineers at DB help to manage (more examples of specific projects are available later in this report).

We find it unlikely that Luxoft faces any imminent risk of completely losing this account given the renewal of the DB MSA earlier this year which runs through 2020. DB, which has utilized Luxoft since 2003, plans to reduce costs significantly through '[Strategy 2020](#)' but based on our conversations with management, we don't expect those cuts to impact LXFT.

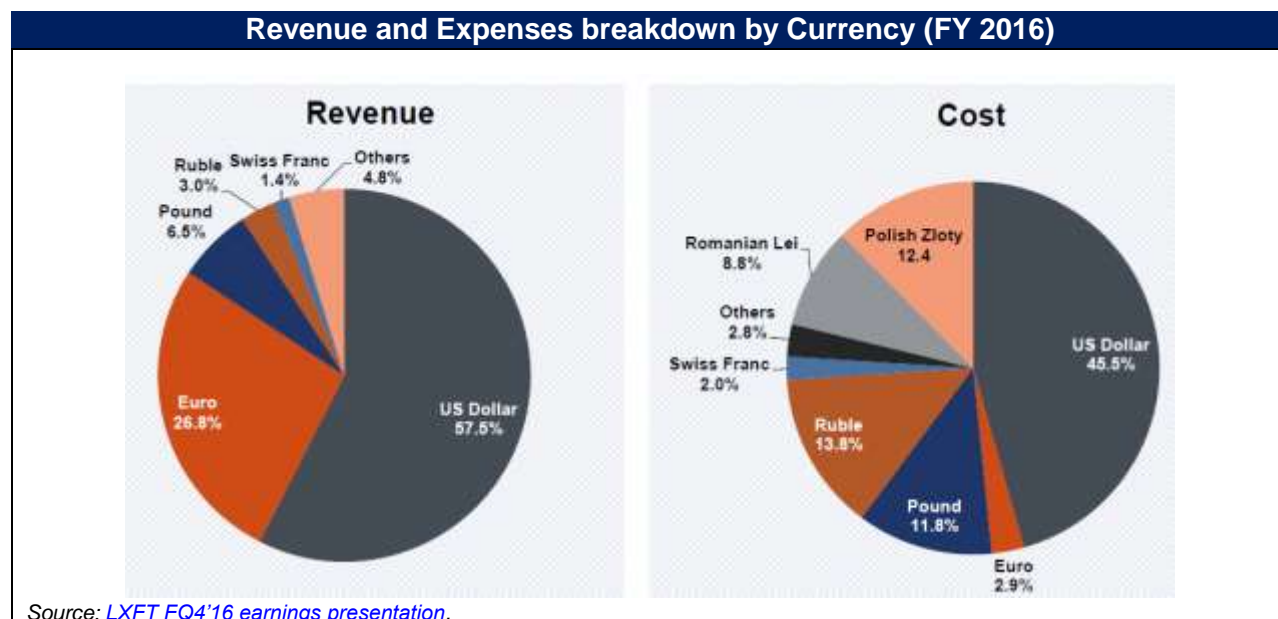
Deutsche Bank historically consolidated smaller IT vendors and shifted more work to Luxoft

In previous financial crises (financial crisis of 2008-2009 and European debt crisis of 2012), Deutsche Bank consolidated many of its smaller IT vendors and shifted more work to Luxoft. In 2012, Deutsche Bank undertook a major vendor consolidation and reduced the number of large IT vendors from 12 to 4. Luxoft benefited from that consolidation and attained Key Strategic Vendor status which led to an expanded footprint within the investment bank. While Luxoft is certainly larger today at DB than it was in 2012, we believe that given Luxoft's critical role within DB's core operations, any potential consolidation will likely occur with smaller, less-strategic vendors.

Today, non-strategic vendors account for about ~40% of Deutsche Bank's IT offshore budget (equivalent to ~\$800 million of total ~\$2 billion). We think any further consolidation would result in re-allocating more of the budget to strategic vendors. Luxoft's CEO believes that going forward the share of strategic vendors could grow from 60% to 80%, positioning Luxoft favorably as a top strategic vendor.

Luxoft has minimal exposure to the British Pound

Despite the significant European exposure, Luxoft will not be impacted by the recent devaluation of the British Pound. In the latest fiscal year, revenues from the Pound accounted for 7% of total revenue while expenses accounted for 12%. With a greater exposure to the pound in expenses, we actually expect margins to improve y-o-y as a result of the Pound devaluation. As evident by the chart below, Luxoft is paid by clients primarily on a USD and Euro basis.



Strong growth outside of Top 5 accounts

With Luxoft still in its nascency, customer concentration isn't an immediate concern for us at a current revenue base of \$681 million, because we believe that Luxoft will be many times larger in the future, and it's rapidly expanding beyond its top five customers. Luxoft reported 56% revenue growth in the FY 2016 from accounts outside the top 5; we are confident that customer concentration will not present an issue in the not too distant future.

Revenue Growth Excluding Top 5 Customers

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
	03/31/11	03/31/12	03/31/13	03/31/14	03/31/15	03/31/16
Total Revenue	\$198	\$271	\$315	\$398	\$521	\$651
Growth	--	37%	16%	27%	31%	25%
Top 5 Clients	\$142	\$192	\$219	\$286	\$374	\$422
Growth	--	35%	14%	31%	31%	13%
% of Total	71.7%	70.8%	69.7%	71.9%	71.9%	64.9%
Revenue excl. Top 5	\$56	\$79	\$95	\$112	\$146	\$228
Growth	--	41%	21%	17%	31%	56%

Source: Company filings.

Our revenue projections call for 15% top-line CAGR over the next 10 years. We believe that Luxoft's 20%+ growth over the next 1-3 years will be supported by proliferation in accounts outside the top 5. For DB, we assume little-to-no growth over our projection period. Management has made it clear that its base case is for DB to stabilize around \$200 million over the next few years. For UBS, we have revenue reaching around \$200 million, per management guidance. We do not assume significant growth for Harman beyond the \$50-60 million threshold, and expect CS to be on a similar trajectory as UBS. Outside of these large clients, we arrived at 30-35% growth, a hurdle which we think Luxoft will easily surpass given recent performance, as well as the growing portfolio of high potential accounts ("HPAs").

Revenue Projections

	Actual						Projected									
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 17E	FY 18E	FY 19E	FY 20E	FY 21E	FY 22E	FY 23E	FY 24E	FY 25E	FY 26E
	03/31/11	03/31/12	03/31/13	03/31/14	03/31/15	03/31/16	03/31/17	03/31/18	03/31/19	03/31/20	03/31/21	03/31/22	03/31/23	03/31/24	03/31/25	03/31/26
IT Employees	3,718	4,556	4,927	6,366	7,849	9,239	10,625	12,219	14,051	16,159	18,583	20,441	22,485	23,610	24,790	26,030
Growth	41.6%	22.5%	8.1%	29.2%	23.3%	17.7%	15.0%	15.0%	15.0%	15.0%	15.0%	10.0%	10.0%	5.0%	5.0%	5.0%
Avg. IT Employees	3,172	4,137	4,742	5,647	7,108	8,544	9,932	11,422	13,135	15,105	17,371	19,512	21,463	23,047	24,200	25,410
Sales/IT Employee	62,547	65,541	66,349	70,545	73,239	76,165	78,450	80,803	83,227	85,724	88,296	90,945	93,673	96,483	99,378	102,359
Growth	4.8%	1.2%	6.3%	3.8%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Revenue	\$198	\$271	\$315	\$398	\$521	\$651	\$779	\$923	\$1,093	\$1,295	\$1,534	\$1,775	\$2,011	\$2,224	\$2,405	\$2,601
Growth	36.7%	16.0%	26.6%	30.7%	25.0%	19.7%	18.5%	18.5%	18.5%	18.5%	15.7%	13.3%	10.6%	8.2%	8.1%	
Revenue from Top Accounts																
DB			91	129	189	194	198	200	202	202	202	202	202	202	202	202
Growth				41.5%	46.4%	2.6%	2.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
UBS			57	78	105	146	175	192	202	212	214	214	214	214	214	214
Growth				37.2%	34.7%	39.3%	20.0%	10.0%	5.0%	5.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Harman			24	34	40	47	56	59	60	60	60	60	60	60	60	60
Growth				39.8%	16.8%	18.4%	20.0%	5.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CS (Estimate)				20	30	45	68	95	123	147	162	178	196	206	216	216
Growth					50.0%	50.0%	50.0%	40.0%	30.0%	20.0%	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%
All other accounts						\$167	\$234	\$305	\$404	\$535	\$698	\$910	\$1,136	\$1,356	\$1,551	\$1,723
Growth						39.9%	30.3%	32.4%	32.4%	30.4%	30.4%	24.8%	19.3%	14.4%	11.1%	10.8%

Source: Company filings and Kerrisdale analysis.

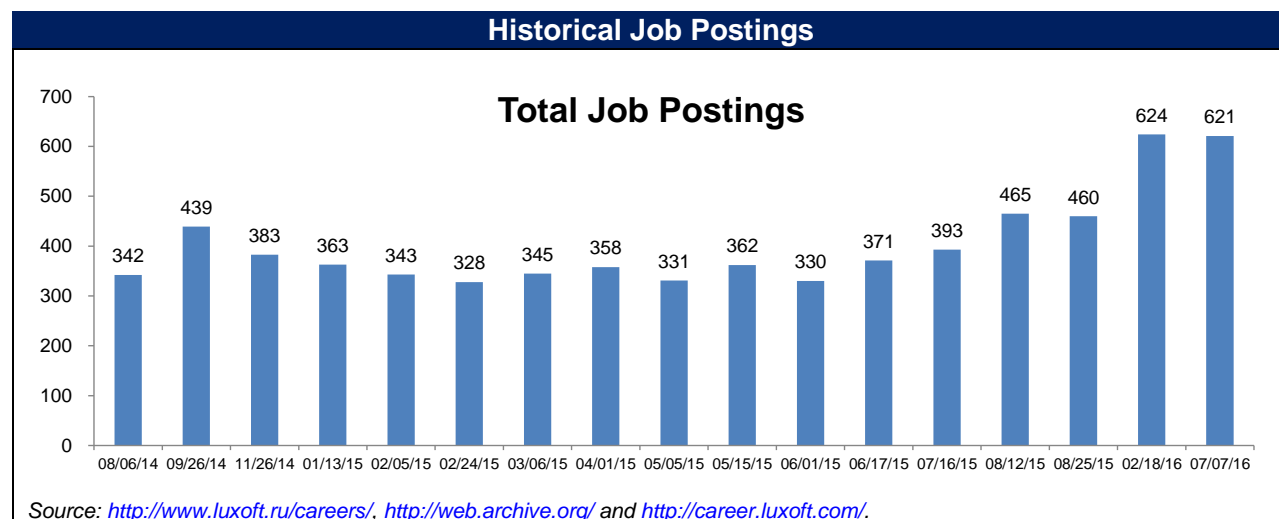
The number of high potential accounts increased from 12 at the IPO in 2013 to more than 40 at present. Clients are classified as HPAs if management believes the accounts have the potential to reach at least \$5 million in recurring annual revenue within the short-to mid-term. During the 9-month period ending 12/31/15, revenue from this account base grew at 177% y-o-y and comprised at least 25% of revenues in FY2016.

Overall, we foresee the slowdown of the top accounts being offset by a large and diverse customer base experiencing strong growth. While much attention is focused on Luxoft's work in the financial services sector, there's likely additional upside from the developing automotive segment (more detail on this sector later in the report) which continues to grow at 40%+. Luxoft CEO Dmitry Loschinin said automotive remains a high priority and the firm's investments appear to be paying off as an automotive OEM account added last year is already a top 10 account. Luxoft has demonstrated a willingness to allocate capital for M&A and, with its unlevered balance sheet, future tuck-in acquisitions provide yet another avenue of growth in excess of our base scenario.

Excess demand at other clients

Through our diligence with management, former executives and current customers, we discovered that demand far outpaces supply and Luxoft struggles to hire enough talented engineers as fast as it would like. Historically, Luxoft had excess demand to allocate an additional ~1,000 engineers for current customers. We think even in the unlikeliest scenario that projects get scaled down significantly at Deutsche Bank, Luxoft's revenue base would be protected by its ability to reallocate personnel to other customers.

Luxoft publishes very detailed job postings on its careers website (<http://career.luxoft.com/>) and we believe the number of job postings is a good proxy to measure excess demand. Throughout 2016, the number of job postings stayed in the ~620 area, implying that demand remains very strong.

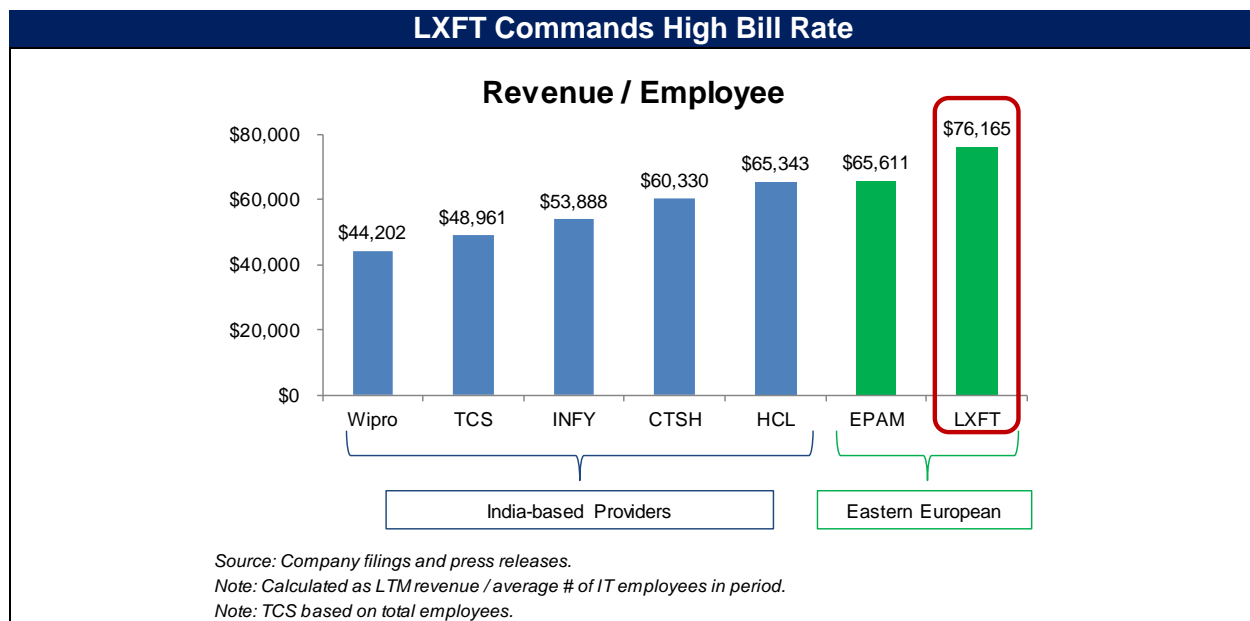


Concluding thoughts on current Deutsche Bank situation

Despite the challenges Deutsche Bank faces in an uncertain economic environment, Luxoft has proved resilient in similar macro environments and we believe Luxoft will ultimately grow out of this perceived issue as management continues to expand within other customers. Given the 20%+ growth and long-term potential to compound, we think Luxoft is too cheap at 18x earnings. Luxoft's projects are long-term in nature, with average engagements of at least 3-5 years; moreover, Luxoft is entrenched with DB until at least 2020, and growth from accounts outside the top 5 is resilient. We anticipate that the recent sell-off of in the stock price will prove temporary, and expect to see a significant return on our investment as Luxoft shares are currently trading at bargain prices.

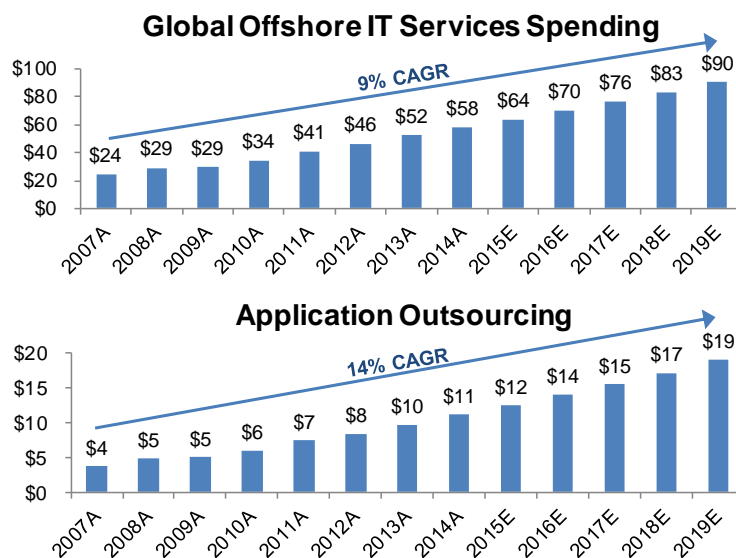
II. Investment Highlights

- Unique Central and Eastern European-based IT outsourcing firm focused exclusively on high-end software services.** Luxoft has over 9,000 offshore computer programmers and serves clients primarily in North America and Western Europe. Relative to its peers in India, Luxoft does not compete on price, but on providing teams of programmers who understand clients' businesses and industries intimately, and are capable of providing advanced, customized application development and other IT solutions. Rather than compete with Indian offshore providers that leverage labor arbitrage to undercut rivals, Luxoft focuses on high-end software services, hiring skilled engineers. Indian vendors oftentimes fill their ranks with novice developers, heavily recruiting recent college graduates; in contrast, 80% of Luxoft's employees have a master's degree and at least five years of professional experience. This approach has enabled Luxoft's developers to command a premium bill rate relative to the prevailing industry standard, as well as cultivate a reputation for unrivalled quality of work.



- Significant growth opportunity supported by Luxoft's focus on application services.** While global offshore IT services are expected to grow 9% annually through 2019, Luxoft operates in the application outsourcing sub-segment which is projected to grow 14% annually over the same period. Growth of the offshore IT industry will be supported by the cost differential between U.S. and non-U.S. IT employees. Furthermore, as U.S. companies scramble to fill gaps in areas such as mobility, big data, analytics and automation, the dearth of engineering talent should only become more pronounced over the next decade.

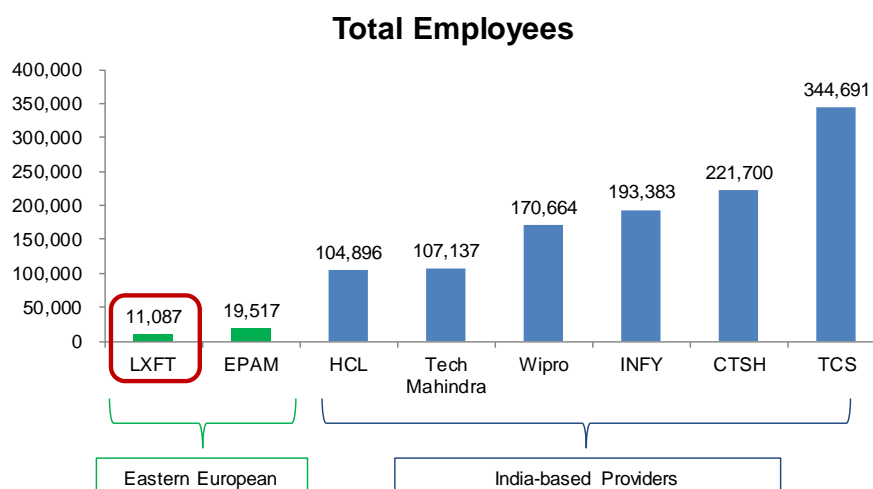
Application Outsourcing Projected to Outgrow Overall IT Spending



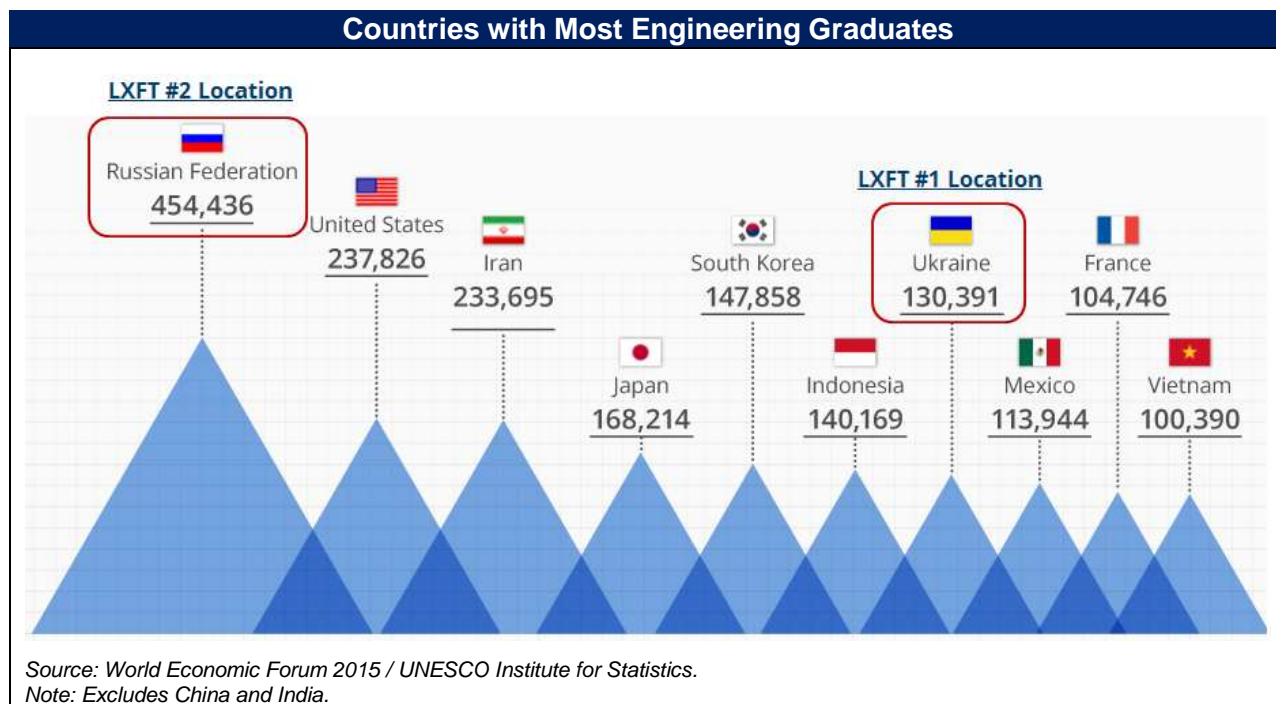
Source: IDC worldwide offshore IT services forecast.

- 11,000 total firm headcount highlights LXFT's relatively small position in the industry and potential growth opportunity.** HCL Technologies (HCL), which is only the sixth largest Indian offshore player, boasts an employee base that is still 10x that of Luxoft. With \$680 million in revenue, LXFT accounts for barely a sliver of a mammoth \$60 billion industry. If Luxoft can multiply its headcount by ten and deploy those new programmers at similar margins, the company's valuation could also easily multiply by a factor of ten. Given the abundance of high quality engineers available in the CEE region, Luxoft's ability to source new talent shouldn't be a formidable challenge. In the science-centric CEE geography, nearly 1 million students graduate annually with a degree in engineering. LXFT has a high concentration of employees in Russia and Ukraine, which together account for nearly 600k engineering graduates.

Headcount vs. Indian Players



Source: Company filings and press releases.



- Extremely compelling valuation vis-à-vis growth opportunity.** For an emerging IT services player with a unique niche in the growing offshore IT services industry supported by a favorable demographic (i.e. high concentration of smart engineers in CEE), we think the current share price undervalues LXFT's opportunity to multiply its revenue base by at least 4-5x over the next 10 years. We project that if LXFT's IT employee base grows at only an 11% CAGR (identical to the overall offshore application outsourcing industry), LXFT's revenue base would be 4x larger in 10 years. Our DCF suggests an intrinsic value of ~\$108/share, implying 105% upside.

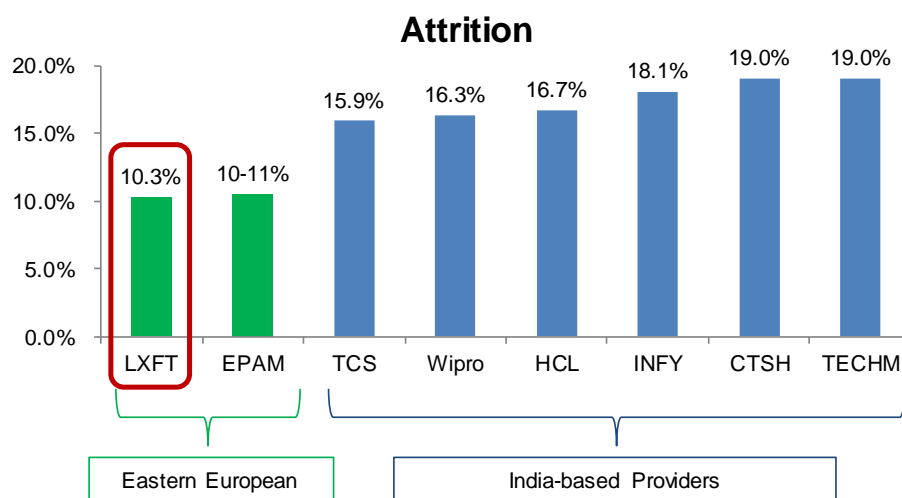
Discounted Cash Flow Analysis

	Historical				Projected									
	03/31/13	03/31/14	03/31/15	03/31/16	03/31/17	03/31/18	03/31/19	03/31/20	03/31/21	03/31/22	03/31/23	03/31/24	03/31/25	03/31/26
IT Employees	4,927	6,366	7,849	9,239	10,625	12,219	14,051	16,159	18,583	20,441	22,485	23,610	24,790	26,030
Growth	8.1%	29.2%	23.3%	17.7%	15.0%	15.0%	15.0%	15.0%	15.0%	10.0%	10.0%	5.0%	5.0%	5.0%
Average IT Employees	4,742	5,647	7,108	8,544	9,932	11,422	13,135	15,105	17,371	19,512	21,463	23,047	24,200	25,410
Revenue / IT Employee	\$66,349	\$70,545	\$73,239	\$76,165	\$78,450	\$80,803	\$83,227	\$85,724	\$88,296	\$90,945	\$93,673	\$96,483	\$99,378	\$102,359
Growth	1.2%	6.3%	3.8%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Revenue	\$315	\$398	\$521	\$651	\$779	\$923	\$1,093	\$1,295	\$1,534	\$1,775	\$2,011	\$2,224	\$2,405	\$2,601
Growth	16.0%	26.6%	30.7%	25.0%	19.7%	18.5%	18.5%	18.5%	18.5%	15.7%	13.3%	10.6%	8.2%	8.1%
Gross Profit	129	169	227	271	327	388	459	544	644	745	844	934	1,010	1,092
Margin	41.0%	42.4%	43.5%	41.7%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%
EBITDA	57	73	99	124	152	182	219	263	316	371	425	477	522	572
Margin	18.1%	18.3%	19.0%	19.0%	19.5%	19.8%	20.0%	20.3%	20.6%	20.9%	21.2%	21.4%	21.7%	22.0%
EBIT	48	60	82	100	128	155	186	224	270	317	365	410	450	494
Margin	15.2%	15.0%	15.7%	15.3%	16.5%	16.8%	17.0%	17.3%	17.6%	17.9%	18.2%	18.4%	18.7%	19.0%
Unlevered Free Cash Flow														
NOPAT (14% Tax)					110	133	160	193	232	273	314	353	387	425
Plus: D&A					23	28	33	39	46	53	60	67	72	78
Less: Capex					(27)	(32)	(38)	(45)	(54)	(62)	(70)	(78)	(84)	(91)
Less: Purchase of intangibles					(8)	(9)	(11)	(13)	(15)	(18)	(20)	(22)	(24)	(26)
Less: Change in Working Capital					(23)	(26)	(31)	(36)	(43)	(44)	(43)	(39)	(33)	0
Unlevered Free Cash Flow					75	93	113	137	166	203	241	281	318	386
Unlevered Yield					4.3%	5.4%	6.5%	7.9%	9.6%	11.7%	13.9%	16.2%	18.3%	22.2%
Discounted Value of Interim FCF					69	77	85	94	103	114	124	131	135	149
Discount Rate	10.0%													
Terminal FCF Multiple	17.5x													
Terminal Valuation	6,755													
Discounted Value of Interim FCF	1,080													
Discounted Value of Terminal	2,604													
Intrinsic Enterprise Value	3,684													
Less: Debt + MI	(14)													
Plus: Cash	132													
Intrinsic Equity Value	3,802													
Implied Share Price	\$108.38													
Upside / (Downside)	105%													

Source: Company filings and Kerrisdale analysis.

- **Attrition rate of 10.3% lowest in the industry.** In the IT outsourcing industry, talent is amongst a company's most valuable assets. As such, we consider employee attrition a key metric when analyzing the sector. Luxoft's employee attrition is one of the lowest in the field, due partly to its mature and highly experienced workforce in addition to its comparatively high pay for the region.

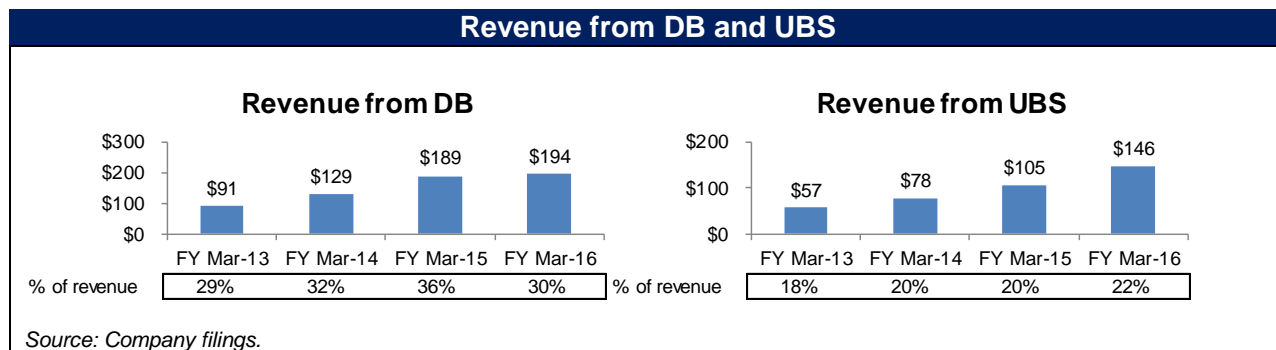
Attrition Relative to Industry



Source: Company filings and press releases.

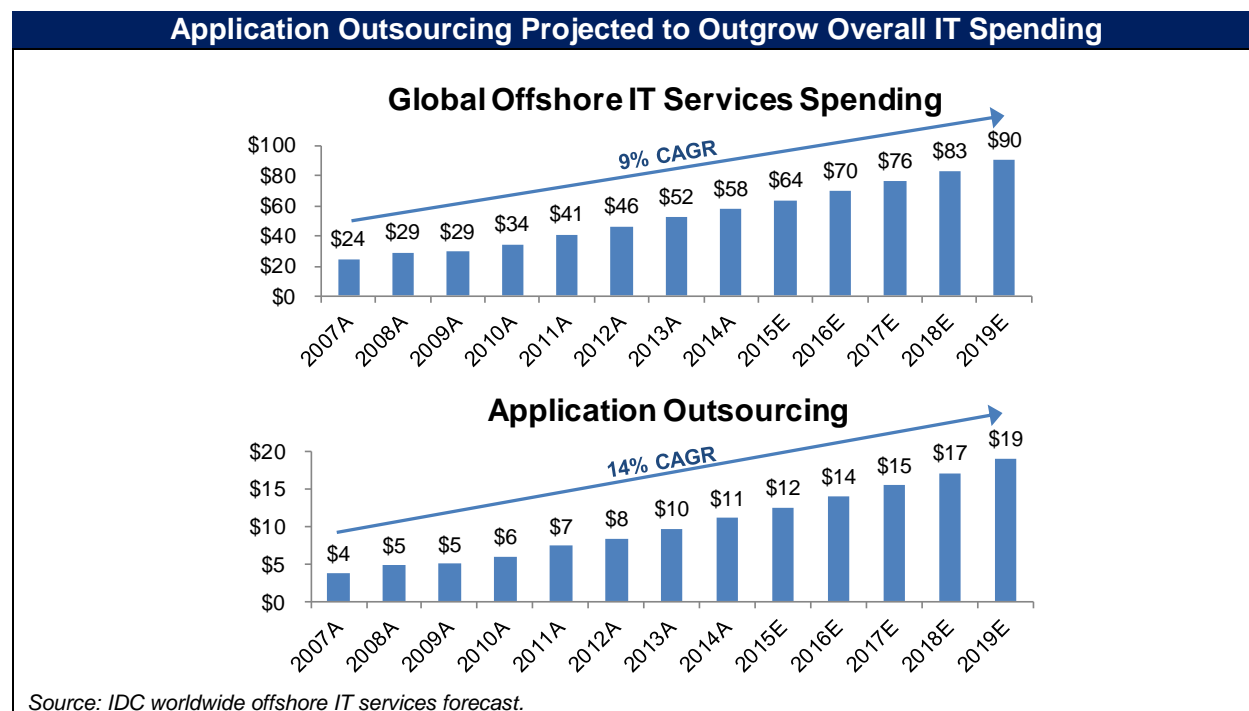
Source: Company filings and press releases.

- Success with Deutsche Bank and UBS Demonstrates High Customer Value Proposition.** Luxoft's enormous success with marquee clients such as Deutsche Bank and UBS (its largest clients) is representative of the company's ability to exponentially scale each new account. As a result of these long-term relationships (DB has been a customer since 2003, UBS since 2008) and focus on front-office assignments (revenues mostly generated in investment banking and wealth management), Luxoft has developed in-depth subject matter expertise in the financial services industry. Revenue from both clients nearly doubled in the two-year period between FY'13 and FY'15.

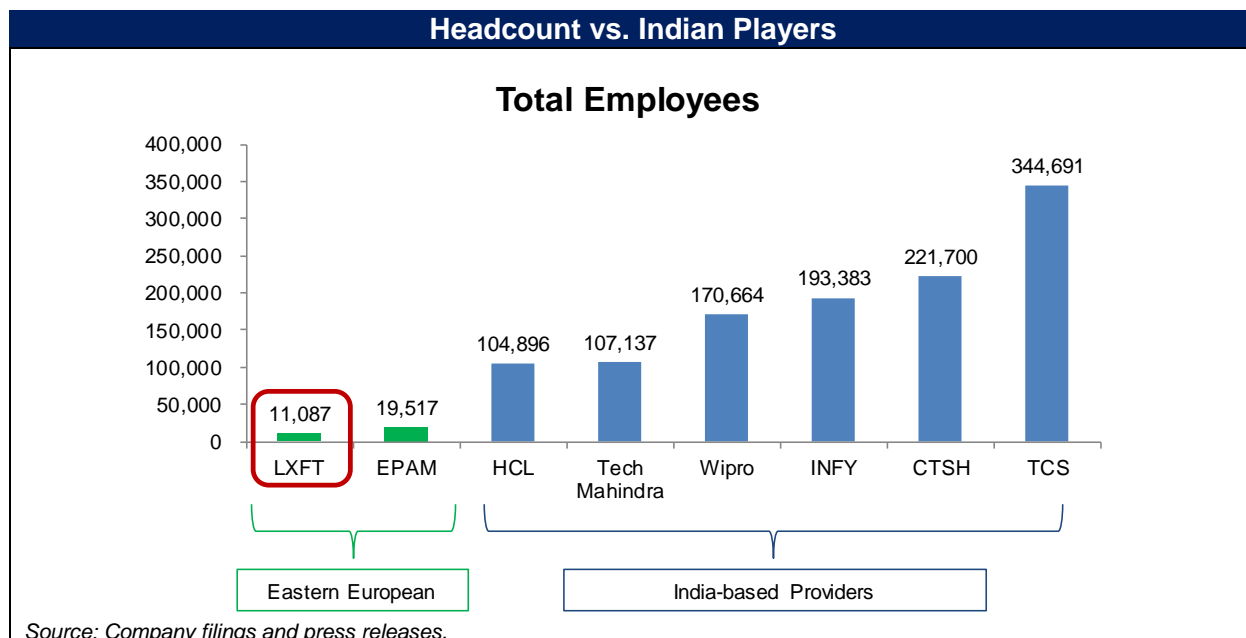


III. Significant Growth Opportunity Translates to Compelling Valuation

Since FY 2011, Luxoft posted an impressive 27% revenue CAGR and we believe the business will continue to compound 15-20% on the top-line over the next 10 years. Given projected growth for the application outsourcing sub-segment (14% through 2019), as well as Luxoft's relatively small scale (~9,500 engineers), we're very bullish that LXFT can exceed overall market growth by a significant margin over the next decade.



Luxoft's staff of 11,000 is miniscule relative to the size of the Indian offshore players. Despite being the sixth largest Indian offshore vendor, HCL still boasts an employee count 10x greater than LXFT's. Even if Luxoft's headcount increased at a 20% CAGR over the next 10 years to ~57k, it would still represent an immaterial fraction of the offshore industry. While we're not arguing that Luxoft's employee base will approach the scale of its Indian competitors anytime soon, the growth opportunity remains quite compelling. Luxoft's total addressable market – namely, demand for organized teams of sophisticated programmers – is massive.



Offshore IT services growth will be supported by the material cost differential between U.S. and non-U.S. IT employees. Based on Susquehanna research, U.S. IT personnel are expected to command a 66% and 25% premium to Indian and Eastern European employees, respectively. We believe this cost delta will continue to drive demand for outsourcing work to these geographies. Luxoft employees not only cost less, but have proven domain expertise, particularly in the financial services and automobile sectors.

Hourly Rates: U.S. vs. India and Eastern Europe

Hourly Bill Rate	2015E	2014E	2013A	2012A	2011A	2010A	2009A	2008A
India	\$36.1	\$35.3	\$34.2	\$34.2	\$34.5	\$31.3	\$32.5	\$34.0
US	\$60.1	\$58.9	\$61.7	\$64.9	\$68.6	\$67.2	\$70.9	\$78.5
Eastern Europe	\$48.2	\$43.7	\$41.1	\$35.4	\$35.2	\$32.6	\$29.9	\$32.7

Hourly Pay Rate	2015E	2014E	2013A	2012A	2011A	2010A	2009A	2008A
India	\$17.3	\$16.7	\$15.6	\$14.6	\$14.5	\$13.6	\$13.5	\$13.4
US	\$35.2	\$34.8	\$36.1	\$38.3	\$39.3	\$37.9	\$40.6	\$45.5
Eastern Europe	\$23.9	\$21.7	\$19.5	\$17.4	\$16.5	\$14.5	\$11.4	\$11.6

Source: Company Filings; SFG Research
Source: Susquehanna research.

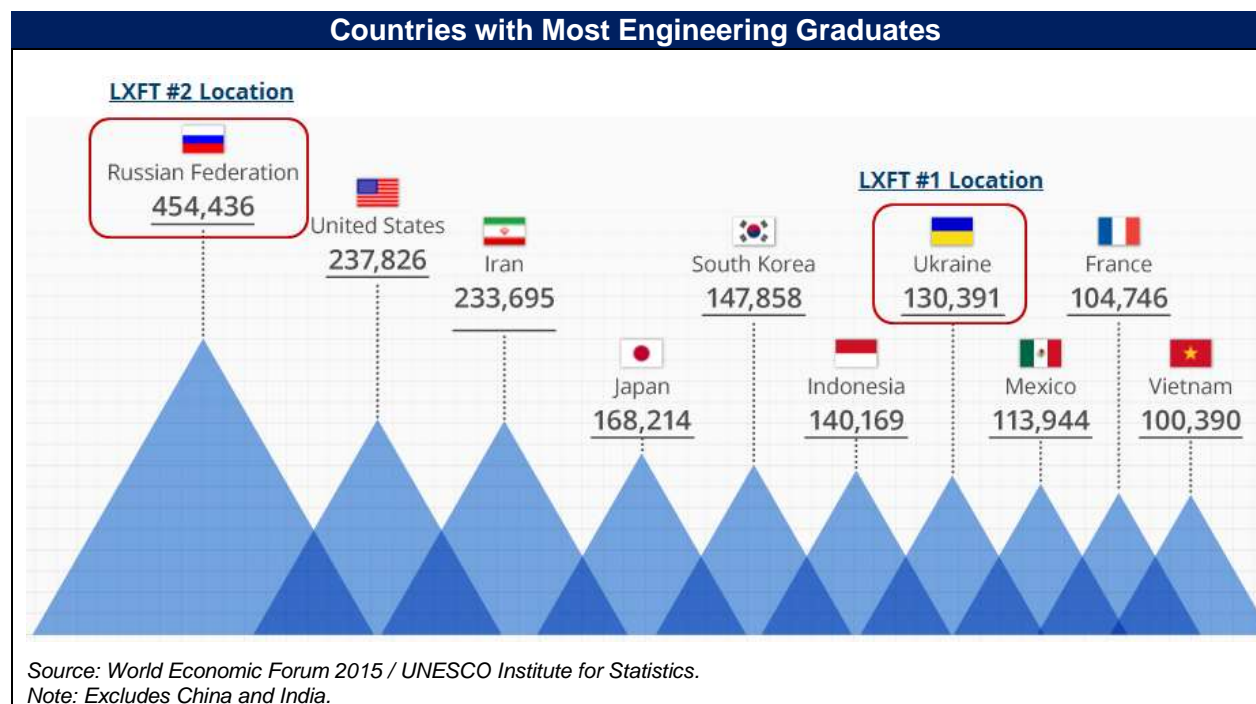
Furthermore, the shortage of engineering talent in the U.S. will be exacerbated over the next decade. According to the [2012 Report to the President](#), there is a significant gap between the supply and demand of science, technology, engineering and mathematics (STEM) graduates in the United States.

“Economic projections point to a need for approximately 1 million more STEM professionals than the U.S. will produce at the current rate over the next decade if the country is to retain its historical preeminence in science and technology. To meet this goal, the United States will need to increase the number of students who receive undergraduate STEM degrees by about 34% annually over current rates.

Currently the United States graduates about 300,000 bachelor and associate degrees in STEM fields annually. Fewer than 40% of students who enter college intending to major in a STEM field complete a STEM degree."

[-2012 Report to the President](#)

The legacy of the Soviet educational complex focused on mathematics and engineering is evident throughout the CEE region. According to the UNESCO Institute for Statistics, Russia and Ukraine churn out nearly 600k engineering graduates annually (LXFT's engineers are predominantly concentrated in these countries). While the U.S. ranks second in number of engineering graduates, the statistic is marginal relative to density per population. Ukraine currently produces ~130k annual engineering graduates, nearly half of the total U.S. number. Yet the population of Ukraine is only 44 million, compared with 319 million in the U.S. With Luxoft strategically focused on this STEM-centric geography, we believe future growth will be supported by access to this talent-rich resource pool.



Conservative Revenue Analysis Suggests Compelling Growth Opportunity

For our revenue forecasts, we project that Luxoft's employee base tracks the overall offshore application outsourcing market (about 14% CAGR over projection period). Based on the recent 18-20% growth of the employee base, we modeled 15% for FY 2017, eventually receding to ~10% per year beginning in FY 2022. In terms of revenue per employee, we project a 3% increase in productivity over the projection period, about 100bps lower than the 4% CAGR between FY 2011 and 2015. Management's goal is to reach \$100k/employee and we have modeled in a scenario where that is nearly achieved by year 10. Aggregating these estimates results in a revenue CAGR of ~15% and a business that is 4x larger by 2026 -- and that's just if we model employee growth at a 11% CAGR. The forecasts appear even more attractive as growth rates approach those

achieved by the Indian offshore industry between 2000 and 2010. For reference, CTSH grew sales from \$137 million in 2000 to \$4.6 billion in 2010; Infosys (INFY) increased from \$414 million in FY'01 to \$4.8 billion in FY'10.

Illustrative Revenue Analysis																	
	Actual						Projected										CAGR '16-'26
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 17E	FY 18E	FY 19E	FY 20E	FY 21E	FY 22E	FY 23E	FY 24E	FY 25E	FY 26E	
	03/31/11	03/31/12	03/31/13	03/31/14	03/31/15	03/31/16	03/31/17	03/31/18	03/31/19	03/31/20	03/31/21	03/31/22	03/31/23	03/31/24	03/31/25	03/31/26	
IT Employees	3,718	4,556	4,927	6,366	7,849	9,239	10,625	12,219	14,051	16,159	18,583	20,441	22,485	23,610	24,790	26,030	10.9%
Growth	41.6%	22.5%	8.1%	29.2%	23.3%	17.7%	15.0%	15.0%	15.0%	15.0%	15.0%	10.0%	10.0%	5.0%	5.0%	5.0%	
Avg. IT Employees	3,172	4,137	4,742	5,647	7,108	8,544	9,932	11,422	13,135	15,105	17,371	19,512	21,463	23,047	24,200	25,410	
Sales/IT Employee	62,547	65,541	66,349	70,545	73,239	76,165	78,450	80,803	83,227	85,724	88,296	90,945	93,673	96,483	99,378	102,359	3.0%
Growth		4.8%	1.2%	6.3%	3.8%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Total Revenue	\$198	\$271	\$315	\$398	\$521	\$651	\$779	\$923	\$1,093	\$1,295	\$1,534	\$1,775	\$2,011	\$2,224	\$2,405	\$2,601	14.9%
Growth		36.7%	16.0%	26.6%	30.7%	25.0%	19.7%	18.5%	18.5%	18.5%	18.5%	15.7%	13.3%	10.6%	8.2%	8.1%	
Source: Company filings and Kerrisdale analysis.																	

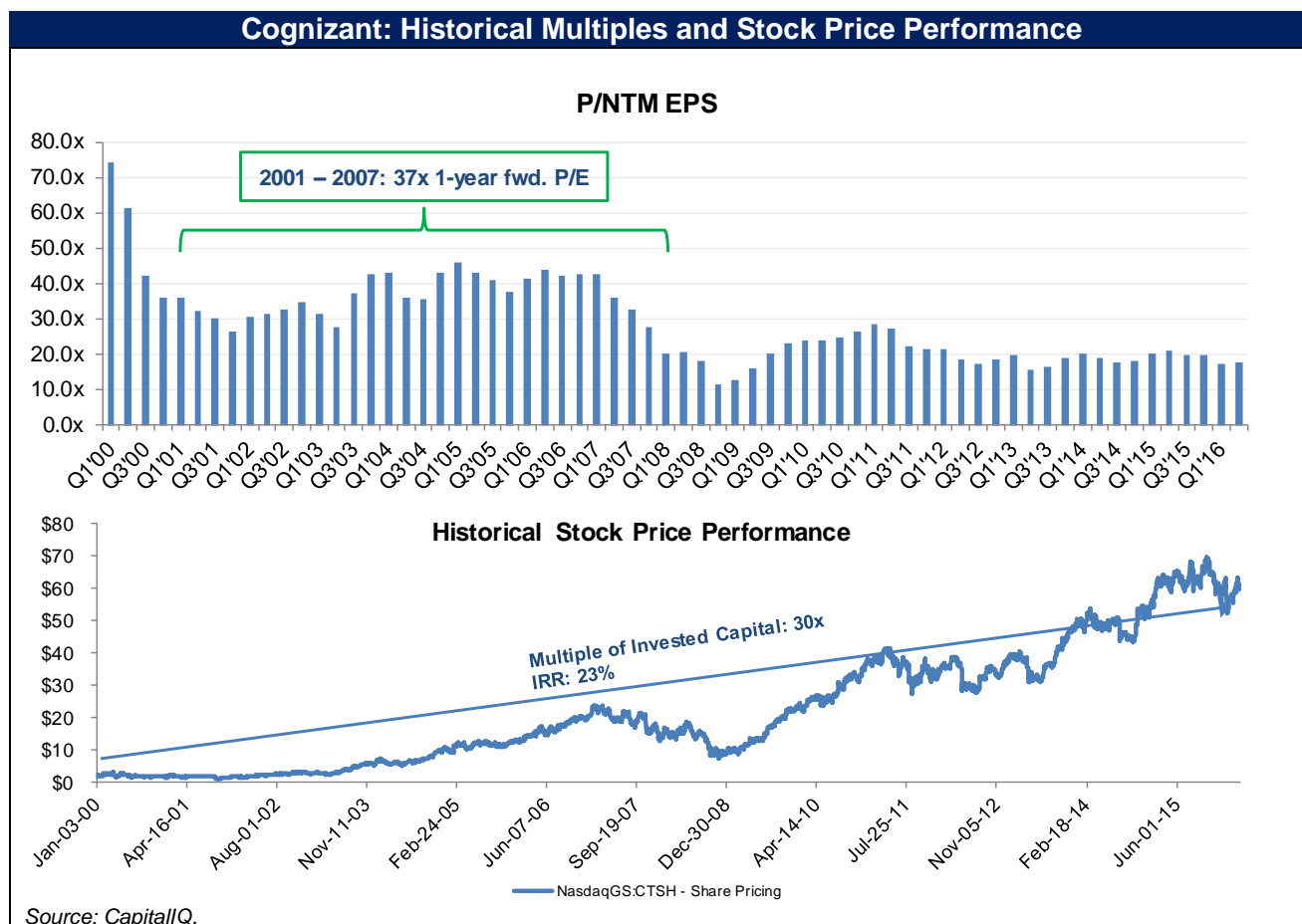
Valuation Too Compelling Considering Growth Opportunity

We think Luxoft is too cheap at its current valuation of 18x FY17E P/E given its long-term growth potential. Luxoft is a well-managed operator with a sticky customer base, a differentiated product, and a massive and rapidly growing total addressable market. We think the current share price undervalues LXFT's potential to multiply its revenue base by at least 4-5x over the next 10 years.

Current Valuation						
Capitalization			Trading Multiples			
Share Price as of 09/28/16	\$52.88		FY Ending March 31,			
Diluted Shares	35		2016A 2017E 2018E			
Market Capitalization	\$1,855		EV / Revenue	2.7x	2.2x	1.8x
Plus: Debt	0		EV / EBITDA	14.1x	12.7x	10.4x
Plus: Earnout Liability	14		EV / EBIT	17.4x	16.7x	13.4x
Less: Cash	(132)		P / E	19.4x	18.0x	15.0x
Enterprise Value	\$1,737					

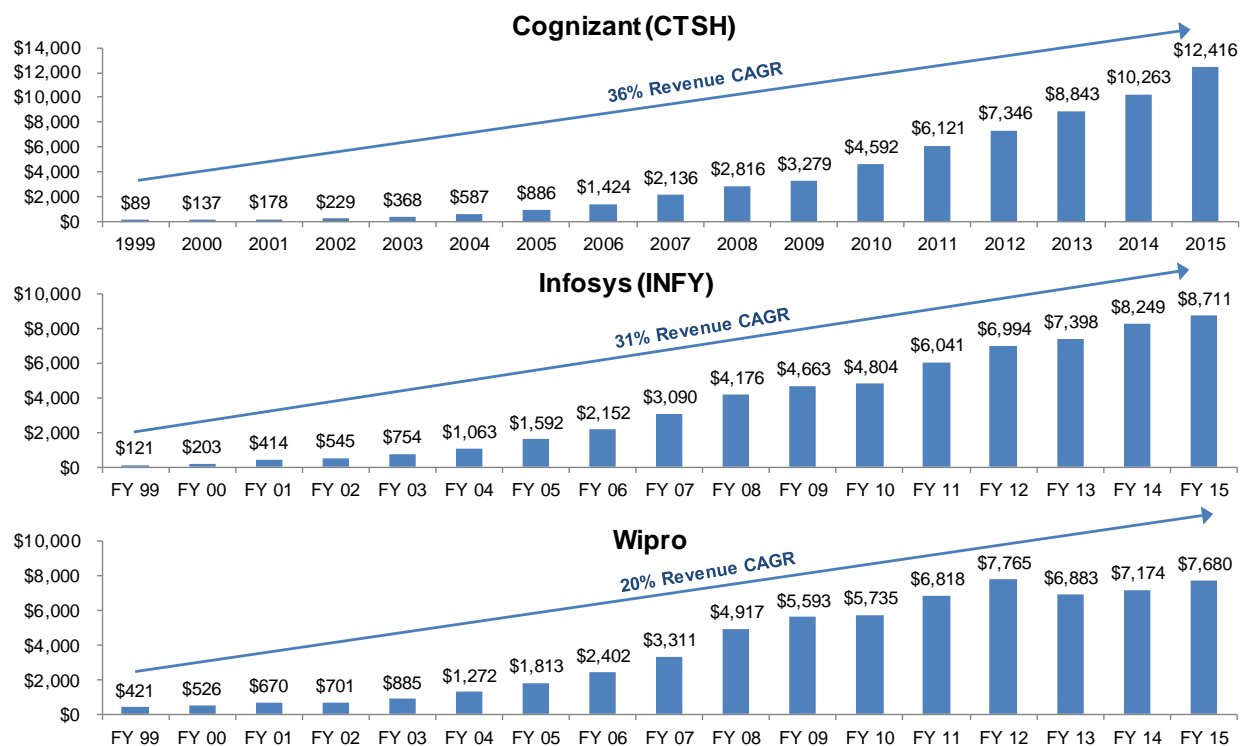
Source: Company filings and CapitalIQ.

The evolution of the Indian IT industry provides a cautionary study of how investors fixated on current free cash flow yields can miss out on a long-term growth story. While "value investors" may balk at Luxoft's seemingly high valuation, we would argue that a P/E multiple of 18x is a significant discount to where Indian vendors such as CTSH have traded since 2000. At the height of the tech bubble, CTSH traded as high as ~73x P/E (1-year forward basis) and between 2001 and 2007, CTSH averaged 37x P/E. Investors who avoided the stock on account of its optically high 30x+ valuation multiples missed out on a tremendous opportunity: a CTSH investor who bought shares in 2000 and held to today would have earned 30x his investment, representing a 23% IRR over a 16-year period.



Despite valuation multiples consistently above 30x between 2000 and 2007, investors earned outstanding returns because the Indian IT companies succeeded in compounding at very high growth rates. CTSH, INFY and Wipro (WPRO), achieved 36%, 31% and 20% CAGRs, respectively, over a 15-year period.

Historical Revenue: Cognizant, Infosys and Wipro



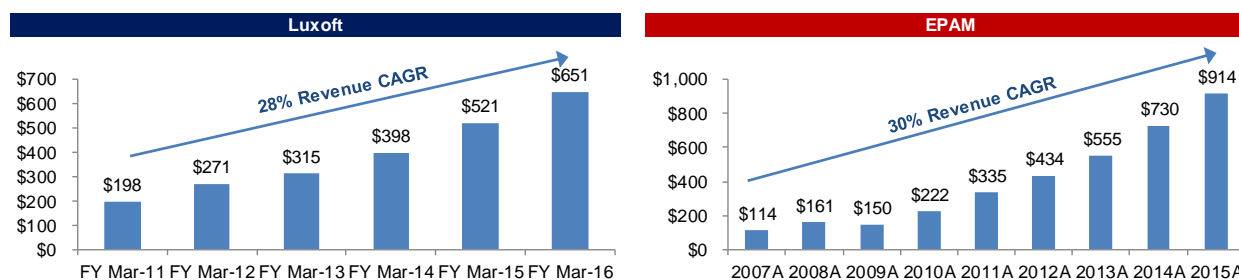
Source: Company filings and press releases.

Note: Fiscal year ends March 31 for Infosys and Wipro.

Note: FY 13 not comparable for Wipro due to business divestiture.

Luxoft and EPAM Systems Inc. (EPAM), the preeminent CEE players, exhibit similar revenue trajectories.

Revenue Trajectory of CEE IT Services Players



Source: Company filings.

To value Luxoft, we use a discounted cash flow analysis. A DCF properly captures the long-term opportunity, as compared to a 1- or 2-year forward valuation multiple metric. Our conservative analysis suggests an intrinsic share value of ~\$108, implying 105% upside.

The revenue build-up is identical to our previously discussed revenue analysis. We project top-line growth of 15% CAGR with EBIT margins expanding by approximately 370 basis points over the projection period. Similar to other IT services businesses, Luxoft's operating margins should

have room to increase as the business scales. Historically, CTSH reinvested incremental earnings above a 19-20% EBIT margin threshold, so we believe a 350-basis-point expansion to ~19% for LXFT by 2026 is reasonable. Our other assumptions include:

- A 10% discount rate. Normally we would model using a lower cost of capital, but given political instability in key geographies like Ukraine, we applied a slightly higher premium. Note that since Luxoft's sales are primarily to Western companies, investors should not look to Ukrainian or Russian interest rates, but instead Eurozone and American rates, as a point of reference.
- Purchase of intangibles at 1% of revenue. Under IFRS, LXFT capitalizes a portion of its software development costs. Purchase of intangibles as a percentage of revenue has historically approximated 0.3%-1.5% of sales.
- Capex at 3.5% of revenue. As a people-oriented services business, LXFT is not capital intensive.
- Terminal FCF multiple of 17.5x.

Discounted Cash Flow Analysis														
	Historical				Projected									
	03/31/13	03/31/14	03/31/15	03/31/16	03/31/17	03/31/18	03/31/19	03/31/20	03/31/21	03/31/22	03/31/23	03/31/24	03/31/25	03/31/26
IT Employees	4,927	6,366	7,849	9,239	10,625	12,219	14,051	16,159	18,583	20,441	22,485	23,610	24,790	26,030
Growth	8.1%	29.2%	23.3%	17.7%	15.0%	15.0%	15.0%	15.0%	15.0%	10.0%	10.0%	5.0%	5.0%	5.0%
Average IT Employees	4,742	5,647	7,108	8,544	9,932	11,422	13,135	15,105	17,371	19,512	21,463	23,047	24,200	25,410
Revenue / IT Employee	\$66,349	\$70,545	\$73,239	\$76,165	\$78,450	\$80,803	\$83,227	\$85,724	\$88,296	\$90,945	\$93,673	\$96,483	\$99,378	\$102,359
Growth	1.2%	6.3%	3.8%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Total Revenue	\$315	\$398	\$521	\$651	\$779	\$923	\$1,093	\$1,295	\$1,534	\$1,775	\$2,011	\$2,224	\$2,405	\$2,601
Growth	16.0%	26.6%	30.7%	25.0%	19.7%	18.5%	18.5%	18.5%	18.5%	15.7%	13.3%	10.6%	8.2%	8.1%
Gross Profit	129	169	227	271	327	388	459	544	644	745	844	934	1,010	1,092
Margin	41.0%	42.4%	43.5%	41.7%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%
EBITDA	57	73	99	124	152	182	219	263	316	371	425	477	522	572
Margin	18.1%	18.3%	19.0%	19.0%	19.5%	19.8%	20.0%	20.3%	20.6%	20.9%	21.2%	21.4%	21.7%	22.0%
EBIT	48	60	82	100	128	155	186	224	270	317	365	410	450	494
Margin	15.2%	15.0%	15.7%	15.3%	16.5%	16.8%	17.0%	17.3%	17.6%	17.9%	18.2%	18.4%	18.7%	19.0%
Unlevered Free Cash Flow														
NOPAT (14% Tax)					110	133	160	193	232	273	314	353	387	425
Plus: D&A					23	28	33	39	46	53	60	67	72	78
Less: Capex					(27)	(32)	(38)	(45)	(54)	(62)	(70)	(78)	(84)	(91)
Less: Purchase of intangibles					(8)	(9)	(11)	(13)	(15)	(18)	(20)	(22)	(24)	(26)
Less: Change in Working Capital					(23)	(26)	(31)	(36)	(43)	(44)	(43)	(39)	(33)	0
Unlevered Free Cash Flow					75	93	113	137	166	203	241	281	318	386
Unlevered Yield					4.3%	5.4%	6.5%	7.9%	9.6%	11.7%	13.9%	16.2%	18.3%	22.2%
Discounted Value of Interim FCF					69	77	85	94	103	114	124	131	135	149
Discount Rate	10.0%													
Terminal FCF Multiple	17.5x													
Terminal Valuation	6,755													
Discounted Value of Interim FCF	1,080													
Discounted Value of Terminal	2,604													
Intrinsic Enterprise Value	3,684													
Less: Debt + MI	(14)													
Plus: Cash	132													
Intrinsic Equity Value	3,802													
Implied Share Price	\$108.38													
Upside / (Downside)	105%													
Source: Company filings and Kerrisdale analysis.														

Source: Company filings and Kerrisdale analysis.

IV. High-Quality and Differentiated Business Model

“Eastern European vs. Indian. To us these are completely separate buckets. We don’t compare them. We will pitch them against each other but literally whenever we’re doing any of our analysis we completely break them out. And the reason for that is the skill set difference. We get a better quality of coders coming out of Eastern Europe. Mathematics is a religion in Eastern Europe and coding is just mathematics....

*...It’s really simple. If you came in on a Monday morning and you phoned your head of development in India and you said ‘look I need this by Friday’ knowing full well that that can never be done, the answer is ‘Yes!’. ‘Yep we’ll do it.’ And it makes you nervous. And when you moved across to this unnamed Eastern European vendor what happened then? When I told them I need this by Friday I was told I’m doing completely the wrong thing and what I should really be doing is this. And that’s the difference. I’ll be honest with you. They were right in that instance. I used to be a coder so I can say this. Coders are naturally lazy people. They look for the most efficient way. The problem is you cut corners that you may potentially need in the future. So I would say as far as differences are concerned the **quality of coding is significantly better that we see coming out of those Eastern European blocs.**”*

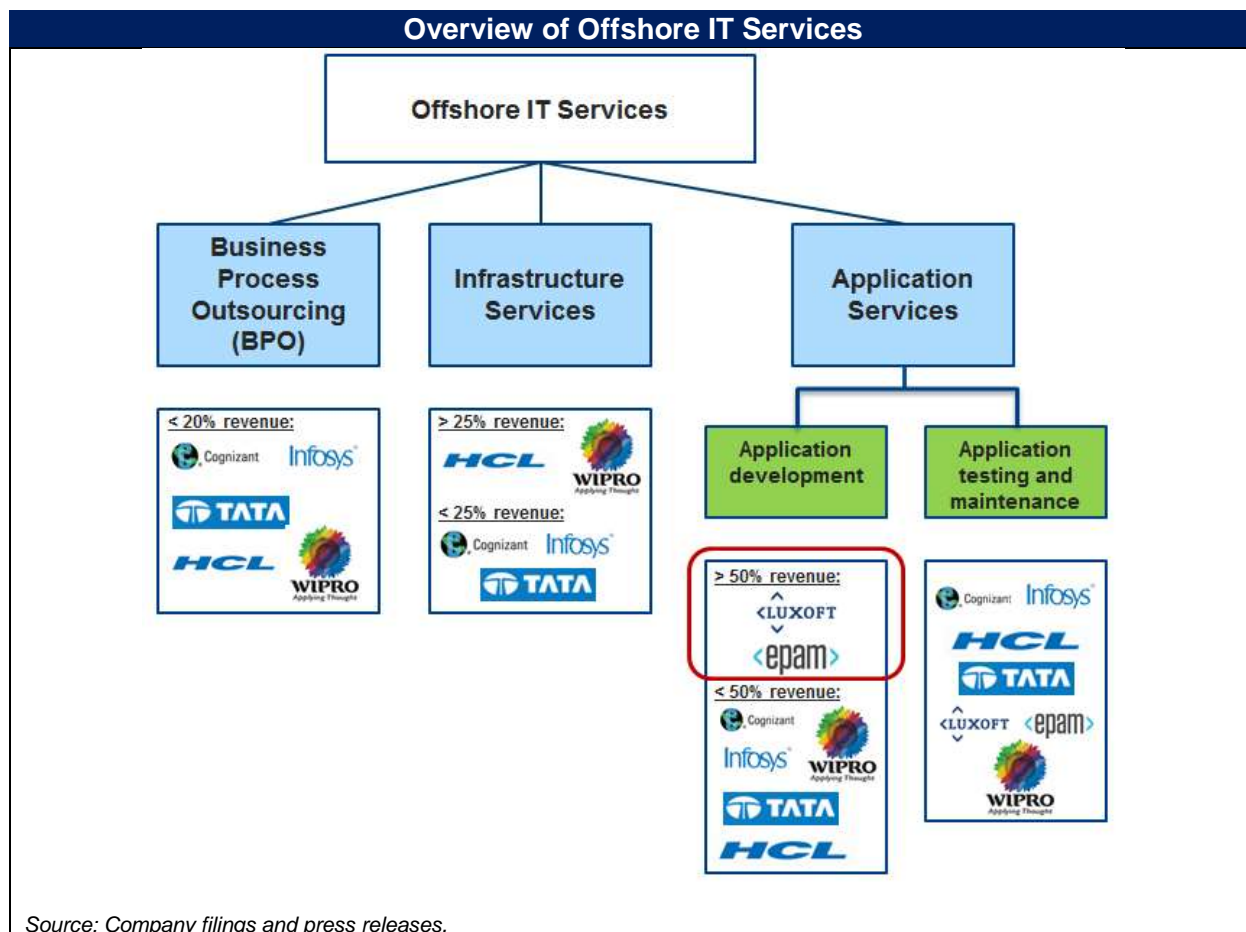
—James Aylen, Technology Business Development at UBS (at LXFT analyst day)

Luxoft has succeeded in establishing a unique edge in offshore IT services, an industry where many key players have failed to differentiate themselves. Given the small scale of Eastern European companies relative to the Indian heavyweights, investors often overlook the differences between some of the small Eastern European players and the Indian providers assuming the services of Luxoft, and its larger peer EPAM, are comparable to those of Indian vendors Infosys, Cognizant, Wipro, etc.

However, Luxoft is focused exclusively on application services and advanced, customized IT solutions. Specifically, LXFT’s forte is application development, as opposed to more mechanical application maintenance and testing. Clients turn to Luxoft for complicated tasks, customized solutions, and adept programmers who take ownership of deliverables, not simply an army of bodies. The more rudimentary offerings of the Indian providers present a poor substitute.

Focus on High-End Application Development

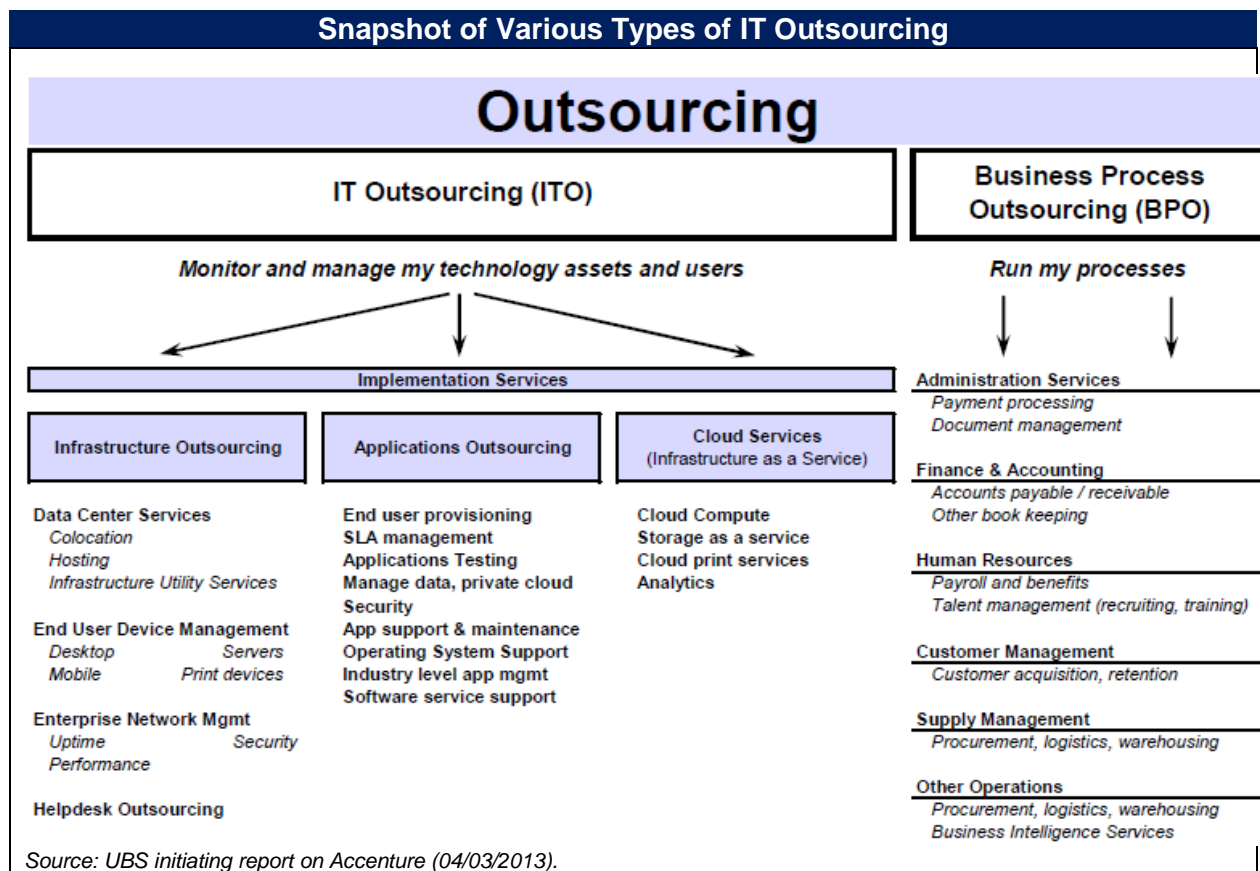
The IT services industry can be segmented into three areas: business process outsourcing (BPO), infrastructure services and application services. Indian providers such as Cognizant, Infosys, HCL Technologies and Wipro provide services across the entire spectrum; Luxoft focuses exclusively on the application services sub-segment.



Buzzwords applied in the IT industry can be confusing, often obscuring what some of the services actually encompass. While we've divided the IT outsourcing industry into three distinct sub-segments for illustrative purposes, the different functions are separated by more of a "dotted grey-line," as projects could entail both labor-intensive BPO work and bespoke application development. For instance, Cognizant might be hired to build software from scratch, and a different vendor might be engaged to help with the maintenance. With that said, the differences between BPO, infrastructure outsourcing and application services could be simply defined as follows:

- Infrastructure services: 3rd party IT vendor (like HCL or Wipro) monitors and manages the hardware and software of the client's underlying technology assets and users (i.e. data centers, end user management, security, help desk)
- Business process outsourcing: 3rd party IT vendor manages a specific business activity (i.e. payroll, HR, accounts receivable, etc.)
- Application services: 3rd party IT vendor provides customized software solution tailored to a specific business purpose

The chart below outlines the various sub-segments and provides some high-level examples. We will follow with specific examples.



Infrastructure Outsourcing

Infrastructure outsourcing consists of services related to helping an enterprise manage its IT assets (i.e. data centers, network hardware, security services) and end user support. Services may include management of help desks (i.e. assist end users with basic IT issues), end user devices, data centers, network services and IT spend. Specific examples of infrastructure outsourcing services include the following:

- Large global bank hires IT outsourcer to help integrate different IT systems of numerous acquired entities
 - Current IT infrastructure includes multiple voice, data and IT networks with limited integration
 - Each brand and office ran on a separate network, serving 100,000 end users and more than 10,000 call center agents
 - Aging equipment and separate carrier contracts exacerbate issues in integrating under one consolidated network
 - IT vendor forms an agile cloud-based network to support all voice and data needs on global scale and replaces all old and legacy systems
- Large global corporation hires IT outsourcer to help manage the demand for 24/7 technical support due to a significant increase in the number of applications and device usage
 - IT outsourcer takes over the entire service desk and provides a single point of contact for all technology incidents and requests

- Provides support to over 100,000 end users
- Outsourcing this function allows corporate to minimize the cost of downtime

Business Process Outsourcing (BPO)

Exponential growth in the offshore outsourcing industry in the late 90s through early 2000s was largely attributable to U.S. and European corporations taking advantage of cheap labor in countries like India. The industry grew very rapidly as global corporations realized significant cost savings from outsourcing non-complex, non-strategic tasks such as those related to human resources, financial processes (i.e. A/R, A/P, billing and document management), other administrative processes and customer services (i.e. customer call centers). These fairly mundane tasks, outsourced to 3rd party vendors, can be categorized within the BPO umbrella. The chart above provides some high-level categories within BPO; additional examples include the following:

- Customer service / tech support: Large U.S. wireless operator outsources in-bound customer calls to delivery centers based in India
- Large retail bank outsources document management services such as printing and mailing of statements. 3rd party vendor manages the flow of customer data into a centralized database that can print out and mail customer statements
- Target decides to outsource the revenue cycle management process. 3rd party vendor handles collection and maintenance of all data for Target's accounts receivables
- [T-Mobile UK hires Infosys to manage all activities related to the finance department](#) including customer finance (credit referrals, billing and commissions, fraud), procurement & control (accounts payable, procurement ops and support, IT capex), accounting, and commercial finance (reporting, planning, marketing controlling)
- [Large Australian Bank hires Infosys](#) to fix errors in its payroll process

Application Outsourcing

Companies rely on 3rd party vendors to build software from scratch when requisite packaged software does not exist. Large banks like Deutsche Bank and UBS benefit from outsourcing to specialty vendors such as Luxoft and EPAM which possess a thorough understanding of their clients' industries and can quickly develop software tailored to address a specific need. Luxoft focuses predominantly on application development, a service that is primarily project-based and involves customizing a solution from scratch. Unlike the Indian vendors that work across the IT services spectrum (BPO, infrastructure and application outsourcing), Luxoft focuses on the industries in which it has the greatest expertise to develop unique and sophisticated software solutions for clients. Luxoft's high quality output is best exemplified by real projects; we have provided a selection of these initiatives below.

- Designed a [market data analysis system](#) to pull real-time and historical equity and equity derivatives data for a global top 10 investment bank
 - DB required an application to execute time-series analysis on equity and equity derivatives market data to help develop internal trading strategy and portfolio management
 - The requirements included:
 - Real-time capture of every tick from multiple exchanges

- Maintain database of historical quote and trade data
 - Provide data filtration capabilities to remove unwanted data such as block trades and off-exchange trades
 - Calculate multiple price-related values including VWAP (volume weighted average price), TWAP (time weighted average price) and average spread
- Luxoft ultimately delivered a solution which reduced costs for the client through:
 - Real-time integration between exchanges and bank's operations
 - Improved performance, latency and stability of real-time market data retrieval
- [Prime brokerage client portal](#) for large global investment bank
 - Luxoft created an online portal for prime brokerage clients which provided access to accounts, investment products and customer service
 - Portal allows customers to receive information on:
 - Executions linked to orders, allocated trades, cleared trades, current positions and balances, cash and securities collateral, margin and margin calls
 - Portal allows self-service functions such as:
 - Make queries on missing trades, not-recognized trades
 - Withdraw and deposit cash
 - Create fx requests
 - Withdraw and propose new securities collateral
 - Receive alerts (expired trades, forthcoming expirations)
 - Project required 40+ Luxoft staff and over 1 year of development time
- [Liquidity management and analysis system](#) for large global investment bank
 - Following the global financial crisis, this client hired Luxoft to develop a new system that would measure and analyze end-of-day liquidity in a way that complied with Basel II requirements
 - This bank originally began the development with support from an Indian vendor but as the system's complexity and size hit critical levels, they selected Luxoft as the new partner
 - Luxoft delivered the project on time and within the budget and the system was able to provide the following functions:
 - Management of short-term liquidity gaps against existing limits
 - Management of overnight funding exposure
 - Collateral management
 - Maintaining liquidity reserve in the form of liquid assets
 - Analysis of liquidity drivers (ratings, regional crises, insecure funding, insufficient collateral, etc.) for stress testing
- [Virtual data room \(VDR\)](#) for a leading financial print and media company in the UK
 - Luxoft developed a secure, controlled-access VDR to facilitate due diligence for M&A transactions, IPOs and audit transactions
 - Ensuring confidentiality of the documents in a virtual repository extremely important
 - Client required high quality, reliable software to eliminate risk of financial or legal consequences resulting from data leaks
- Loan collection management system for large Russian corporate and retail bank
 - Luxoft developed a loan collection management system to monitor unpaid debt and to automate and streamline the collections process

- High growth of Russian corporate and retail lending resulted in increased risk of delinquent debt
- Luxoft's solution included functionality for following:
 - Debt management
 - Automated credit agreement tracking for assignment or removal of bad debt status
 - Segmentation of debtors with recommended collection approach
 - Ability to track employee performance on assigned recovery

Developing Industry Expertise Results in Deeper Client Relationships

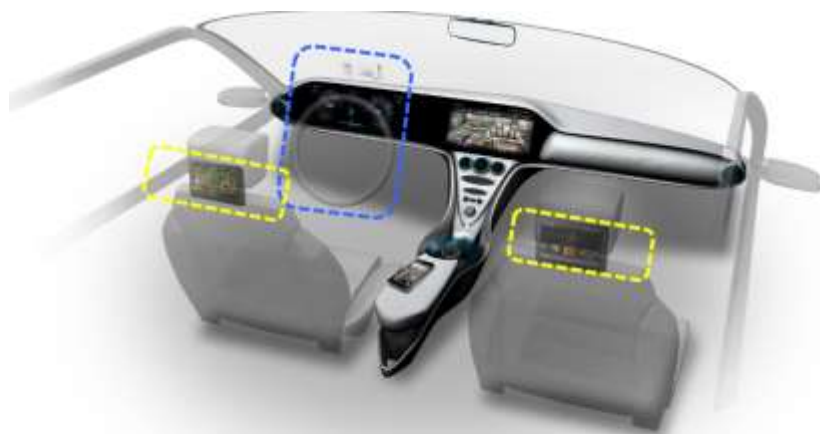
"We worked with Luxoft on interactive video tutorials and Luxoft not only met our objectives, but exceeded our expectation. Knowing this project would be the first of many, we selected Luxoft as our long-term development partner, not only because of their native expertise, but because of their superb track record of creating innovative software solutions. We look forward to continued teamwork on future software development projects"

– Jim Buczkowski, Technical Fellow and Director of Electrical and Electronic Systems at Ford Motor Company

Luxoft's go-to-market strategy is to continue developing proficiency in its core industries. The success of this approach is demonstrated by the revenue generated from clients in financial services and automotive; these two verticals account for nearly 80% of total revenue. Between FY 2011-2015, revenue from financial services and automobile grew at a CAGR of 37% and 40%, respectively. While Luxoft is well known for its financial services expertise, thanks in large part to Deutsche Bank and UBS (which we discuss later in this report), revenue from automobile clients continues to account for significant growth.

Luxoft's expertise in the automobile sector is human machine interface (HMI). In a consumer vehicle, HMI is essentially a tool that presents information to the driver (e.g. a digital cluster that shows how fast you're driving, how much gas you have left, etc.). Luxoft has relationships with Tier 1 auto suppliers (like Harman) and plays a vital role in ensuring functionality of software for the affiliated hardware to be implemented in a vehicle.

Human Machine Interface (HMI)



CONTROLS, INFORMATION, INTERACTION, INTELLIGENCE

Source: [Luxoft presentation on automobile.](#)

A good example of HMI technology is the heads-up display (also known as HUD), which is a transparent display installed right above the driver's side of the dashboard or integrated directly into the windshield, allowing the driver to see data (current speed, speed limit, directions from navigation, gas tank indicator, etc.) without looking away from their direct viewpoint.

Heads-up Display (HUD)



Source: [Luxoft presentation on automobile.](#)

The coding required to build the software behind this kind of technology is extremely complicated, and manufacturers rely on Luxoft to ensure that this technology works seamlessly. While revenue

from the automobile segment accounts for only 12% of total revenue, the industry is rapidly expanding and evolving to incorporate sophisticated components like the HUD. The market for the HUD alone is expected to grow from 6.6 million units in 2012 to over 75 million units in 2020 (per LXFT).

Other examples of Luxoft's projects in automobile are below:

– [Interactive tutorial](#) for in-car infotainment system for Ford

- Ford decided to develop an interactive tutorial to help new drivers and auto dealers learn the in-car communications and entertainment system as quickly and conveniently as possible
- Luxoft created the MyFord Touch Guide as a multi-platform application that is able to run on iOS, Android and Windows devices
 - Virtual avatar provides narrative and video instructions on exactly how to engage various features
- Luxoft completed the project within the 6 month requirement as set forth by Ford



– [Augmented reality navigation system](#) for BMW

- Luxoft designed solution for BMW's new 7 Series line
- System provides driving and navigation guidance with the interaction system overlapped directly to environment (i.e. directly on windshield)
- Numerous functions including:
 - Recognition of current car position and orientation on road
 - Filtering and tracking of detected vanishing points
 - Vanishing point and lane borders detection for camera position estimation and road width estimation
- Example of road modeling, speed limit, actual speed and next action hint

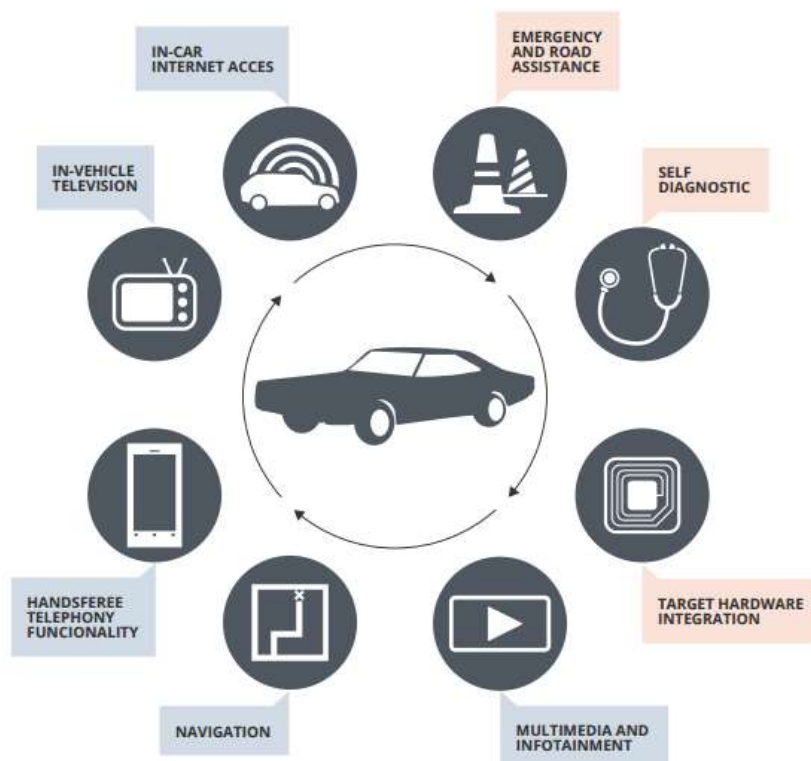


- [3D digital map data processing](#) for European manufacturer of automotive infotainment, multimedia and navigation systems
 - Luxoft brought in to develop algorithms for processing and visualization of major types of 3D objects required for digital map compilation
 - Screenshot of 3D navigation map



- [Car infotainment system](#) for large vendor of automotive electronics, multimedia and related systems (we suspect to be Harman, Luxoft's 3rd largest customer)
 - Client looked to Luxoft to jointly develop a universal car infotainment and multimedia system that would include telephony, internet communications, onboard navigation and interactive speech control as a platform for a number of high-end vehicle manufacturers (think BMW, Mercedes, etc.)
 - Luxoft cooperated with several other hardware and software vendors to deliver a complex solution with multiple applications including:
 - Telephony communications (hands-free and mobile internet), navigation, TV, emergency calling

- System design encompassed functionality across numerous functions (see below)



At the company's Investor Day last November, Harman's CEO made several remarks that confirmed Luxoft's reputation for providing high quality services in the automobile sector. Harman's CEO suggested that Luxoft will play an increasingly larger role in the automotive space and he will remain a long-term customer. Some of his quotes are below.

"Infotainment, which is our largest business, this year about \$3 billion. We are the single largest provider of infotainment and Harman has been... projected winner of the 'connected car' -- even if you believe, and I do, that soon within 5 years we'll see many self-driven cars"

*"How many people know that **cars have more software than a big airplane**? Cars are approaching **100 million lines of code**, very high-end cars, like the 7 Series of BMW or Mercedes S-Class. Almost 100 million. And 20 million to 25 million of the lines of code are ones we put in. That's how complex this machine is."*

*"So what comes with connected cars in your mind? The number one thing that comes to me is that it's a services business. It's no more providing a onetime system architecture in the car and you say goodbye, see you next time, 10 years from now. **These systems require constant updates, constant application services, over-the-year updates, and what have you.** And we're just scratching the surface."*

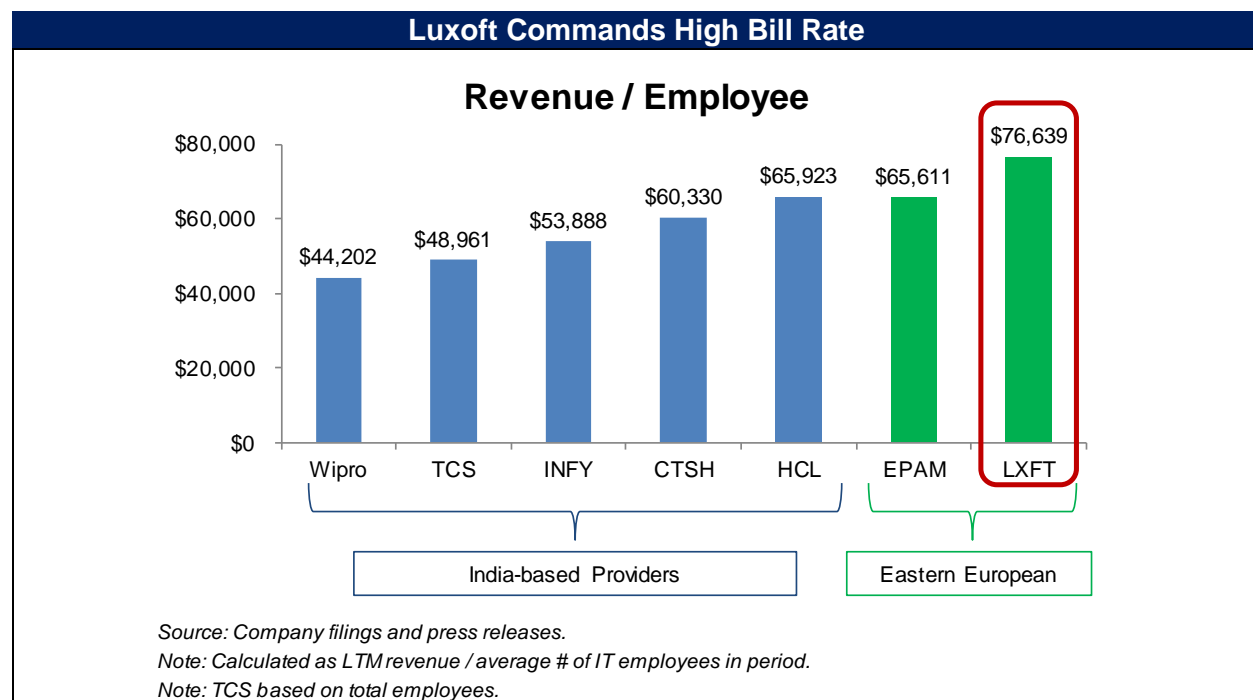
*"And Luxoft has been time-tested, as I said. We have our journey, [and after] 8 solid years [we have come] to a point where we collocate. So **there's no boundary between us.** We*

collocate to a point where [not only is] the economic model clear, but the technical model is absolutely clear. **We know from each other what to expect and where we're going to be 3 years from now.**

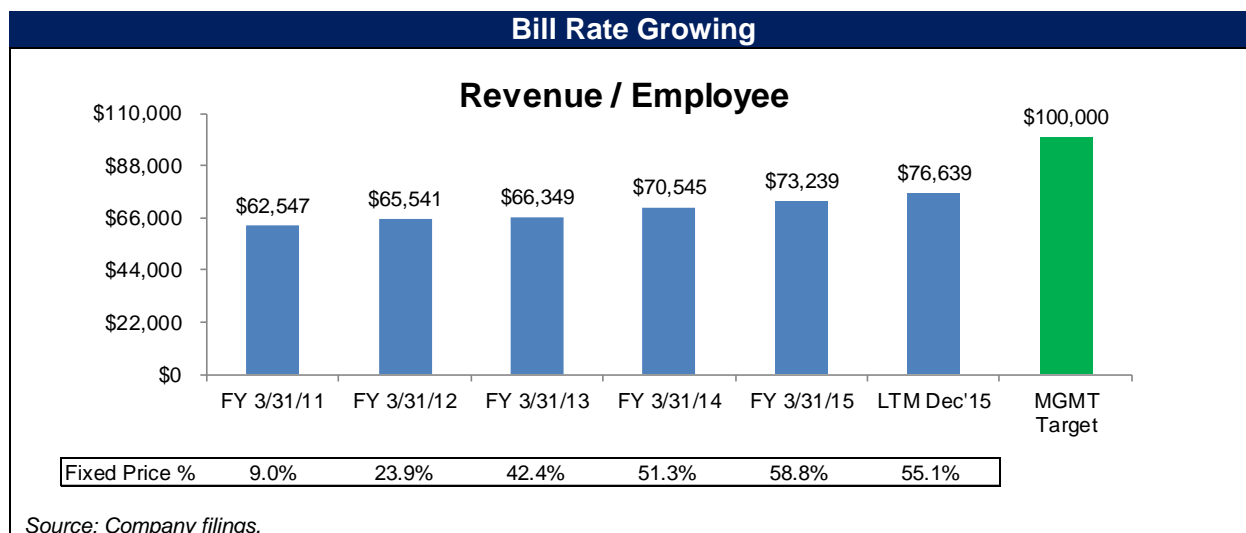
[Emphasis Added]

Luxoft Stands Out Due to Unique Approach

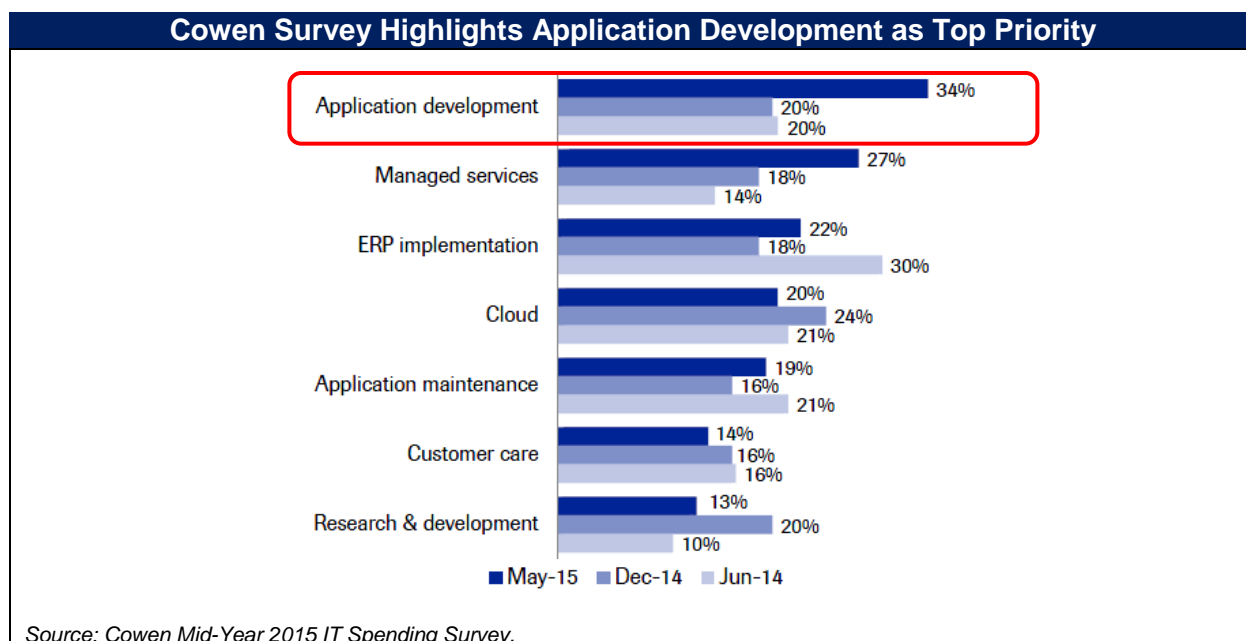
Quantitative metrics reinforce the positive qualitative commentary above. Relative to the rest of the industry, Luxoft boasts the highest billing rate at \$77k per IT employee. We believe that Luxoft's unique approach to software development is a meaningful contributor to the premium its engineers command over the competition.



More impressive still is that the bill rate has grown over the past five years from \$62k per employee to \$77k per employee. We attribute this growth to two factors: (i) a growing proportion of fixed-price contracts and (ii) deeper penetration of clients. In recent years Luxoft has restructured its pricing with large customers like Deutsche Bank and UBS from time-and-materials (T&M) contracts to fixed-price ones. Under a fixed-price arrangement, Luxoft has more control and flexibility to scale staffing requirements, prompting opportunities for increased margins and revenue per employee. In addition, Luxoft has made tremendous strides in further penetrating large clients. During our due diligence, we learned that projects become more predictable as relationships with vendors lengthen, enabling LXFT to streamline project management.



The importance of focusing on application development was also highlighted in Cowen's Mid-Year 2015 IT Spending Survey published on May 26, 2015. Cowen's survey included respondents across a variety of sectors and titles. In terms of spending, Cowen found that application development was considered the top priority, garnering 34% of the votes, materially greater than the 20% received in each of the prior two surveys.



The survey was particularly relevant to Luxoft because participants from the financial services sector comprised the largest group of respondents, at 36% of the sample size (followed by manufacturing at 25% and healthcare pharma at 16%). With Luxoft generating two-thirds of its revenue from the financial services sector, we believe this survey supports our thesis that Luxoft's market opportunity in financial services will grow as companies respond to new government regulations.

Abundant Talent in Central and Eastern Europe

*"It was something we could do in the UK ourselves, but the daily rates of programmers meant that was quite expensive. So we picked a team in Russia and a team in India and sent each a week's worth of source code that needed to be written in a new language as a test... The guys in India said yes to everything, copied the mistakes we had deliberately put in there, and didn't ask us anything about the business - it was all very systematic. **The team in Russia looked at our proposition, asked if it was functional, noticed the mistakes and asked us why we did things in this way. They really challenged us and had much better engagement,**"*

*Daniel Marowitz, head of global transaction banking at Deutsche Bank, works with Russian outsourcing company **Luxoft**. Marowitz agrees that there are unique skill sets in the region. "There is a lot of talent in Russia and the Ukraine in particular," he says.*

Although [Deutsche Bank] still has more bodies based in India than Russia, both regions are well suited to different purposes, he says.

*"If I was to make a very broad generalisation, **I would say India is good at processing in a factory model, doing things quickly and being cost-efficient, and Eastern Europe is a better destination for more experimental tasks.**"*

– From ComputerWeekly.com on nearshoring in Eastern Europe

[Emphasis Added]

Based in Eastern Europe, Luxoft benefits from the highly educated workforce prevalent in this geography. Nearly one in five students in the CEE region will graduate with degrees related to science, technology or engineering. This excerpt from EPAM's [10K](#) provides additional color on the quality of talent in Eastern Europe:

"Historically, we have developed our base of IT professionals by hiring highly-qualified, experienced IT professionals from the CIS and CEE region and by recruiting students from leading universities there. The quality and academic prestige of the CIS and CEE educational system is renowned world-wide. The participants from these universities are frequent and consistent winners in the ACM International Collegiate Programming Contest (ICPC), the oldest, largest, and most prestigious programming contest in the world. In the 2014 ACM International Collegiate Programming Contest ("ICPC,") seven out of twelve top ranked finishers were from CEE..."

Demographic Comparison: CEE vs. India

Table 6: Luxoft vs. Indian peer group

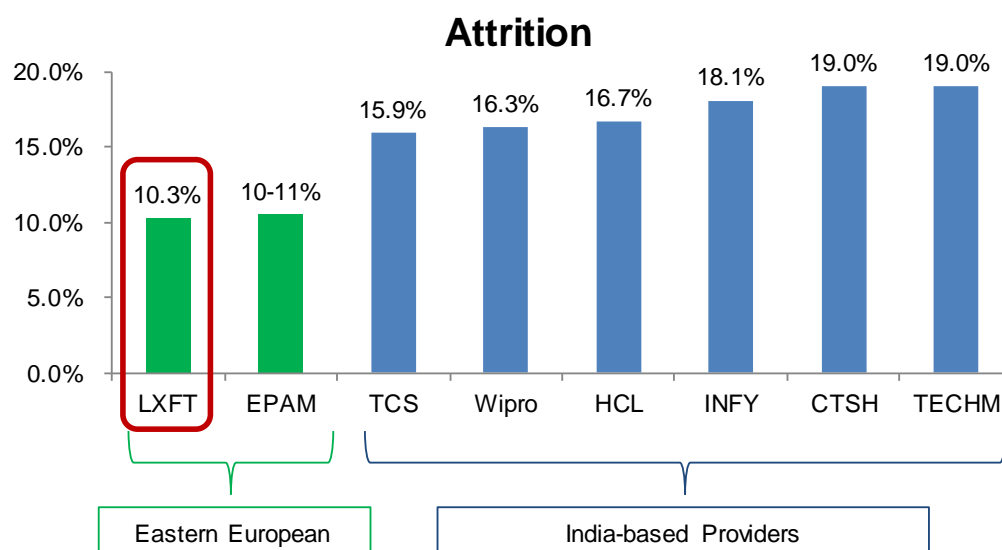
Criteria	Luxoft	Indian players
Experience	5+ years - c85%	3+ years - c70%
Average employee age	30 years	22 years
Education	Tier1 universities (80%+ of personnel have master degree or equivalent)	Tier 1 and Tier 2 universities
English proficiency	High	High
Complexity of work performed	High	Medium
Multinational diversification	High	Medium
Employee loyalty (attrition)	12.70%	13.60%
Revenue per employee (\$'000)	\$65.6	\$47.0
Potential talent pool	Luxoft CEE countries	India
Total population	398 mn people	1.2 bn people
School life expectancy	14.5 years	10.7 years
Annual # of graduates	4.7 mn people (1.2% of population)	3.7 mn people (0.3% of population)

Source: Company data; Gartner; J.P. Morgan; For Indian players we show an average for Wipro, Cognizant, Syntel and Infosys

Source: J.P. Morgan report on LXFT.

Luxoft benefits from this attractive demographic as 80%+ of its employees have at least a master's degree. Additionally, 79% of employees have at least five years of professional experience.

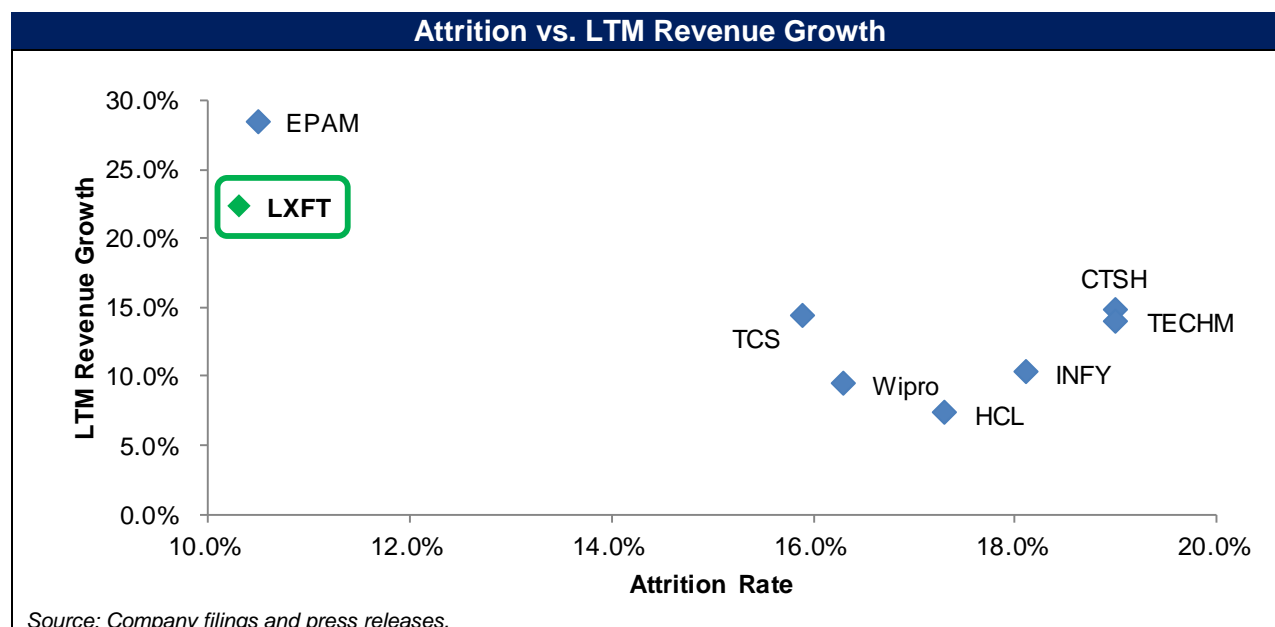
Attrition Relative to Industry



Source: Company filings and press releases.

Source: Company filings and press releases.

Employee attrition is a critical metric when analyzing companies in the IT outsourcing space. Luxoft's low attrition is especially impressive when measured against revenue growth over the past twelve months. Compared to peers, Luxoft stands out with the lowest attrition and highest LTM revenue growth rate.



The low attrition is attributable, in part, to the higher salaries offered by Luxoft relative to competitors. For FY 3/31/2015, we estimate that the average employee was paid ~\$41k in USD terms, significantly higher than the GDP per capita in Luxoft's largest geographies.

Average Salary Relative to GDP / Capita			
	# of Employees	% of Total	GDP per Capita (PPP)
Ukraine	3,857	42%	\$8,200
Russia	2,296	25%	\$24,800
Romania	834	11%	\$19,400
Poland	394	5%	\$24,400
Average			\$19,200
Est. Average LXFT Salary			\$41,359
Delta			215%

Source: CIA World Factbook.
Note: Romania and Poland metrics as of FY 3/31/2014.
Note: Estimated salary calculated by dividing total COGS by average IT employees in FY 3/31/2015.

V. Deutsche Bank and UBS Demonstrate High Customer Value Proposition

“Effective credit risk management is a vital component of a bank’s overall risk management strategy and is essential to the long-term success of any banking organization. We are glad that together with Luxoft we were able to develop an advanced solution that significantly improves client satisfaction by quicker decisions and enhances overall risk management.” – [Jan Gross, Former Global Head of Risk Advisory Services at DB](#)

Luxoft's multi-year relationships with its two marquee clients, Deutsche Bank and UBS, are a paradigm for its potential to augment growth via new client acquisition.

Deutsche Bank

The company's history with Deutsche Bank demonstrates Luxoft's ability to establish deep customer relationships. Luxoft's engagement with Deutsche Bank began in 2003 through a referral. Initially, Luxoft provided a 30-person team to assist DB with application support for the cash equities desk. Upon successful completion, Luxoft was engaged for numerous other projects. Ultimately, Luxoft's mandate expanded to encompass areas such as fixed income and derivatives as the company was recognized for its innovative and scalable solutions.

Examples of projects that Luxoft has completed for Deutsche Bank include:

- Development of web-based lending tool called [COMPAS \(comprehensive approval system\)](#)
 - The Risk Management Advisory (RMA) group at DB wanted to develop an internal, automated credit decision engine which would assist in evaluating credit risks of potential new clients
 - Luxoft developed COMPAS, an advanced web-based lending tool used as a credit assessment tool and scoring model for clients ranging from large corporate borrowers to middle-market and commercial accounts as well as retail customers
 - Goals for COMPAS included:
 - Automation and structuring of loan origination
 - Risk quantification (score, rating)
 - Approval processing
 - Some specific functions include:
 - Identify historical and existing exposure to client (on DB's entire system)
 - Expected loss calculation
 - Collateral analysis
- [Project StRiDe](#)
 - Large-scale effort aimed at automating and optimizing the financial infrastructure of the global banking unit
 - Created central warehouse for all of the investment bank's risk and finance data
 - DB has many different data streams from numerous systems (risk systems, business info systems, systems from various units, desks, geographies)
 - Over 1,000 data streams from more than 100 transaction systems

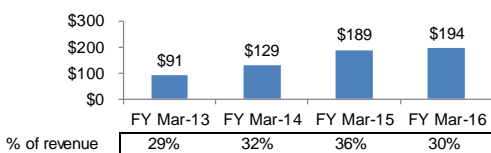
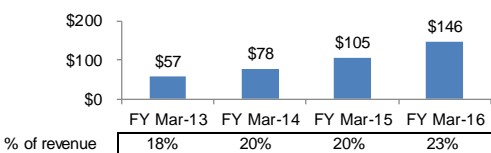
- Implementation involved multiple segments across the organization including retail banking, commercial and investment banking and asset management
 - Luxoft is overseeing 100% of the development
 - Project StRiDe helps DB create better internal financial reporting (P&Ls, end of day flash reports)
 - Optimizes compliance process as management is required to sign documents to attest to accurate records of the firm
 - Extremely complex project with hundreds of thousands of man-hours already spent since launching in 2012
 - Budget for this project went from tens of millions to over hundreds of millions of Euros
- Client clearing tool for the investment bank (corporate finance)
- Luxoft helped to re-develop and upgrade a proprietary DB system that's been used by the investment bank for over 20 years
 - Core function of the system is to manage conflict clearing in the investment bank
 - A banker must clear the client in this system prior to engagement
 - Example: DB banker must make sure that in an M&A engagement, DB isn't representing both sides of the transaction
 - Luxoft manages/maintains this system and is responsible for upgrading the system which occurs 3-4 times annually
- Credit risk management system for global lending
- Luxoft created a credit risk modeling system used by DB's credit officers and certain investment bankers
 - Credit decision model would assist in evaluating credit risks of potential new clients and monitoring existing clients
 - Complex interface with numerous inputs allows for testing of various scenarios
 - Example: DB considers making a loan to a South Korean corporation that exports products primarily to China and Russia. Credit model forecasts how a change in the South Korean Won and Chinese Yuan would affect this potential client's earnings and ability to pay
 - Model has hundreds of data points including commodities, currencies, fixed income exposure
 - Very integral to core lending function and Luxoft handles majority of the work
 - This project is integrated with Project StRiDe mentioned previously
- Developed [customer relationship management \(CRM\) solution](#) for Deutsche Bank's global banking business
- DB looked to Luxoft to develop a comprehensive CRM platform which would aggregate customer data from numerous existing systems
 - Legacy systems included Dealogic, BoardEx, Lotus and other proprietary systems
 - Users included sales managers, global relationship managers, and senior executives within Global Banking (both commercial and investment bank)
 - Over 5,000 users globally
 - Project required over 30 Luxoft staff and required over 5 years of development and maintenance work

In 2012, DB came under immense pressure to reduce costs amid the European debt crisis. During that time, the bank undertook a vendor consolidation and reduced the number of IT services vendors from 12 to 4. Luxoft survived that consolidation, and gained business previously given to other IT outsourcers. DB also restructured its pricing arrangement with Luxoft to move away from T&M to fixed price, forcing Luxoft to temporarily sacrifice margins. Luxoft fulfilled DB's requests during the course of that turbulent transition and, consequently, was named a key strategic vendor in 2012, leading to an expanded footprint within the investment bank. As a result, ~70% of Luxoft's DB revenue is now generated from the investment bank, while the other 30% comes from the treasury services segment that offers cash and liquidity management services for mostly large corporate clients.

UBS

Luxoft's success with UBS began with a history that mirrors the Deutsche Bank story. This relationship began around 2006 when UBS opened its Moscow office and management looked to bring in local IT resources for application support on the equities trading desk within the investment banking division. As Luxoft repeatedly impressed UBS, the relationship soon grew out of the Moscow office to other business segments and geographies. The relationship reached a turning point in 2012 when UBS began to wind down its fixed income business and relied on Luxoft for IT support as a majority of the existing employees were laid off in that division. Luxoft's performance on that transition was well received by UBS management and resulted in Luxoft's recognition as a strategic vendor. Luxoft's headcount at UBS more than doubled, increasing from 600 to roughly 1,300 over the two year span from 2013 to 2015. In FY 2015, Luxoft generated \$105 million of revenue from this relationship alone, counting UBS as its second largest client.

Snapshot of Deutsche Bank and UBS

	Deutsche Bank	UBS																														
Revenue	<p>Revenue from DB</p>  <table><tr><th>FY</th><th>Mar-13</th><th>Mar-14</th><th>Mar-15</th><th>Mar-16</th></tr><tr><td>Revenue (\$)</td><td>\$91</td><td>\$129</td><td>\$189</td><td>\$194</td></tr><tr><td>% of revenue</td><td>29%</td><td>32%</td><td>36%</td><td>30%</td></tr></table>	FY	Mar-13	Mar-14	Mar-15	Mar-16	Revenue (\$)	\$91	\$129	\$189	\$194	% of revenue	29%	32%	36%	30%	<p>Revenue from UBS</p>  <table><tr><th>FY</th><th>Mar-13</th><th>Mar-14</th><th>Mar-15</th><th>Mar-16</th></tr><tr><td>Revenue (\$)</td><td>\$57</td><td>\$78</td><td>\$105</td><td>\$146</td></tr><tr><td>% of revenue</td><td>18%</td><td>20%</td><td>20%</td><td>23%</td></tr></table>	FY	Mar-13	Mar-14	Mar-15	Mar-16	Revenue (\$)	\$57	\$78	\$105	\$146	% of revenue	18%	20%	20%	23%
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Customer Since	2003 (13 years)	2006 (10 years)																														
Allocated Resources	2,600 Employees (30 in 2003)	1,300 Employees (600 at LXFT IPO in 2013)																														
Other Vendors	Accenture and TCS	Accenture, CTSH and EPAM																														
Revenue by Bank Segment	~70% Investment Bank / ~30% Treasury/CFO & Other	~80% Investment Bank / ~20% Wealth Management																														
Other	<ul style="list-style-type: none">MSA renewed in 2016<ul style="list-style-type: none">5 year term	<ul style="list-style-type: none">Currently in 5th year of contract																														

Admittedly, the level of concentration at DB and UBS (which together accounted for 56% of total revenue in FY 2015) appears concerning at face value. However, we perceive the concentration risk to be less pronounced given Luxoft's deeply embedded position with these clients amid an uncertain and complicated regulatory environment. In the post-financial crisis era, regulators have unleashed an avalanche of compliance and regulatory demands, and the implementation of final rules is not even complete and the list continues to grow – as of December 2015, only [75% of rule proposals have been finalized](#).

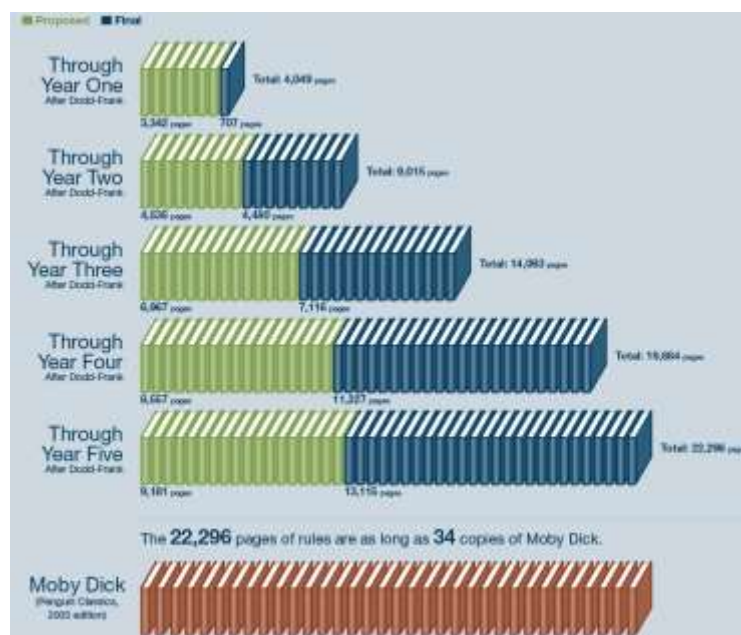
Banking Industry: Overview of Regulatory Timeline

KEY TREND EXAMPLE - BFS: IT IS RAINING HARD IN THE BANKING INDUSTRY!!



Source: [Analyst day presentation](#).

Dodd-Frank: Overview of Rules Pages Published Over 5 Years



Source: [Davis Polk](#).

Considering both these regulatory trends and feedback from former Deutsche Bank and UBS employees, we feel confident that Luxoft will remain deeply entrenched with its core banking customers. Earlier this year, [CIO magazine published an article](#) discussing “StRiDe,” a major internal IT initiative at DB aimed at creating a central warehouse for all of the investment bank’s risk and finance data. Interestingly, Luxoft was listed as the sole software developer for this large-scale engagement designed to aggregate information from all of the bank’s legal units (~1,000 data streams and more than 100 transaction systems).

*"And the project will go on." StRIDE has important targets, of course. The essential improvements and expansions of the architecture and processes are slated to be achieved by 2016/17. Nevertheless, **the project can also be seen as a long-term improvement process**. We will always be pursuing further improvements, since the competition, cost pressure, regulations and what we expect from a world-class department are not going to decrease," Müller notes. **[Emphasis added]***

Overview of Project "StRIDE" at Deutsche Bank

Project name: StRIDE -- Strategic Redesign of Information Delivery

Cost: Several hundred million euros

Employees: 600 IT and 200 finance

Service provider: Luxoft (software development)

Applications: Oracle Exadata, SAS Business Analytics

Duration: 2012 to 2017

Scope: Over 1,000 legal units, 1,000 data flows, 100 transaction systems

Source: <http://www.cio.in/feature/deutsche-bank%3A-it-becomes-a-job-for-finance>

Growth Outside of Top 5 Customers

With Luxoft still in its nascency, customer concentration is not an immediate concern, particularly as the company expands beyond its top five customers. In fact, LXFT has been experiencing solid revenue growth in its smaller accounts, with sales from clients outside of the top five growing from \$56 million in FY 2011 to \$228 million in FY 2016. In FY 2016, revenue outside of the top 5 grew at an astounding 56%.

Revenue Growth Excluding Top 5 Customers

	FY 2011 03/31/11	FY 2012 03/31/12	FY 2013 03/31/13	FY 2014 03/31/14	FY 2015 03/31/15	FY 2016 03/31/16
Total Revenue	\$198	\$271	\$315	\$398	\$521	\$651
Growth	--	37%	16%	27%	31%	25%
Top 5 Clients	\$142	\$192	\$219	\$286	\$374	\$422
Growth	--	35%	14%	31%	31%	13%
% of Total	71.7%	70.8%	69.7%	71.9%	71.9%	64.9%
Revenue excl. Top 5	\$56	\$79	\$95	\$112	\$146	\$228
Growth	--	41%	21%	17%	31%	56%

Source: Company filings.

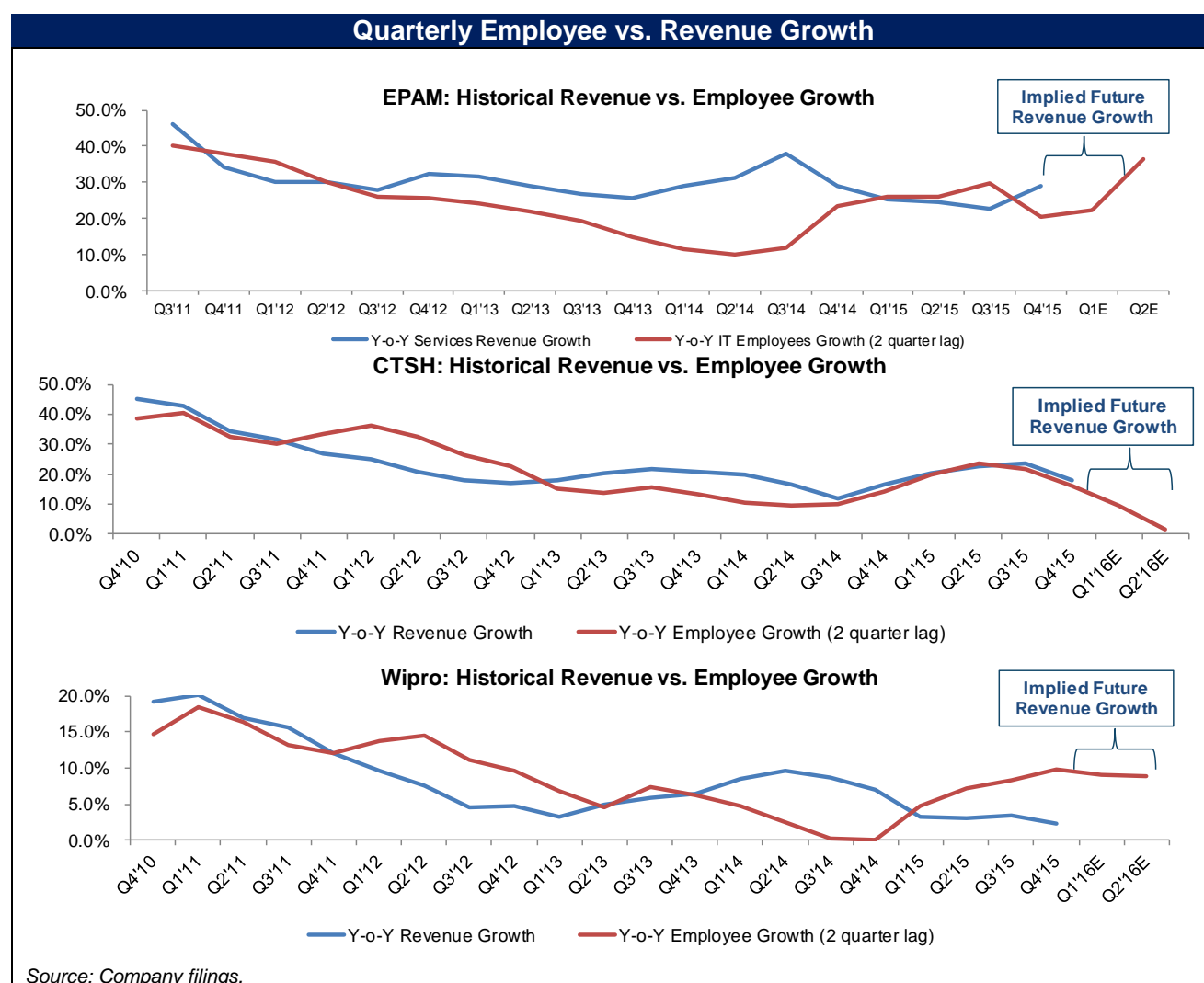
Luxoft's portfolio of high potential accounts ("HPAs") grew from 12 at the IPO in 2013 to more than 40 today. Clients are classified as HPAs if management believes the accounts have the potential to reach at least \$5 million in recurring annual revenue within the "short-to mid-term". On

the FQ3 2016 earnings call, management disclosed that HPA customers generated more than 177% growth year-over-year in the 9-month period:

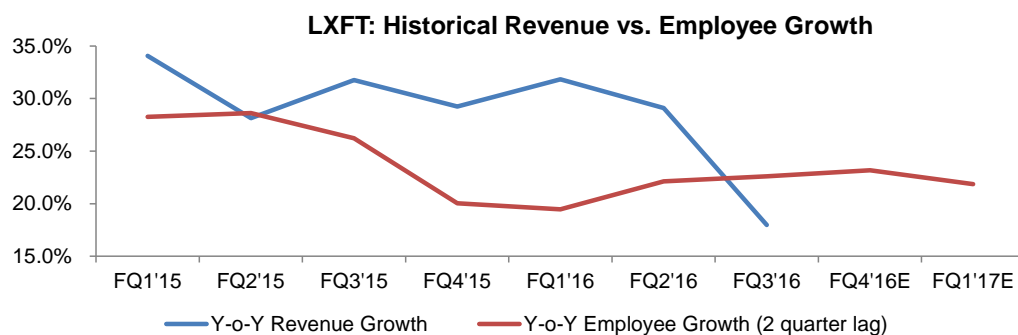
“Speaking about the HPA list, we now have slightly over 35 accounts there. The group has delivered 177% growth for the first 9 months on a year-over-year basis, and it will comprise at least 25% of our total revenues at the end of this fiscal year” – Dmitry A. Loschinin, LXFT CEO *on FQ3’16 Earnings Call*

VI. Employment Growth a Good Indicator of Future Revenue Growth

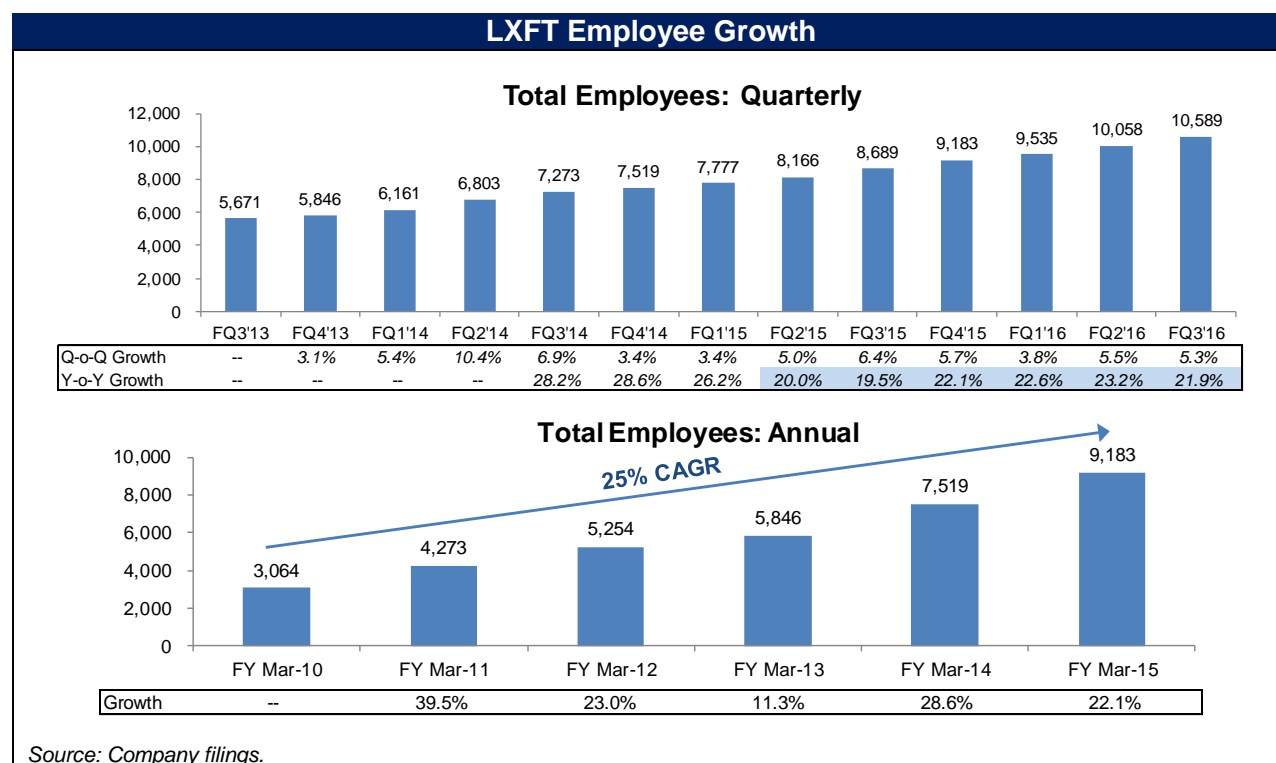
In the IT services industry, as in other asset-light and people-oriented businesses, talent is one of the most valuable resources. As such, employee growth is a vital metric when analyzing businesses, like Luxoft, which rely on human capital. We have observed a strong correlation between employee and revenue growth for IT outsourcing vendors. Specifically, employee growth on a two-quarter lagging basis appears to have historically been a fairly predictive indicator of future revenue growth. The correlation coefficient (a measure of linear correlation) between the two variables was 79% for CTSH and ~60% for Wipro, also suggesting near-term employee growth may be a relevant indicator of revenue growth.



Unfortunately, Luxoft's publicly available quarterly growth data is only obtainable starting in 2013, making it difficult to determine whether a strong correlation exists as we'd prefer more data. The chart below shows what the historical correlation has been since FQ1 2015.



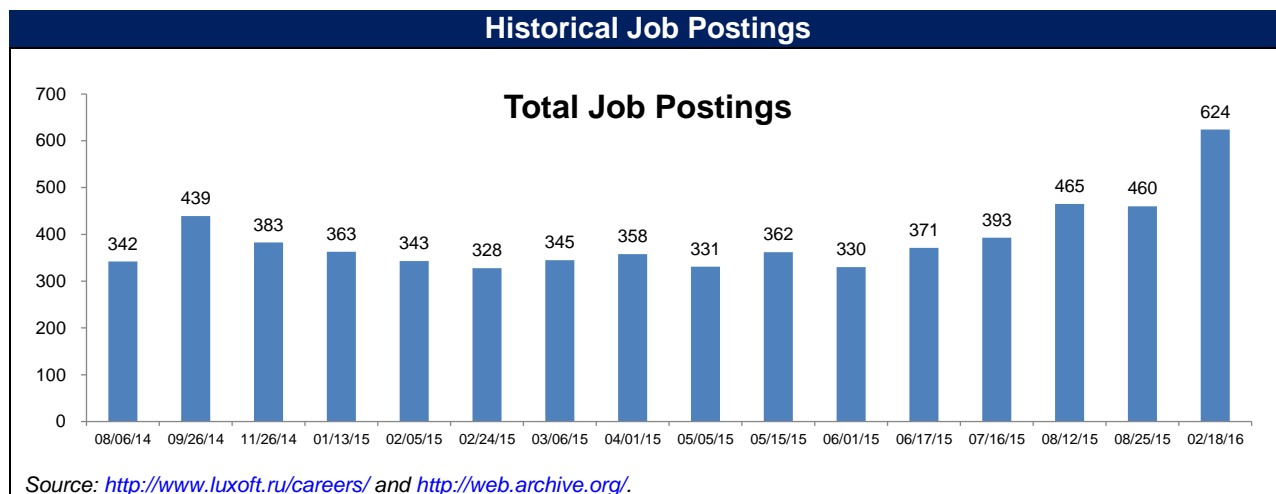
However, LXFT posted robust employee growth over the past few quarters (22% in FQ3'16 and 23% in FQ2'16), giving us confidence that the pipeline of current activity remains extremely strong.



One data point we employ to track current demand for employees is Luxoft's Russian-language careers website (<http://www.luxoft.ru/careers/>). The page lists job postings by function and geography, and listings are updated on a daily basis. Historical data is accessible via the Wayback Machine, an online web archive service (<http://web.archive.org/>).

Before July 2015, the number of job postings has consistently remained around 350 for total employees. Beginning in July and through late August of 2015, we saw total job postings and development positions grow to ~400-450. Recently, we saw this spike to ~600, implying that demand remains very strong. This data may prove a reliable proxy for future employee growth –

and thus future revenue growth – with sudden spikes or declines signaling fluctuation in the current state of customer demand.



VII. LXFT vs. EPAM

EPAM Systems is Luxoft's primary CEE competitor in the emerging IT services industry. Like Luxoft, EPAM focuses predominantly on application development and employs talent in similar geographies, principally Belarus (Luxoft has no presence), Ukraine (#1 Luxoft location) and Russia (#2 Luxoft location). Revenue per employee is higher at Luxoft (\$76k vs \$65k) but attrition levels have historically been similar, between 10-12%. At a high level, the firms appear fairly similar, even sharing some customers: UBS is EPAM's largest customer and Luxoft's second largest. Admittedly, this overlap in value proposition and edge makes us bullish on EPAM's prospects (i.e. focus on application development, access to talent in CEE, etc.). With that said, our work clearly demonstrates Luxoft to be the higher quality provider.

At a Glance: LXFT vs. EPAM

	LXFT					EPAM					
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
	03/31/12	03/31/13	03/31/14	03/31/15	03/31/16	12/31/10	12/31/11	12/31/12	12/31/13	12/31/14	12/31/15
IT Employees	4,556	4,927	6,366	7,849	9,239	5,350	6,968	8,495	9,340	11,787	16,078
Growth	23%	8%	29%	23%	18%	41%	30%	22%	10%	26%	36%
Attrition	12.7%	12.9%	9.9%	10.5%	10.3%	9.4%	9.1%	10.7%	13.1%	11.8%	n.a.
Revenue per engineer	\$65,541	\$66,349	\$70,545	\$73,239	\$76,165	\$48,571	\$54,315	\$56,108	\$62,250	\$69,108	\$65,295
% of Revenue: T&M	76%	58%	49%	41%	46%	87%	88%	85%	83%	86%	87%
% of Revenue: Fixed-Price	24%	42%	51%	59%	54%	12%	11%	14%	16%	14%	13%
<u>Employee Location</u>											
#1 location	Russia	Ukraine	Ukraine	Ukraine	Ukraine	Belarus	Belarus	Belarus	Belarus	Belarus	Belarus
#2 location	Ukraine	Russia	Russia	Russia	Russia	Ukraine	Ukraine	Ukraine	Ukraine	Ukraine	Ukraine
#3 location	Romania	Romania	Romania	n.a.	n.a.	Russia	Russia	Russia	Russia	Russia	Russia
Total Revenue	\$271	\$315	\$398	\$521	\$651	\$222	\$335	\$434	\$555	\$730	\$914
Growth	37%	16%	27%	31%	25%	48%	51%	30%	28%	32%	25%
Gross Profit	\$114	\$129	\$169	\$227	\$271	\$89	\$129	\$163	\$207	\$273	\$347
Margin	42%	41%	42%	44%	42%	40%	39%	38%	37%	37%	38%
Adj. EBITDA	\$51	\$57	\$73	\$99	\$123	\$43	\$68	\$85	\$104	\$135	\$171
Margin	19%	18%	18%	19%	19%	19%	20%	20%	19%	19%	19%

Source: Company filings.

One way to distinguish Luxoft from EPAM is by comparing the revenue generated from time-and-materials (T&M) versus fixed-price contracts. For the latest LTM period, LXFT generated 55% of revenue from fixed-price contracts as compared to 13% for EPAM. Under a T&M pricing structure, clients are billed at a pre-determined rate for the total hours worked. Vendors sign a master service agreement (MSA) with clients that includes a rate card outlining the hourly rates for each level of employee (i.e. rate set for entry level, experienced programmer, project manager, etc.). Under fixed-price contracts, vendors are paid a pre-arranged fixed price and are responsible for managing their own resources. The primary difference between the two arrangements is that with fixed-price contracts, the vendor can potentially make a greater profit (relative to T&M where margin is fixed) while also facing the risk of exceeding the estimated cost.

Luxoft and EPAM have different contract structures due to their different delivery models. There are two widely adopted delivery models for offshore IT vendors: staff augmentation and managed services. EPAM derives most of its revenue using the staff augmentation model while Luxoft generates ~55% of revenue from managed services. The most widely adopted model for offshore IT services is staff augmentation; however, the industry is gradually shifting to the managed services model. Under the staff augmentation model, pricing is based on T&M and companies pay for each staff member at an agreed upon rate. Staff augmentation is beneficial to companies

looking for rapid access to temporary employees with specific capabilities and skills. Additionally, there's no waste of time or resources for companies trying to recruit new employees to fill needs that may only be temporary. When considering an offshore vendor, customers seek the lowest cost per contractor, encouraging stiff competition among suppliers.

While staff augmentation is ideal for short-term solutions, the model does not work well for customers seeking a long-term partnership. When used as a long-term solution, the staff augmentation model is more expensive. The cost benefit gained in the short-term (through avoidance of HR costs associated with hiring) is lost. Perhaps even more significant is that reliance on staff augmentation as a long-term solution could lead to poor management of resources. Under this model, the company is responsible for managing the vendor's resources. This gives the vendor limited incentive or accountability for the outcomes and quality, as no specific requirements or deliverables are specified in the staff augmentation contract.

Another significant issue with the staff augmentation model is the risk that knowledge will be retained with the contractors and not with the hiring organization. As contractors spend more time on a specific project, they accumulate knowledge and capabilities that become invaluable. The vendor could potentially use this knowledge to hold the customer hostage, leading to a more permanent engagement utilizing an expensive delivery model.

The alternative delivery model is known as managed services. Under this model, vendors agree to deliver a specific capability or functionality with a desired level of results for a fixed price. This differs significantly from staff augmentation which revolves around defining cost inputs; with managed services, the vendor is committed to delivering an outcome at a fixed price. This model requires a higher level of trust as customers cede more control to the vendor. The customer defines the requirement and desired outcome, but the vendor is responsible for managing all resources, assuming the risk of meeting the delivery commitment. Since engagements are based on a fixed price basis, vendors are highly incentivized to maintain high productivity as any delays would result in cost overruns borne solely by the vendor, not the customer.

Managed Services vs. Staff Augmentation

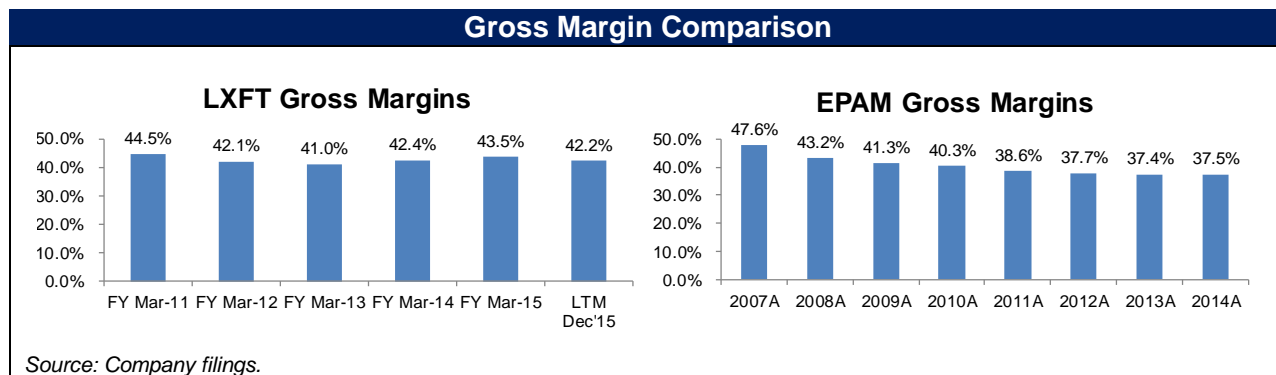
Managed Services Model (Outsourcing)	Staff Augmentation (Out-tasking)
<ul style="list-style-type: none"> • Supplier assumes control of all or part of the execution component of IT • Service delivery commitments expressed as "service levels" • Committed scope and term • Pricing tied to service levels and volumes where appropriate • Supplier managed delivery model; processes and tools • Impacted employees; assets and contracts may be transitioned to supplier (supplier needs to acquire or have the capability to deliver) • Knowledge must be documented and transferrable • Supplier assumes the risk of transition and operations 	<ul style="list-style-type: none"> • Supplier commits to providing resources of defined capability at a price • No Service delivery commitments relative to outputs • Limited commitment • Pricing tied to hours worked and availability • Customer manages the delivery model (including individual subcontractors); process and tools • No change to customer operating model • Knowledge vested in the individual • All delivery risk remains with client
Commitment to deliver an outcome	Commitment to provide an input

Source: [CGI white paper](#).

Based on our discussions with former customers and executives in the industry, the utilization of one model over another is the best way to distinguish Luxoft from EPAM. Staff augmentation was the primary delivery model for Luxoft several years ago, but between FY 2011 and FY 2015 revenue from T&M declined from 91% of total revenue to 41%.

"As you can see from our numbers, the proportion of fixed price slowly growing... we definitely recognize this as a very, very solid industry trend. You -- we have to -- you have to provide fixed price services or outcome based services if you want to be competitive on the market, but just to know, the way the client mentality and client maturity has changed over the past 2, 3 years" – Dmitry Loschinin, LXFT CEO on [FQ1 2015 Earnings Call](#)

Luxoft's success in implementing this model with clients is evident in its enduring relationships with DB and UBS, customers since 2003 and 2008, respectively. Due to the long-term nature of these relationships, projects become more predictable, creating an opportunity for LXFT to maximize efficiency. We think this explains, in part, why LXFT's gross margins are higher than EPAM's. While EPAM's gross margins have declined over the past 7 years (EPAM management attributes the decline primarily to wage inflation), Luxoft has managed to keep gross margins stable at 42-44%.



VIII. Conclusion

As corporations increasingly look to utilize technology to boost their competitiveness, the world will turn to providers of high end developers such as Luxoft. Who programs the dashboard in your car? Who builds the capital adequacy reporting software of our leading financial institutions? How do local retailers build their online marketplaces? The United States simply does not graduate enough software engineers to satisfy the burgeoning demand for customized application development. This shortage of talent will result in the continued outsourcing to companies like Luxoft that specialize in recruiting, training and mobilizing teams of highly talented and experienced programmers. We believe that Luxoft is in the early stages of a rapid, long-term growth trajectory that its Indian peers experienced in the late 90s and early 2000s. If Luxoft repeats even a quarter of those achievements, its shares will be a tremendous investment.

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