25 March 2013 | 37 pages

IT Services and Software (Citi)
Global

Changing Face of IT Services

Industry Reboot – The Potential and the Perils

- **Deep-dive on an IT Services sector in flux** — Emerging industry trends and rising competitive intensity globally are raising questions about the medium-term growth potential of offshore IT services. Having recently met 17 companies/sector participants, we identify five key themes as likely to drive the industry over the medium term, as well as highlight our top global picks.
  - **1: Too large to grow? We think not** — $revenue CAGR for Indian IT (biggest offshore destination by far) has slowed from ~35% over FY02-06 to ~17% over FY11-13E, largely on higher scale. Share gains vs. in-house work can continue given higher acceptance of offshore model – validated by MNC expansion in India, Overall, we see Indian IT growing at double-digit rates in the medium term.
  - **2: Traditional services saturated? Europe/BPO offer growth** — Traditional cost take-out projects continue at a good pace. Horizon 2 services (BPO/infra services), Europe and public sector have lower penetration and potential to grow faster. Regulatory spend in BFSI/healthcare should also contribute to growth.
  - **3: SaaS a threat? Possibly long-term, but an opportunity first** — SaaS (software as a service) may be more suited for smaller firms or isolated/non-core processes in large organizations. While a material shift to SaaS could hamper growth, security/privacy issues make this only a long-term threat. Before then, opportunities may arise in pilot projects and integration with existing applications.
  - **4: New services? Significant potential** — IT companies are investing in Horizon 3 services (social/mobility/analytics/cloud). As these projects are highly strategic, they are unlikely to get cut in a constrained business environment.
  - **5: Changing nature of demand? Business models keeping up** — With clients looking for new engagement models (eg: fixed price, managed services contracts), IT services providers are adapting hiring models (just-in-time campus hiring, more local hiring onsite) and stepping up non-linear initiatives.
- **Industry winners** — Large IT services players have been adept in entering new segments (infra/BPO); we believe leaders will adapt well to evolving sector trends.

- Industry Overview

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Top Picks in Global IT Services

Company	Ticker	MCap (US$m)	Price	TP	Rating	Comment
HCL Tech	HCLT.BO	9,865	Rs772	Rs820	Buy	Deal wins and revenue share gains continue; margins/ROEs are picking up
Infosys	INFY.BO	30,056	Rs2,864	Rs3,035	Buy	Deal wins encouraging – good pick-up over past 2-3 quarters
EPAM	EPAM.N	1,018	US$23	US$25	Buy	Benefiting from (1) trend to mitigate single-country delivery risk (2) outsourcing trend in Europe
Cognizant	CTSH.O	22,978	US$76	US$90	Buy	Making right investments to sustain above-market growth
Atos	ATOS.PA	6,012	€54	€67	Buy	1) Increased outsourcing in EU, 2) merger synergies, and 3) payments upside
Capgemini	CAPP.BO	7,598	€37	€44	Buy	Globalisation and offshore bases lay foundation to transform business model

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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Executive Summary

Emerging trends like SaaS and rising competitive intensity from global peers with a convergence of business models are raising questions about the growth potential of the IT services sector. In this deep-dive analysis, we identify and discuss the five key themes that we see as impacting growth over the medium term. As large companies in the sector have traditionally been agile in entering newer segments (infra/BPO), we expect leading companies to be highly adaptable to the evolving business challenges.

Five Key Themes for the Medium Term

(1) **Indian IT growth has been slowing over the past decade** − $revenue CAGR was ~35% during FY02-06, ~25% over FY07-10 and ~17% over FY11-13E. This drop is largely attributable to the twin challenges of (1) Higher scale/maturity of the industry and (2) Business models converging with global peers on scale/offshore mix − leading to higher competitive intensity. We think it is more of (1) than (2) – given offshore has become mainstream, resulting in higher client awareness driving decent growth. *In our view, Indian IT can still continue to grow at double digit rates in the medium term. Offshore model continues to gain acceptance and wallet share gains from work that is currently performed in-house should continue.*

Current Spending Drivers in IT Services

Cyclical Impact	
Slow recovery in major IT markets. Better, albeit still-disappointing, growth outside traditional developed markets.	
Lowest employment recovery on record	
Secular Impact	
Growth of social media	
Growth of mobility and M-commerce	
Growth of analytics and big data	
Mainstreaming of cloud	
Globalization	
BPO growth	
Digital marketing growth	
Shortage of IT talent	
Episodic Impact	
Growth of regulation	
Other Impact	
Maturation of thought process on outsourcing	

Source: Citi Research

(2) **Traditional services in offshore outsourcing are increasingly saturated,** raising questions about growth and profitability. Yet incremental growth opportunities are still on offer in (i) new services and functions (ii) new verticals, and (iii) new geographies. In particular, *we see demand upside from regulatory spending, and potentially higher penetration in BPO, infrastructure services, Europe, and the public sector.*

(3) **Investors remain concerned about SaaS because its primary objective is to reduce the total cost of ownership relative to traditional software** – and the thinking is that a part of this "hurt" will be felt by services companies that benefited over time from traditional software applications. Given concerns around data privacy/security, SaaS is more suited to smaller organizations and isolated functions than to large organizations. It will take a long time (and even that is unclear today) for organizations to convert a large part of their usage to SaaS – *in the medium term, SaaS offers multiple opportunities.*

(4) **IT vendors increasingly are turning to "Horizon 3" services** (social, mobility, analytics and cloud), which could be a significant medium-term growth driver. Such projects tend to be highly strategic and are unlikely to be the first to get cut in a corporate spending pullback, in spite of being discretionary in nature. Equally important, the potential for a flow-though from initial pilots and proofs-of-concept to large systems integration activity is significant. *In particular, we reckon that Analytics and Mobility can result in significant green-field opportunities in the medium term.*

(5) **Business models/strategies are evolving to meet changes in demand.** The changing face of demand (newer services and contract structures) and longer-term supply constraints are forcing IT services companies to adjust their business models. Forward-looking IT services providers are adapting hiring models (just-in-time campus hiring, more local hiring onsite) and stepping up non-linear initiatives. *TCS, for example, is following a non-linear strategy through: (1) platform-based BPO services (2) products, and (3) iON, an IT-as-a-service solution for small and medium-sized businesses.*

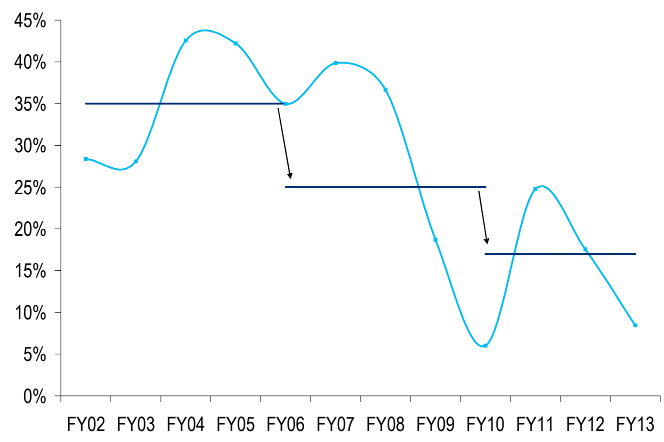
Change in Demand – Traditional Services

Too Big to Grow? We Think Not!

Majority of ACN's and IBM's headcount additions over last 6 years have been on the global delivery model – increasing competition

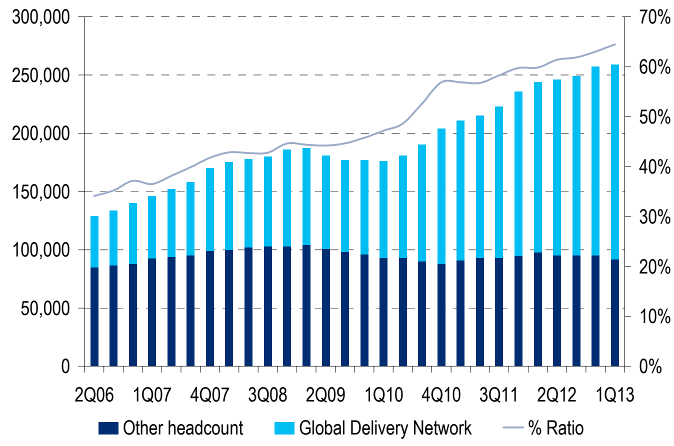
- **Secular slowdown; not surprising at this base** — Indian IT has seen growth slowing down over the last decade - $revenue CAGR was ~35% during FY02-06, ~25% over FY07-10 and ~17% over FY11-13E. This drop is largely attributable to the twin challenges of (1) Higher scale/maturity of the industry (Infosys FY12 revenues were ~17x FY01 revenues) and (2) Business models converging with global peers on scale/offshore mix - leading to higher competitive intensity. However, we think it is more of (1) than (2) – given that offshore has become mainstream, resulting in higher client awareness driving decent growth.

Figure 1. Industry revenue growth coming off



Source: Company Reports, Citi Research; Indian IT Revenues calculated as sum of the top 4 companies

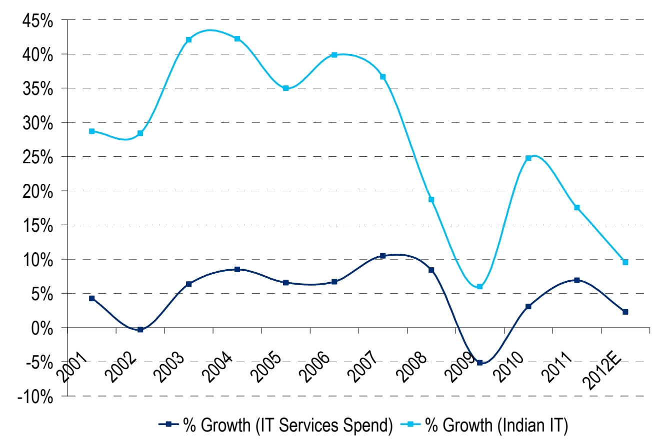
Figure 2. Accenture's offshore presence has increased to ~65%



Source: Company Reports, Citi Research

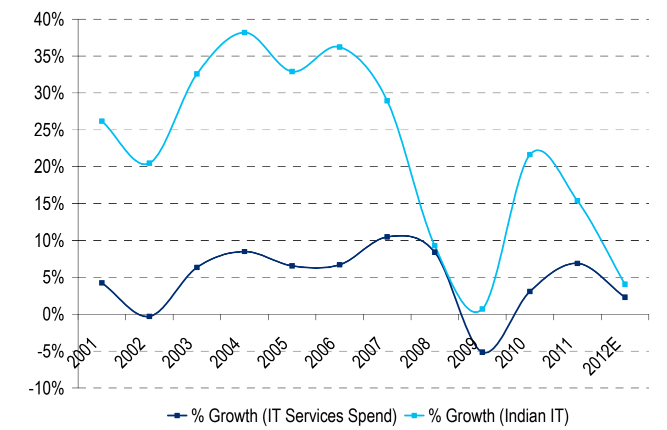
- **Traditional services can still grow at double digits** — In spite of these growth headwinds, we believe Indian IT companies can achieve growth in the low teens in the medium term (average over a cycle). While correlated with global IT spend growth, revenues from traditional services have grown at a faster clip (Fig 4).

Figure 3. $-Revenues of Indian IT is correlated with Global IT spends



Source: Company Reports

Figure 4. Indian IT Horizon 1 revenues grow faster than global IT spend



Source: Company Reports, Citi Research Estimates; Horizon 1 services revenues computed as sum for Infosys (AD, AM, testing services), TCS (ADM & engineering services), Wipro (ADM and Testing) and HCLT (Tech led – R&D and Engineering services, enterprise application services)

This faster growth should continue for several reasons:

Indian IT can still grow (1) global peers still operate at higher base (2) contract sizes trending lower – sweet spot for Indian IT

- **Market share gains to continue** — Although the scale of Indian IT has increased materially, global peers still operate at a much higher base (Accenture's revenues are ~2.4x TCS) while continuing a healthy growth rate (ACN has revenue CAGR of ~10% over FY03-12, driven by ~14% CAGR in outsourcing revenues), suggesting double digit growth is possible even at this base. Moreover, wallet share gains from work that is currently performed in-house should continue. But, not all companies will have similar growth rates, visible in the increasing growth rate differential over the past couple of years.

- **Contract durations trending lower** — As per trends compiled by ISG (TPI Index), average contract durations have been trending lower over time – from ~6.4 years in 1999-00 to ~4.8 years in 1H12. This has resulted in a broader shift in the market towards smaller contract sizes – the sweet spot for Indian IT companies, which should also help market share gains going forward.

Cap Gemini recently announced its intent to grow India headcount at ~18% CAGR over the next 3 years

- **MNC offshore growth highlights offshore becoming mainstream** — The offshore demand exists – proven by the fact that MNCs continue to grow offshore at a very rapid pace. Cap Gemini announced that they want to increase offshore headcount by ~18% CAGR over the next 3 years to take it up to ~70k employees. Other global players like IBM and Accenture also continue to drive offshore at a pretty fast pace. This highlights the increased adoption of offshore, which in turn means possibility of continued growth.

Trends from Key Verticals

Increasing divergence in performance across companies driven by varying levels of exposure/expertise across sub segments

- **Will Financial Services growth come back?** CTSH highlighted signs of some pent-up demand getting released – management is cautiously optimistic. Trend from other companies also suggests that weakness in BFSI is abating, although the optimism isn't being shared by others like Infosys. Overall, the view still seems to be that the vertical could lag company growth on a higher base – however this will also be a function of sub-segment wise break up of BFSI – insurance and retail banking are holding up well while investment banking is under pressure.

- **Sub segments within BFSI see different trends** — Large banks continue to face challenges, manifested in flat to down budgets and projects around cost take outs. Higher adoption of offshoring is driving strong growth in mid-sized and regional banks (demand for services like multi channel integration, upgrading CRM systems). Retail banking is also seeing healthy demand. Insurance is seeing good growth across segments particularly for services like BPO and Infrastructure services. Asset managers are also spending on offshoring.

Retail/manufacturing demand robust; Telecom likely to continue to lag

- **Trends from other verticals** — In retail, investments are being made in areas like eCommerce and digital marketing. Manufacturing demand continues to remain robust across most sub-segments. Telecom is widely expected to remain weak in CY13. Pharma could lag overall growth – IT budgets could see some contraction as the segment continues to face headwinds post the patent cliff; companies do not expect a pickup until CY14. Healthcare Insurance is seeing new opportunities in consulting (ObamaCare, Healthcare Exchanges) in the medium term, while existing demand for ICD-10 work continues.

- **Horizon II services contribute to growth in mature accounts** — Discussions suggested that the relatively more mature clients are witnessing growth in the Horizon II services like BPO, ITO and consulting. Ability to cross-sell and up-sell remains an important criterion to deliver growth in the large client base.

- **Growth rates could continue to see variance** — As demand trends across sub segments continue to vary, IT companies could see a divergence in their medium-term growth rates, based on revenue mix / distribution. Moreover, with domain knowledge increasingly becoming a factor in deal negotiations, the track record of vendors in rolling out large complex transactions in specific verticals/sub-verticals is becoming a key consideration in subsequent deal wins.

An Important Change on Who the Buyer Is

Many companies we met concurred with a 2012 Gartner report that indicated that CMO (Chief Marketing Officer) IT budgets would exceed CIO budgets by 2017. This has been our viewpoint as well – except we make a broader point about the dispersion of IT/BPO spending authority across today's enterprises and include full-fledged CxO engagement

Traditionally, the CIO controlled IT spending. While the CIO remains important, they are increasingly focused on just a part of the IT spending in an organization. Our checks have certainly shown the growth of two other centers of control.

1. As the search for productivity has transcended the IT organization leading to the increased mainstreaming of BPO, the CFO and/or COO has emerged as a key player in the funding of such initiatives. Why? Because many of the underlying business processes that are being outsourced – finance, accounting and procurement – legitimately belong in their organization. So they tend to fund and control these initiatives. However, because the IT systems that support these processes are typically controlled and maintained by the CIO's organization, the CIO remains involved. In fact, sometimes they act as a conduit for BPO spending. Ultimate control, however, resides with the CFO or COO – this complexity is also a contributing factor in elongated sales cycles.

2. The search for growth also results in a different buyer. Many growth initiatives are centered on the customer and so the "business unit" or the CMO (Chief Marketing Officer) or Head of Sales often becomes the key buyer instead of the CIO. For eg, an analytics project on revenue leakage is not likely to be driven by a CIO. Again, it is the CIO's organization that ensures systems standardization and supports the CRM systems, so they often act as the conduit for this spending. But the buyer is not the CIO.

Some verticals like life sciences actually have business heads controlling a very large part of spend. Some areas like analytics may see more demand coming from the business side.

Companies mentioned that as far as multiple buying centers within organizations are concerned, life sciences led the pack among verticals – with as much as ~60-70% budgets under the control of R&D and sales & marketing divisions. Non-CIO decision makers also had fairly high budgets in consumer goods clients. However, Banking clients continue to have relatively traditional buying centers, with limited budgets for CMOs.

Why Is this Change Important?

Most CIO Surveys nowadays, including ours, typically indicate that the CIO Budget is flattish. This is true, but it also measures just one of the three areas of an enterprise's tech spending.

In effect, what has happened is that the CIO might manage all of the tech spend in an organization, but they do not control all of it. The important implication from this is that IT vendors that understand this and cultivate relationships at multiple points in an enterprise or sell at higher levels in an enterprise are likely to see a bigger budget and a different growth profile relative to a vendor that is focused on traditional IT.

Another conclusion is that overall tech spending is healthier than what one might gather from a conversation with just the CIOs.

Which Vendors Benefit from this?

Good consulting and strong relationships at all levels helps – Indian companies will need to invest to get there

Vendors with a good consulting front-end intrinsically "get" this. The list includes Accenture, IBM and Capgemini. The Indian vendors are also trying to refocus their efforts to adapt to this. Among smaller vendors, we note that Sapient has long had a creditable reach into the marketing organization and that EPAM recently acquired into the space. Lastly, we note that the pure-play BPO companies like EXLS, WNS and Genpact are clearly beneficiaries of the strength in BPO even as Accenture, Cognizant, TCS and Infosys re-double their efforts in that area.

New pricing models

Traditional pricing models

Move from T&M to managed services and newer transaction/outcome based models continues at a rapid pace – execution capability becomes the key to make good margins

- **The offshore model itself continues to be in demand** — Good supply, quality of work, labor arbitrage and Indian vendors moving up the value chain to different kinds of services/solutions continue to drive offshoring – multinationals having a big presence in India has only increased the visibility of the model.
- **But labor arbitrage is no longer a differentiator** — Over time, while labor arbitrage remains, it is no longer a differentiator. Large MNCs like ACN/IBM have stepped up their offshore presence in low cost locations. Deal discussions have evolved - clients are now looking for vendors who can offer customized solutions and domain knowledge.
- **Bulk of legacy pricing is still on a per-person, per-unit-of-time basis** — As vendors get larger, the linear nature of the traditional model creates practical challenges. At the same time, wage inflation, currency and demand volatility are still factors in terms of margin impact. Due to this factor, the trend is gravitating to newer models like managed services, outcome based pricing etc.

Figure 5. Wage costs over time

Wages ($/person-month)	FY04	FY13
Offshore	750	900
Onsite	6,500	8,200

Source: Company Reports, Citi Research

Changes in contract structures

Infosys' share of revenues from fixed price contracts has gone up from ~27% in FY07 to ~40% − growing at ~24% CAGR vs. 12% CAGR for T&M revenues.

- **Advent of fixed-price contracts** — As time progressed, clients felt that Indian IT services companies were not passing on the benefits to them – increasing offshore and pyramid to instead boost their margins. In recent times, large clients are increasingly negotiating fixed price contracts demanding targeted savings at the time of signing the deal.
- **New pricing models** — Lot of the deals are moving towards the managed services model – companies have to meet the targeted SLAs (service level agreements) and are free to staff the project in a particular manner. Transaction/outcome-based pricing is also gaining traction in certain areas – clients will pay per transaction rather than on headcount.
- **Asset intensive businesses** — In infrastructure oriented asset intensive businesses, Indian companies are leasing the hardware, bandwidth and being able to provide a total solution to the client. This has resulted in a good pickup in the infrastructure services business over the past few years.
- **Skin in the game** — Lots of new contracts demand initial investment by the vendor (particularly when the deal is already being done by some incumbent vendor) and then gradually it moves to the managed services model. Clients want vendors to make the requisite investments and benefit if they can execute well. This does increase the risk associated with large contracts, in our view – the investments required are also moving up – poor execution can result in margin/ROCE pressures.

- **Sustainable margins in medium term** — The situation might look bleak with clients tightening their purse strings and traditional services getting commoditized. But on the other hand, clients do realize that supply of quality talent is a constraint – this is likely to help companies bargain better with their clients.

Change in mentality on IT budgeting

ROI has become the buzzword – difficult to get anything approved which does not have a visible near term ROI

As macro challenges remain in the environment, large project decisions continue to require multiple levels of approval. CFO- and Board-level approvals are not uncommon and ROI metrics are increasingly important. With budgets under pressure, the following trends are coming to the fore:

(1) Increase savings from run-the-business (parts of the traditional ADM business that are getting commoditized) to fund critical discretionary projects.

(2) Larger rollouts are fewer and are being broken down; result of each phase is monitored before committing to a subsequent phase.

(3) Short term high-ROI projects are doing well.

(4) Near-consensus in newer areas like Analytics, Cloud, Mobility, Platforms etc.

Traditional Services – Next Leg of Growth

The next leg of growth could come from (1) Regulatory spend (2) Underpenetrated services (3) Europe (4) Public sector

Generically, it has been understood for some time that the sources of incremental offshore outsourcing growth were (i) New services and functions (ii) new verticals, and (iii) new geographies. At the current time, this translates into incremental growth based on regulatory spending, BPO, infrastructure services, Europe, and potentially, new demand from the public sector.

Post the financial crisis, vendors have tried to diversify across multiple verticals, partly insulating them from vertical specific cyclicality. Currently, BFSI has relatively high offshore penetration followed by manufacturing, healthcare, telecom and retail. But the public sector has shown a lesser propensity given optics around unemployment etc. In the backdrop of a mixed macro, vendors are also looking at focusing/ investing more on specific segments like BPO/Europe. There is a bigger focus towards domain specialization and a focus towards managed services, which can reduce the linear dependence of revenues on headcount growth.

(1) Regulatory spend – Finally here?

- **Changes in the regulatory climate** — These are shaping demand like never before. Clients in BFSI (Dodd Frank, Basel 3, Solvency II) and healthcare (ObamaCare) are required to rollout projects that make their internal systems compliant with regulatory changes. While expected to be a medium-term driver, this is yet to meaningfully translate into higher revenues for IT services companies. While the nature of these spends is discretionary, associated deadlines could make the work non-discretionary as and when clarity emerges.

- **BFSI regulatory work funded by cost takeouts elsewhere** — Companies across the board highlighted a significant amount of regulatory work (particularly in large banks in US). However, with overall budgets under pressure, companies expect clients to push for savings elsewhere to fund the regulatory spend. This could be a big growth driver for offshore IT companies.

- **Some key cost takeout trends in BFS** — (1) Infrastructure services – increasing demand for services like remote IMS (2) Monetization of IT assets – involving re-badging of domain experts on the bank's rolls and use their expertise to service multiple BFS clients (3) Automation and productivity enhancement in BPO (4) Consolidation of multiple systems across geos for the same services.

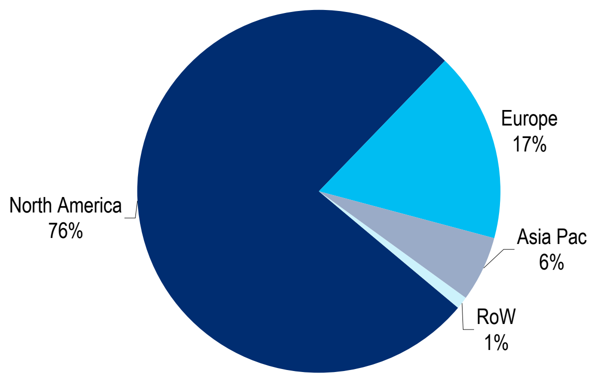
- **Healthcare** — Part of the regulatory work around ICD 10 was already under way in 2012, and is expected to continue in 2013. Companies expect the next big driver to come from spends related to the Healthcare Reform Act and exchanges where there is a higher incidence of consulting projects. However, many of these projects have moving targets (moving timelines of enforcement of the regulation, discretionary nature of work) and some part of the work could spill over to CY14.

Part of the regulatory spend may be funded by savings elsewhere; but expect at least a portion to be incremental

- **Incremental or shift; the jury is out** — The jury is still out on whether regulatory spend will be incremental or if budgets will be cut elsewhere to fund them. While there is limited clarity, this will partly be "incremental spend": (1) Macro environment seems to be stabilizing, albeit still tough (2) Lot of transformational projects have been deferred over the past couple of years, resulting in pent up demand. In some cases, the initial work associated with regulatory change could be done in-house, but even in this case, the associated maintenance goes offshore. These are unlikely to be postponed indefinitely. If paying for regulatory spending has to be supported by productivity gains elsewhere, it can be a positive for offshore outsourcing.

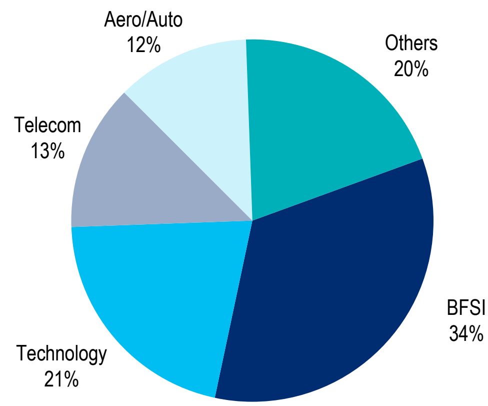
- **Some share could also go to captives** — Given the sensitive nature of projects (greater scrutiny by regulators) and desire for greater control over the IP, some clients are relying more on captive units to execute these projects. According to a survey by McKinsey & Co and Nasscom, 52% of companies with captives in India intend to increase offshore penetration by 15-30% over the next 2-3 years.

Figure 6. Captives in India – Distribution by headquarter location



Source: Nasscom

Figure 7. Captives in India – Distribution by industry



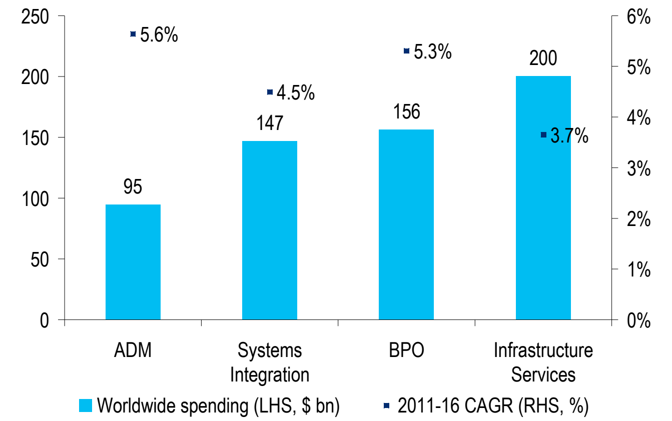
Source: Information Services Group (ISG); Data based on analysis of >300 captives

(2) Underpenetrated services (BPO/IMS)

- **BPO/Infrastructure Management are huge opportunities** — It was a virtual consensus that BPO/infrastructure management are huge opportunities with annual spending exceeding that in other traditional services like ADM. Moreover, offshore penetration is still very low at ~5% vs ~30% for ADM, so higher growth rates could sustain for a relatively long period of time.

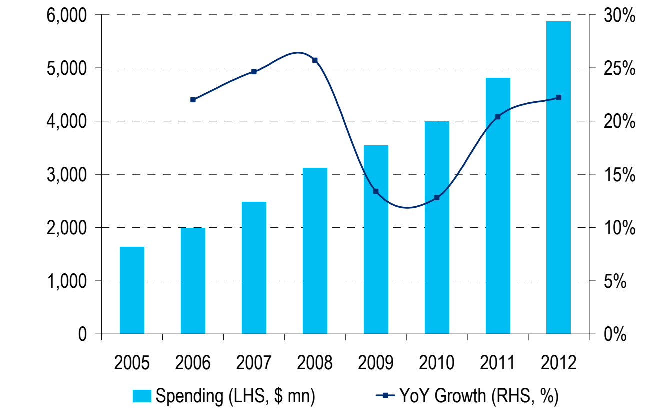
- **BPO has seen resurgence of late** — Over the past couple of years, BPO has seen a resurgence with a good pick up in offshoring and deal activity – in fact in the most recent fiscal year, BPO growth exceeded IT growth for the first time in many years. Among geographies, EMEA and Asia Pac have driven growth while Americas has been largely stable. Rebadging deals have been an integral part of BPO contracts in Europe, also helping IT companies build a good onsite base of domain experts.

Figure 8. BPO and Infrastructure Services are bigger markets



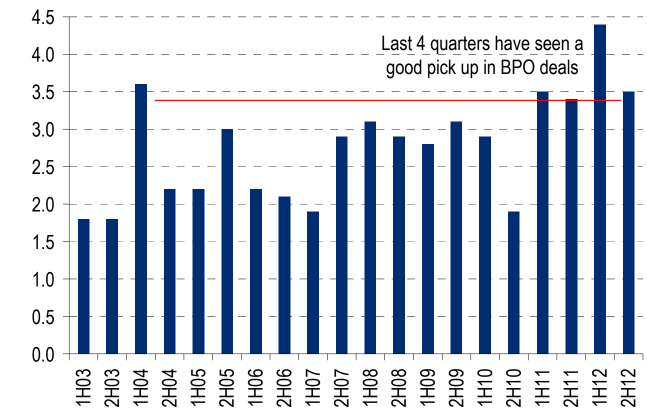
Source: IDC (May 2012), Citi Research; Data for worldwide services spending in 2011

Figure 9. Worldwide offshore-based BPO Services spending



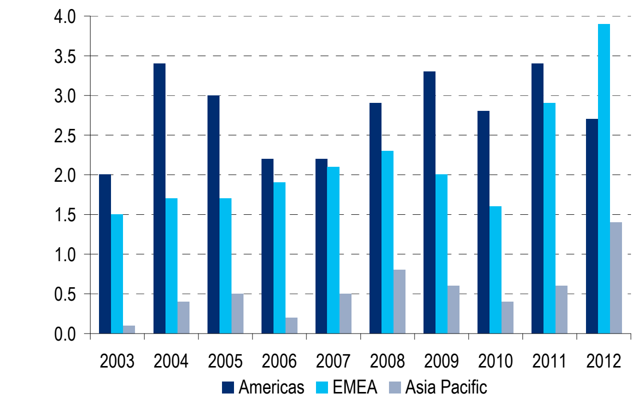
Source: IDC, Citi Research

Figure 10. BPO Contracts – ACV award trends ($ bn)



Source: TPI Index, ISG One; Data shows contracts with ACV ≥ $5M

Figure 11. BPO Contracts – Pick up in ACV driven by EMEA and APac



Source: TPI Index, ISG One; Data shows contracts with ACV ≥ $5M

Integrated vs pure-play – the debate continues. For now, there seems to be enough opportunity for both to grow

- **IT+BPO vs. pure plays** — We saw a healthy debate on who would stand to benefit more from this surge in BPO. IT companies continue to pitch for BPO deals on the premise that they can introduce better automation and process transformation to reduce costs. On the other hand, pure plays seem to be banking on their domain expertise and references. Companies mentioned that ~85-90% of the deals currently are standalone in nature.

- **Key trends in BPO** — (1) Time frame from signing to revenue generation has increased with newer models of transition; a lot more deals are happening where the process is changed upfront (2) Share of transaction based pricing has increased marginally over the past 2 years to ~10% of contracts – some clients still prefer the traditional time & material contracts given the certainty of spend. (3) It is increasingly important to invest in "platforms" within BPO – such platforms encapsulate and industrialize domain knowledge. Vendors are acquiring such assets through tuck-in acquisitions in many cases.

- **Infrastructure services is seeing greater churn** — A largely "renewal" market, companies mentioned that IMS has seen a significant increase in churn from ~10% few years back to ~30% now. While not very price sensitive, clients seem to be gravitating towards asset light models and thus move away from global majors who look to bundle hardware. Typically, only ~60% of the IMS contract costs are people related, with the rest for data centers, licenses, bandwidth etc.

- **Key trends in infrastructure services** — (1) Large clients are looking to create private clouds and consolidate their data centers. (2) Focus on remote infrastructure – some employees are getting rebadged. (3) Most decisions on renewal deals in the infrastructure space are being taken by the board.

(3) Europe – The next frontier

- **Lifecycle of offshoring in geographies** — Offshoring has been highest in the US/UK, where early/easy market share gains seem to be behind us. The next leg of opportunity seems to be Europe (ex UK). It has been a traditionally difficult market due to language / labor barriers. With the current macro environment exerting pressure on several European companies with a high cost structure, there seems to be an increasing acceptance towards greater offshoring – particularly in Nordics, Germany, Benelux and France.

Markets in Europe opening up with cost pressures on corporates there – Indian IT players have invested heavily – growth should pick up

- **Geographic exposures** — IT services companies have a reasonable onsite presence (hunting/farming teams, select delivery teams). These are typically shared services and work on multiple projects. Being a scale business, companies would like to attain a certain scale in each geography to optimize their utilization. Diversified exposure also helps companies mitigate region-specific macro risks.

- **Newer markets opening up** — Key markets were originally UK, Switzerland and Benelux given that these regions had a higher English speaking population and greater presence for financial services sector where Indian IT was strong. Now the market has expanded well to include Nordics, Germany and France as well with greater adoption of offshoring. However, language continues to be a big challenge in these locations.

Near-shore helps in providing comfort and language capabilities to clients

- **Near-shore delivery seems critical** — Clients in continental Europe need a near-shore centre to get more comfort, necessitating companies to invest much more than before. However, we understand that these near-shore centres are 20-30% more expensive than India and availability of talent, particularly within the context of rapidly scaling up operations, remains a challenge. Companies are also seeing the need to hire more locals in the sales force. BPO has seen good demand in continental Europe, with several deals around employee rebadging – offering companies an opportunity to quickly build a sizeable onsite base of domain experts. Given the rising importance of outsourcing to European companies, we continue to rate CEE/CIS-based vendor EPAM as one of our top ideas in the IT Services space.

- **Other key trends** — (1) Large amount of deals are around cost take-outs – companies are seeing multi year deals being signed in traditional ADM areas (2) Companies are expanding presence in new segments like public sector in UK. (3) While rising European demand is a reality, investors should expect the pace of European outsourcing to be deliberate rather than euphoric – European clients are likely to proceed in a steady fashion that slowly increases their comfort level with this process.

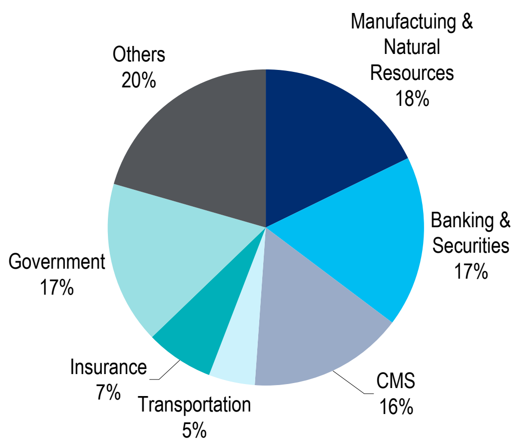
(4) Public sector – Can companies cut through the rhetoric?

- **Government sector accounts for ~17% of overall spend** — With increasing penetration in the traditional verticals, Indian IT companies are looking to tap other sources to drive the next leg of growth. As per Gartner estimates, the Government sector accounted for ~17% of worldwide enterprise IT spending in 2012 – making it one of the top 3 verticals (along with manufacturing and BFSI).

Large spend and some initial breakthroughs – will Indian companies manage to break through?

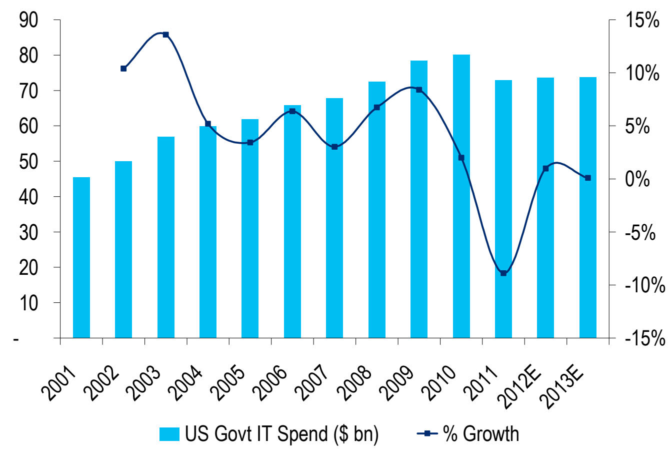
- **Government IT spend of ~$80bn in the US alone** — As per the US government, federal IT spends of various government agencies total ~$80bn. Offshore penetration is currently limited given concerns on unemployment and security.

Figure 12. Government sector forms a sizeable pie of global IT spend



Source: Gartner Worldwide IT Spending Forecast, 4Q12 Update; Data shows split of 2013 forecasted worldwide enterprise IT spending

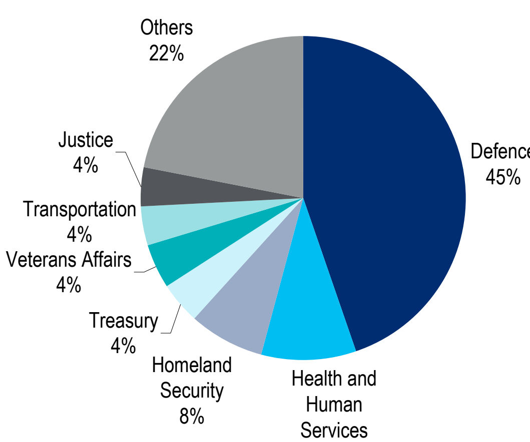
Figure 13. US Federal IT Spend has stagnated in the past few years



Source: Federal IT Dashboard (FY2013 Edition); Data last updated August 31, 2012; Above data excludes spends in areas that are classified

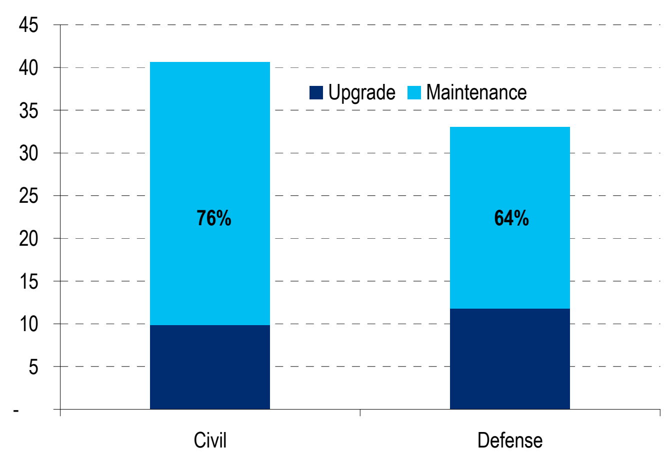
- **~$33bn addressable market** — Of the total spend, civil expenditure (ex defense, where security concerns are likely high) form ~55% of the total. Of the civil spend, upgrade-related spend (more discretionary, and hence volatile) form ~24% - leaving a ~$33bn addressable market for Indian IT in the medium term.

Figure 14. IT spend ex Defense accounts for ~55% of total



Source: Federal IT Dashboard (FY2013 Edition); Data last updated August 31, 2012

Figure 15. Civil IT spend has a higher share of maintenance spends



Source: Federal IT Dashboard (FY2013 Edition); Data last updated August 31, 2012;

- **Deal wins show growing traction** — Indian IT companies seem to be gaining traction (albeit gradually), as some recent deal wins suggest. Companies like Infosys/Wipro are setting up dedicated entities to hunt for deals in the public sector. Infosys Public Services has ramped up its team to ~180 in 6 quarters, building it up to a ~$100mn business – although profitability is yet to kick in.

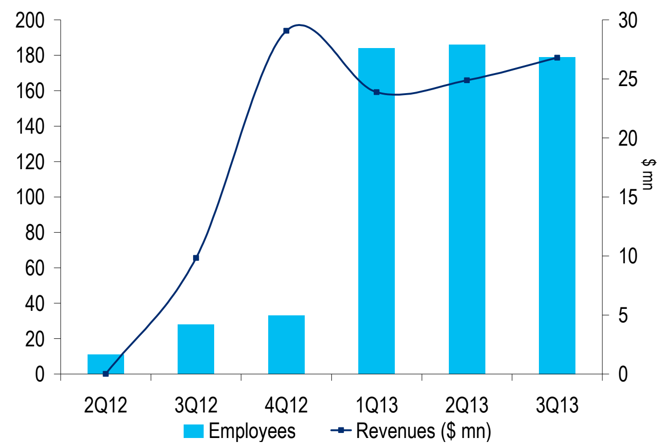
- **Teams staffed with local hires** — To manage sensitivities around job losses and to obtain security clearances to execute these government projects, vendors are staffing these entities with local hires many of them being ex-military personnel.

Figure 16. Indian IT – Some deal wins in the Public Sector

Client	Country	Vendor	Date	Tenor	TCV ($ mn)
State contracts	US	Infosys	Jan-13	na	> $100mn
Home Office	UK	TCS	Nov-12	8	£350mn
Ministry of Education, New Zealand	NZ	Infosys	Mar-12	5	na
UK Financial Services Authority (FSA)	UK	Cognizant	Aug-11	na	na
Norway Post	Norway	Cognizant	Jul-11	na	na
Commonwealth Secretariat	UK	Wipro	Dec-10	na	na
Personal Accounts Delivery Authority (PADA)	UK	TCS	Mar-10	10	£600mn
Cardiff City Council	UK	TCS	Dec-09	15	$250mn
Child Maintenance and Enforcement Commission	UK	TCS	Apr-09	na	£55mn
Mississippi Department of Employment Security	US	TCS	na	na	na

Source: Media Reports, Company Reports

Figure 17. Infosys Public Services – Ramp up over the last year



Source: Company Reports

Emergence of SaaS – Opportunity or Threat?

Last year, we wrote a cross-sector report on Cloud, titled Every Silver Lining Has a Cloud which has a detailed description of cloud and related trends / impacts.

During our investor trip, there were a lot of investor questions on the medium to longer term impact of the shift towards the SaaS (Software as a service) model. Specifics on the various flavors of "Cloud" are in the detailed report referenced to the left, here we focus on the brief takeaways for Services companies.

- Investors remain concerned about SaaS because its primary objective is to reduce the total cost of ownership relative to traditional software – and the thinking is that a part of this "hurt" will be felt by Services companies that benefited over time from traditional software applications.
- Specifically, SaaS implies there is a limited customization/implementation opportunity and down the road, there could also be a more constrained maintenance opportunity. However, one must also consider the considerable consulting and change management opportunity that exists. Also, by and large, there will need to be a level of effort to integrate the cloud application with other existing applications. So, in the near-term one could make a good case for muted (or even positive) impact for some vendors.
- However, the longer term impact is quite unclear at this stage, because it depends on the penetration of SaaS applications over time – which most companies did agree to, in our discussions. The perspectives which emerged from various meetings are:

While longer term trends are difficult to forecast, SaaS is more suited to smaller organizations and isolated functions at large organizations. Also, any major trend change will be a multi-year phenomenon

  - Large enterprises will likely be reluctant to use SaaS for core/sensitive data related work. Hence, the shift to SaaS based models may only be for non-core work (and also if it addresses an isolated function, where the interdependencies are not large).
  - SaaS has more acceptability among the smaller clients – large organizations which have already incurred huge capital costs may not be as keen. Also, integrating SaaS based software to the existing IT infrastructure may require a lot of work.
  - Larger organizations have historically relied on huge amount of customization even when they were buying off the shelf software.
  - Cost is a primary concern but there are other issues like security, privacy, ability to customize etc.
  - Reluctance of IT departments in buyer organizations.
  - Even if the shift happens, it will take a long time to make the shift given concerns around data privacy/security.

Similar to the Enterprise software vs customized software debate? Does seem partly similar

- To us, it does remind of the big debate on Enterprise software vs customized software a decade back. Even today, both of them continue to co-exist. Large enterprises will continue to focus on privacy/security, ability to customize (particularly related to core differentiating process), ability to integrate with other applications etc. Given the same, we believe SaaS will find faster adoption within smaller organizations and isolated/non-core applications in larger enterprises. It will take a long time (and even that is unclear today) for organizations to convert a large part of their usage to SaaS – near term, it will provide an opportunity to the IT services industry.

Change in Demand – Newer Services

Newer services becoming more mainstream

Analytics & Mobility can be significant drivers of medium term growth

Indian IT companies have historically been good at expanding the addressable market and have added service lines like Enterprise Applications and BPO. Now, as they find themselves at crossroads yet again, these companies are turning to "Horizon 3" services (Social, Mobility, Analytics and Cloud) which could be a significant medium term growth driver.

Cloud, Mobility, Analytics are not just buzz-words any more. 2012 has shown us that these projects tend to be highly strategic and are unlikely to be the first to get cut in the event of spending constraints in spite of being discretionary in nature. Equally important, the potential for a flow-though from initial pilots and proofs-of-concept to large systems integration activity is significant.

Cloud could bring in some revenue cannibalization; but the net result can be positive with the right strategy

Overall, we reckon that Analytics and Mobility can result in significant green-field opportunities in the medium term. While the emergence of cloud could result in some revenue cannibalization over the long-term (big area of debate), it could also lead to good revenue opportunities in the near-to-medium term.

As these newer services increasingly become mainstream, offshore companies are stepping up their investments to tap these opportunities:

- As per media reports, Wipro is putting together a team of ~3,000 people to develop a new line of business under 'advanced technologies' to address solutions around social media, cloud, analytics-as-a-service and mobility. The reports also suggest that the company is looking to give a separate revenue mandate for this team and report revenues separately from Q1FY14. In Sep 2012, Wipro announced the appointment of Mr. Shaji Farooq (earlier worked with Infosys) as Senior VP to head the unit.

- Cognizant recently announced it will initially invest $25mn to open additional data centers in Arizona, Virginia, Amsterdam, and Slough (UK) to strengthen and expand the company's enterprise cloud infrastructure services.

Cloud

- **Variety of business models** — Cloud broadly encompasses three main opportunities – (1) SaaS - provision of software; (2) PaaS - an application platform; and (3) IaaS - storage and infrastructure. Opportunities also exist for consultants, integrators and aggregators who help clients progress into the cloud and manage a range of services on the cloud.

Figure 18. Cloud – Service Offerings

Service	Description
Cloud strategy and planning	Developing a Cloud roadmap and assess cloud readiness
Cloud enablement	Build a robust and secure Cloud computing environment to deliver IaaS and PaaS
Cloud brokerage	Bring together private and public Clouds, and enterprise assets
Cloud migration	Service on-boarding and best-in-class business services
Cloud application development	Build native Cloud services involving collaborative and ubiquitous services
Cloud security	Deliver a risk-based security framework that addresses and integates with existing compliance and privacy regulations
Cloud sustenance	Manage Cloud governance and Quality of Service (QoS) issues

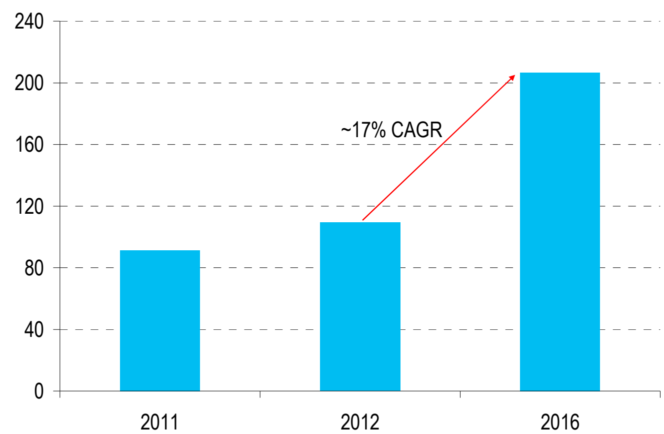
Source: Company Reports, Citi Research

- **Hype was greater than reality** — Over the past few years, there was a lot of hype around cloud-based technologies and their benefits. Today, most enterprises have done / continue to do cloud pilot projects, proofs of concept and initial implementations. However clients still must get comfortable with new contract structures and address concerns on security and data privacy.

As per ISG, the percentage of contracts with Cloud in scope has gone up to ~27% in 2012 from ~9% in 2010

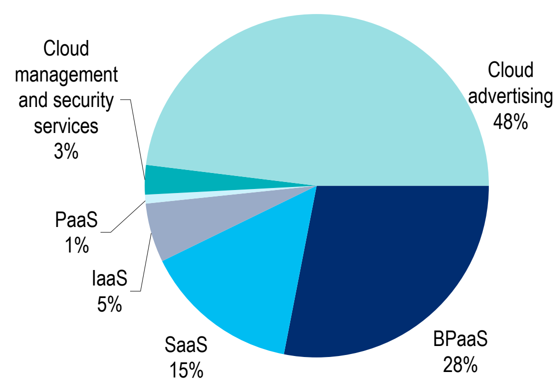
- **Increasingly becoming mainstream** — Over the past year, we finally seem to be entering a phase in which cloud has become more mainstream, presenting far reaching implications for IT/BPO companies. Gartner estimates enterprise spending on public cloud services to reach ~$207bn worldwide by 2016, implying ~17% CAGR from 2012 levels.

Figure 19. Global Public Cloud Services Market ($ bn)



Source: Gartner, Citi Research

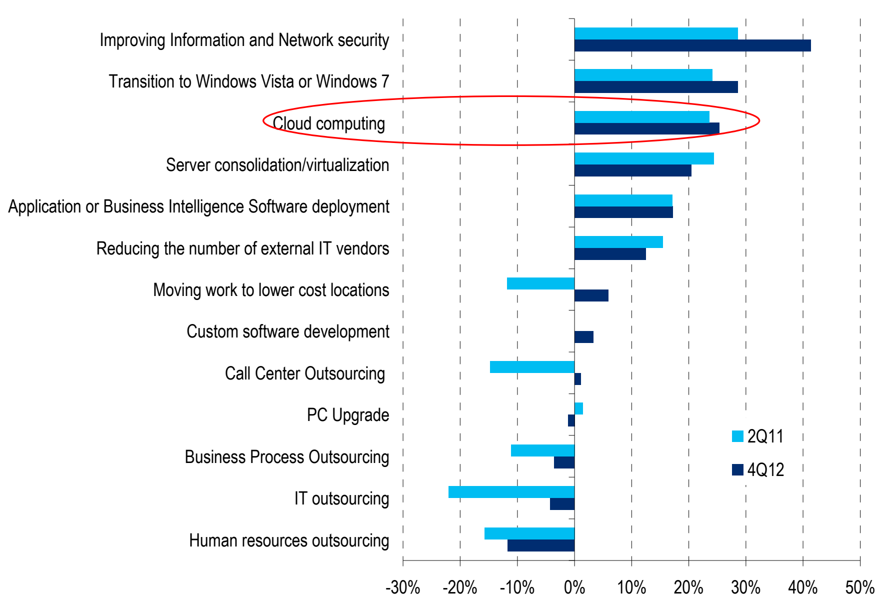
Figure 20. Global Public Cloud Services Market (2012)



Source: Gartner, Citi Research

Citi CIO Surveys over the past few quarters have pegged Cloud computing among the top 3 priorities for CIOs

Figure 21. Citi CIO Survey - Are the following items a "priority" or "candidate for deferral" during the next 12 months?



Source: Citi Research

Most market forecasts of enterprise cloud computing coincide around $45-50bn pa of revenue globally by 2013-2014 (more than double the level in 2011) and we expect a 20% CAGR to 2020.

- **Drivers of cloud adoption** — Cloud usage in the consumer segment has been driven by media streaming and access to cloud storage with an easy interface at minimal cost (applications like *Dropbox* and *Google Drive*). On the enterprise side, clients are seeing a need to provide access to large data archives (for eg: access to case studies on best practices to employees, access to a data library to customers).

- **BYOD as a big driver** — Cloud adoption is also increasingly driven by BYOD. We believe that BYOD (Bring Your Own Devices) is likely to be a disruptive force in technology in the years ahead ("Bring Your Own Devices" BYOD Trend Grows Bigger To Challenge Traditional PC Growth).

Cloud outlook for IT Services companies

Strategy consultants and data centre outsourcing vendors may see an initial negative impact

The outlook for traditional IT Services companies depends on which service offerings their historical revenue base is comprised of as well as what investments each vendor has made to adapt to the cloud. There are risks as well as opportunities associated with the cloud and, clearly, not every vendor will be affected in a similar manner. Our take is as follows:

Important to be an early mover in the Cloud

- **Market acceptance will take time** – The impact grows over time and some of these offerings need a prolonged time period to be accepted in the marketplace in a material way. So it is important to be an early mover and to have some say in the market direction by providing consulting and advisory services.

- **Different vendors are likely to be affected at different times** – We do expect the initial impact is likely to be felt by data centre outsourcing vendors. By the same token, the impact on the important channel partners of the major independent software vendors (ISVs like SAP and Oracle) is likely to be muted and probably determined by the actions of those software vendors. But it seems reasonable to assume that a SaaS application needs a lower level of implementation effort compared to a similar traditional application.

- **Systems development and integration vendor negatives** – (i) As the acceptability and upward reach of cloud-based solutions continues, the demand for certain categories of application / systems development work could face a secular decline or at least a headwind to growth. (ii) Large ISVs continue to make their own cloud investments and have tried to actively address the total-cost-of-ownership (TCO) issue, which puts pressure on the overall demand for customized systems work.

Client IT departments are stretched and need cloud functionality within their private cloud set-ups

- **Systems development and integration vendor positives** – (i) It is quite clear that in the near to mid term, the vast preponderance of most Fortune 1000 IT budgets will not be on the cloud, even as cloud applications gain share – this is a built-in base of business for major IT vendors because the multiple sets of applications and their underlying data will need interfaces developed and will need to be integrated and managed together. (ii) There is a market to build custom-SaaS solutions. While this is a seemingly contradictory term, it is actually a source of business for IT firms because client IT departments are stretched and need cloud functionality within their private cloud set-ups. (iii) Many of the leading players are introducing their own industry-specific SaaS solutions, which actually play well with underlying 'Platform BPO' work that many of these vendors have.

- **Applications maintenance vendor negatives** – (i) As the percentage of cloud applications in an organization increases, there should be correspondingly fewer systems to maintain – again a longer term challenge. (ii) Even if an organization does not move to a public cloud but chooses a private cloud instead, there should be a general tendency away from smaller support organizations toward larger ones that can provide more global support.

- **Applications maintenance vendor positives –** The move towards organizations that can offer global support should be a positive for the global IT companies we tend to cover.

Near term, cloud is a significant opportunity; longer term will depend on strategy and investments – for example, IBM expects to be a "net gainer" with the shift towards cloud

For an IT services vendor with the right strategy the net result can be positive. For example, **IBM** expects its multi-pronged cloud initiatives to contribute around $7 billion of revenue by 2015. Note, however, that there is around $4 billion of revenue cannibalization envisioned in its plan and so the net contribution from the cloud is approximately $3 billion. This is a good illustration of how the various elements of cloud affect different IT revenue streams. Companies will need to have an appropriate strategy and investments – without which they may struggle to offset some cannibalization which the model would bring. However, there should be a lot of opportunities in the near term for IT Services vendors – manifested in the numerous proof of concept/pilot kind of projects which the industry is talking about today.

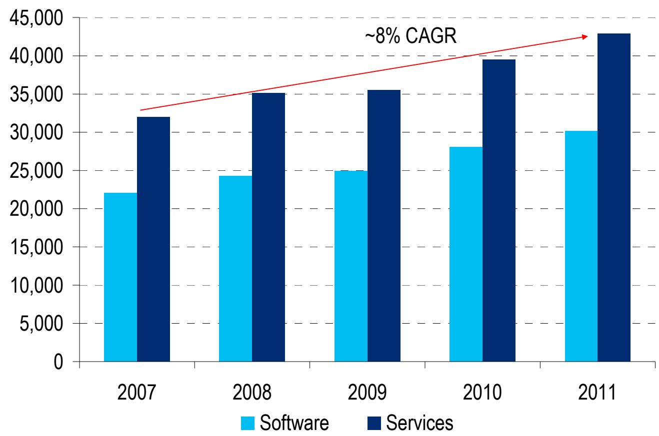
Analytics

- **There has been a rapid proliferation of data…** — Recent years have witnessed a rapid proliferation of data globally. The total size of data center traffic is estimated by Cisco[1] to be ~2.6 ZB and expected to reach ~6.6 ZB by 2016 at ~31% CAGR over 2011-16. As per Wipro's estimates, the amount of big data stored globally is to the extent of ~6,500 petabytes[2].

Growing faster than overall IT market

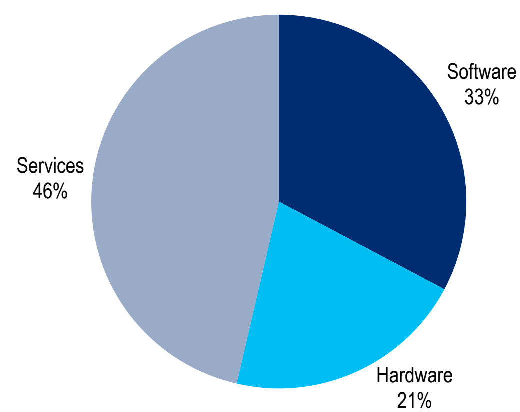
- **…leading to surge in demand for analytics** — With data proliferation, there is a greater need to analyze the data and use it to tweak systems and processes as well as provide real business insights. Worldwide business analytics services revenues have thus grown at ~10% CAGR over 2009-11 in a period where overall IT Services spending has grown at ~5% CAGR (on a low base post decline in 2009 during the financial crisis).

Figure 22. Worldwide Business Analytics Technology Revenue ($ mn)



Source: IDC, Citi Research

Figure 23. Global Business Analytics



Source: IDC, Citi Research; Data for 2011

[1]http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns1175/Cloud_Index_White_Paper.html

[2] http://www.wipro.com/images/infographic.jpg

Figure 24. Business Analytics – Competitive Positioning

Company	C&SI Services		BPO Services	
	Areas of Strength	Areas of Improvement	Areas of Strength	Areas of Improvement
Accenture	Strategy to create next-generation tools and methodology	Marketing of business analytics C&SI services	Current innovation/research and development pace and productivity	Current cost competitiveness
	Strategy to increase organic and inorganic growth	Affordability of business analytics C&SI services to clients	Customer service	Current marketing
	Current innovation process and delivery tools and methodologies	Size of dedicated sales force	Future marketing strategy	Future portfolio strategy
Capgemini	Strategy to target underserved or new verticals/areas	Revenue per employee generated for the business analytics C&SI practice	Current and future pricing model options and alignment	Future customer services strategy
	Strategy to enhance functional/industrial and organizational capabilities	Size of dedicated sales force	Current portfolio of benefits delivered (across the value chain)	Current marketing strategy
	Strength of the full life cycle of business analytics services	Number of deals signed	Future sales distribution strategy	Future growth strategy
Cognizant	Effective use of onshore/offshore/hybrid delivery model	Revenue per employee generated for the business analytics C&SI practice	Current cost competitiveness	Current and future growth strategy
	Affordability of business analytics C&SI services to clients	Worldwide client base	Current and future functionality/offering delivered and road map	Current customer service
	Strategy to create next-generation tools and methodology	Strength of vertical- and region-specific partnerships	Future sales/distribution strategy	Current sales/distribution structure/capabilities
Infosys	Effective use of onshore/offshore/hybrid delivery model	Marketing of business analytics C&SI services	Current delivery model appropriateness and execution	Future sales/distribution strategy
	Affordability of business analytics C&SI services to clients	Revenue per employee generated for the business analytics C&SI practice	Current marketing	Current growth strategy execution
	Variety of pricing models offered currently to the clients	Size of dedicated sales force	Future portfolio strategy	Current customer service
TCS	Effective use of onshore/offshore/hybrid delivery model	Marketing of business analytics C&SI services	Current innovation/research and development pace and productivity	Future delivery model
	Affordability of business analytics C&SI services to clients	Revenue per employee generated for the business analytics C&SI practice	Current sales/distribution structure capabilities	Future growth strategy
	Current innovation process and delivery tools and methodologies	Number of deals signed	Current employee strategy and future employee management	Current customer service

Source: IDC, Citi Research

- **Competitive landscape dominated by global peers** — Unsurprisingly, global peers like ACN/IBM dominate the competitive landscape for Analytics. Recently Indian IT services firms have started making inroads in this area, with both IT and BPO firms recognizing the market opportunity.

- **Offshore players are stepping up their presence —** Indian IT companies always had basic business intelligence expertise from a software implementation perspective, but they are now slowly moving up the value chain to areas like predictive real time analytics. To realize this, companies are recognizing the need to invest heavily in these areas – both organically and inorganically:

Companies are making big investments (both organic and inorganic) to cater to the fast growing demand in this segment

  – **Organic investments** — In FY12, Infosys doubled investments in its Product Research and Development Center (PRDC). An outcome of this increased investment is an advanced analytics product – Infosys's Supply Chain Performance Management Suite. TCS also rolled out niche offerings in warranty analytics and collection/sourcing and is actively looking to build IP in Big Data analytics.

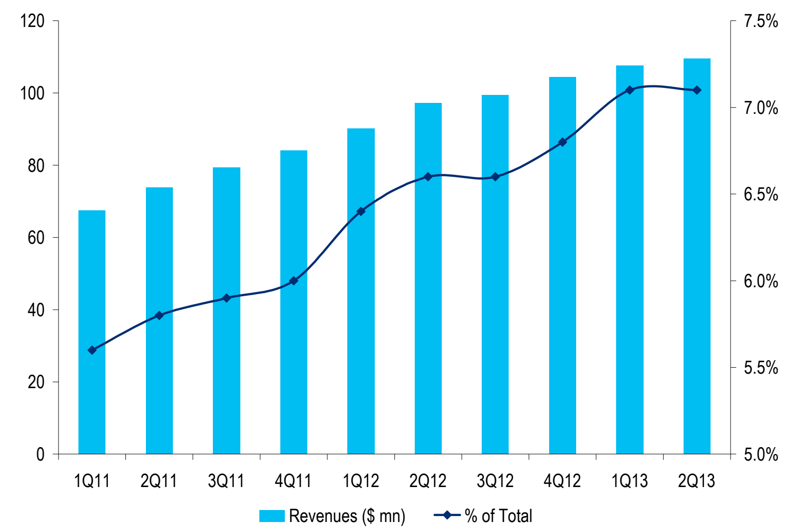
  – **Inorganic strategies** — In Apr'12, Wipro reported entering into an arrangement to acquire Promax Applications Group (PAG) for A$35mn in an all-cash deal (~2.3x trailing sales). Founded in 1989, it had 71 employees and offered solutions in predictive analytics for trade promotions, among others, to 45 clients incl Heinz, Loreal, Kraft, and Henkel.

Figure 25. Analytics – Service Offerings

Company	Solution Offered	Objective
Infosys		**Infosys is delivering business analytics programs to over 300 clients across the globe.**
	Applied Customer Intelligence (ACI)	Gain insights on an organization's customer base by assimilating information from disparate systems leading to more effective marketing campaigns and targeted cross-sell efforts
	Enterprise Banking Analytics	Modular solution offering end-to-end pre-built framework to integrate sales, pipeline, marketing, service, billing and profitability information from diverse source applications into consolidated business intelligence for the enterprise
TCS		**Has done 650+ analytics implementations for Global 2000 companies**
	Financial Analytics	Provides insights to manage expenditure, cash flow and investments to grow revenues
	Consumer Analytics & Insights	Provides insights around consumption and loyalty patterns
	Supply Chain Analytics	Helps drive spend and inventory optimization
	Risk Analytics	Helps prevent fraud, project claims and other losses
ACN		**ACN provides a host of consulting and technical services across all its focus verticals, below we detail a few of them**
	Industry Specific Analytics	Banking Analytics, Communications, Health Services, Insurance, Public Service, Retail
	Cross-Industry Analytics	Big data, business intelligence, customer and marketing analytics, fraud and risk analytics, human capital analytics, operations analytics, sales and customer services analytics
	Organization Effectiveness Svcs.	Organization readiness, talent development, and transformational enablement services
	Marketing Analytics	Marketing investment optimization, agile marketing analytics platform, forecasting, product portfolio optimization
	Intelligent Processing Services	Public services / government focused analytic tools, analytics delivery, and business process integration
Wipro		**Added 56 customer engagement in 1HFY13**
	Promax PX, Promax AnalytX	Trade Promotions Management and Optimization (TPM/TPO) solutions
CTSH		**Team of 600+ professionals - Services leverage / expand upon CTSH' MarketRx acquisition in 2007**
	Banking & Financial Services	Credit Risk Analytics
	Retail	In-Store Analytics advisory services including campaign optimization, price and markdown optimization
	Healthcare	Payor/Provider Analytics integrates multiple data sources and technologies to increase productivity, drive collaboration and increase throughout
	Life Sciences	Transform life sciences organizations by connecting information, insights and technology to improve business performance
	Manufacturing & Logistics	Combined with consulting, supply chain and vendor analytics tools help examine the supply chain and leverage KPIs to drive improvement

Source: Company Reports

Figure 26. Wipro – Analytics and Information Management now form ~7% of total revenues



Source: Company Reports

- **Good demand for customer centric applications** — While these are early days, some of these investments are beginning to yield results. In our recent tech tour, companies indicated that a lot of spends are getting channelized into the front end for customer-centric applications. In this context, companies are seeing more traction than ever in services like customer analytics and BI.

Mobility

Mobility is expected to be one of the biggest demand drivers for IT Services over the medium to long term

- **Significant opportunities for services companies** — With tablets and smartphones increasingly becoming a part of our daily lives, clients are recognizing the need to offer similar level of customer engagement across these platforms. This trend of going "mobile" has presented significant new opportunities for services companies – ranging from design and development of mobile applications to specialized security and support on these platforms.

- **Mobility services going out of the "discretionary" realm** — As revenues are under pressure, clients are seen as reluctant to lag behind on customer centric trends. In this context, many of these mobility projects are no longer seen as fully discretionary in nature. For example, developing a mobile banking application is not a choice for a bank, it is a necessity.

- **Project sizes are still small** — Average engagements in the market currently are still small – hardly sizeable in isolation for Indian IT companies on their scale. Verticals which have shown the greatest changes to deal with mobile customers are telecom, retail, travel and media & entertainment.

Volatile nature of demand with evolving trends in devices, platforms and buyer preferences…

- **Relatively volatile nature of demand** — Vendors and clients alike also need to keep pace with newer and more powerful devices, and evolving platforms/buyer demands. This has necessitated a few changes in the engagement models:

  – **Change in the buyer** — Given the relatively volatile nature of these projects and their customer centricity, new buyers have emerged within the client organizations in addition to the CIO. As per a global survey conducted by TCS across 664 executives, roughly two-thirds of the respondents indicated that non-IT functions took the lead in mobile strategy, with Sales and Marketing functions playing a significant role. This is also consistent with public comments made by Cognizant management on the percent of overall engagements that have a Mobility or Analytics component.

…in turn manifested in changes in contract terms (less T&M) and staffing models (more domain experts)

  – **Changes in contract terms** — Given the volatile nature of demand, clients are looking for more nimble and shorter term contracts. Contracts are thus moving away from traditional "time and material" to outcome-based, revenue share and other models. In our trip, companies also highlighted that they were co-creating mobility-led business solutions with clients. For example, HCLT has partnered with Cisco and filed multiple patents in the field of mobility.

  – **Changes in staffing models** — IT companies also have to deal with changes in staffing requirements – with greater demand for domain experts who can keep pace with changing requirements and scope. In this regard, we note that most Tier I companies have a history of hiring subject-matter experts and non-engineers into the company.

Competitive landscape also littered with numerous specialist firms

  – **Changes in competitive landscape** — Companies highlighted significant competition from niche, smaller firms particularly for design and development as contract sizes are typically much smaller and due to the specialist nature of work involved. Overall, IBM, ACN and Infosys have emerged as the leaders in enterprise mobility services space with their capabilities and investments in IP to jump start some of these projects.[3]

- **Offshore players are stepping up their investments** — As mobility has increasingly become mainstream, companies are investing heavily in developing IP assets. Some companies like Infosys/HCLT are partnering with clients to co-create mobility-led business solutions.

[3] http://www.infosys.com/mobility/features-opinions/Documents/enterprise-mobility-services-leader.pdf

– In FY12, TCS launched a few IP assets: (1) foundational platforms to help deploy mobility (2) horizontal solutions applicable across verticals (3) industry specific solutions. TCS has also filed patent applications for several innovations embedded in these IP assets.

– Infosys has created a mobile commerce platform for Airtel, a leading telecom company in India, for customers to pay bills, make money transfers and transact online through multiple channels including mobile phones. The company has also co-created a Mobile Point of Sale solution with a large US retailer.

Figure 27. Mobility – Service Offerings

Company	Solution Offered	Objective
Infosys		**Has ~1200 employees working on enterprise mobility with >70 customers**
	Flypp	Enables enterprises to engage their consumers by delivering rich and relevant experiences across numerous mobile devices and creates customer stickiness through a set of experiential applications.
	mWallet	Comprehensive mobile payments solution - banking facilities, enabling payments at POS terminals, personal finance manager which maintains and tracks budgets, link multiple credit/debit cards into the phone etc.
	mBrochure	Retailers can provide relevant product/promotion related information to customers.
	mConnect	Enterprise middleware that enables mobile services for websites and eCommerce platforms. It seamlessly integrates evolving technologies, new devices and information delivery channels.
	TruSync	Enables a sales executive in a retail store enhance a customer's shopping experience by selecting products that match their specific requirements.
TCS		**Has >100 customers**
	TCS Travel Assist	Helps plan and track travel itinerary by providing personalized local travel information and flight status updates.
	TCS Event Maestro	Enhances conference event experience with personalized event schedules and event collaboration using messages and tweets between attendees.
	TCS Cabin Crew Ops	Data such as passenger roster, crew info, checklist and on-board manuals are enabled on a tablet device.
	TCS Mobile Point of Sale	Transforms a business at the point of sale with an integrated bar code scanning and credit card processing with mobile devices.
ACN		**Accenture provides a wide range of consulting and technology focused mobility services, below we detail just a few**
	Mobility Business Integration	Workforce management and sales force automation
	Mobility Consulting	Management and technology consulting services to develop mobility strategies, mobility business and technology plans, and design mobility solutions
	Mobility Managed Services	A managed-service platform for clients to launch and scale vertical mobile offerings on a variable cost, transaction model basis. Enterprise application catalog, mobile device management, connectivity (device and vehicle), mobile banking and payments, billing solutions
	Mobility Software Services	Application development and testing, device enablement and engineering, device and platform testing, in vehicle infotainment
Wipro		**Has >1000 employees and added >50 customers in FY12**
	Retail offerings	B2C apps for consumers such as Mcoupons, store locator etc.
	BFSI offerings	Mobile banking, mobile trading, mobile claims management and mobile commerce.
	Healthcare offerings	Clinical workflow and medical records, patient monitoring etc.
CTSH		**Rapidly growing its client base**
	Advisory Services	"Visioning", Technical assessments, Center of excellence (COE) development, Governance
	Delivery Services	Application development, UI and UX , Testing, Data integration, Security
	Managed services	Fully outsourced “pay as you go” model, Hardware configuration and staging, application administration, and end-user support
	Mobility Solutions	End-to-end mobile solutions. Range of "pre-built" frameworks, applications and solution accelerators

Source: Company Reports

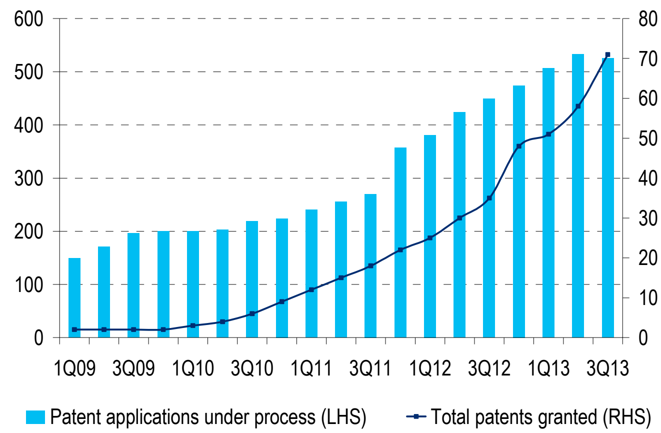
Non Linear Initiatives

As Indian IT has gained scale in traditional services, the growth rate has structurally decelerated due to the high base (i.e., law of large numbers). Availability and management of talent has also gotten increasingly difficult. To cope with these dual challenges of slowing growth and constrained supply, Indian IT has been looking at newer, non linear models of engagement. In this section, we focus on some of these initiatives adopted.

Infosys – Non Linear Initiatives

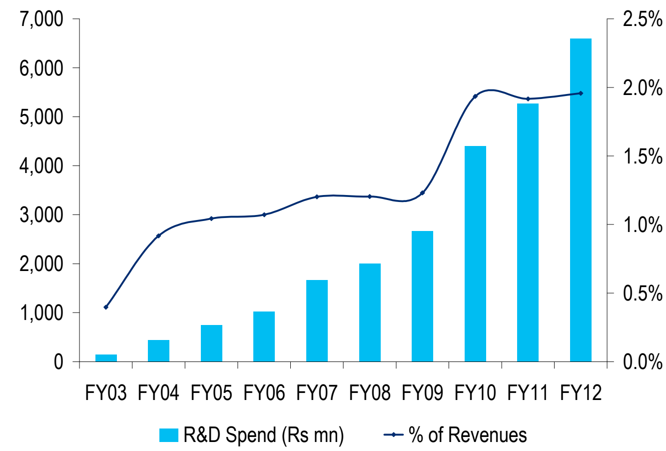
- **Aim to take PPS revenues to 1/3rd** — Under Infosys 3.0, the company is looking to increase revenues from Products, Platforms and Solutions to one third of the overall revenues. Infosys has also shown a higher focus on R&D and Innovation over time. In the last few years, Infosys has stepped up spending on R&D – from ~0.5% of revenues to ~2% of revenues (on a much higher base). In the past few quarters, Infosys has also seen a notable rise in patent applications and grants.

Figure 28. Infosys – Higher focus on innovation over time



Source: Company Reports, Citi Research

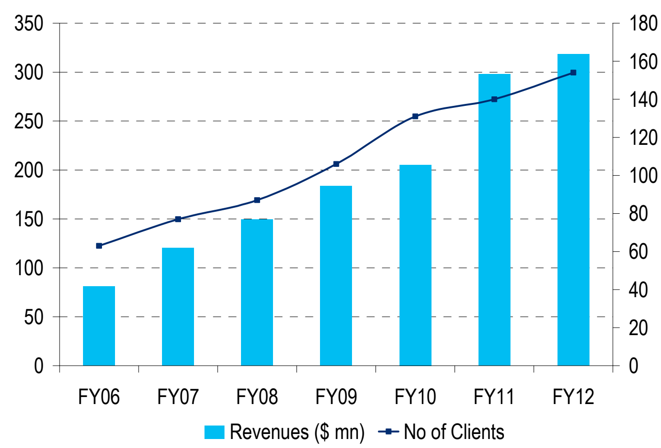
Figure 29. Infosys – Increasing R&D spends over time



Source: Company Reports, Citi Research

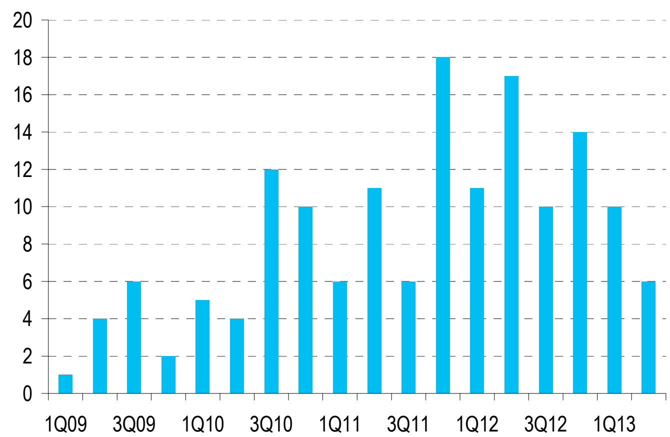
- **Finacle** — Finacle is Infosys's banking solution which caters to multiple requirements of a bank ranging from core, e-banking, mobile, CRM, wealth management to treasury solutions. Finacle revenues have quadrupled in 6 years, albeit on a low base. Moreover, Infosys has seen much better traction in terms of client wins on the Finacle platform over the last 7 quarters – lending significant visibility to the medium term growth prospects.

Figure 30. Infosys - Finacle revenues have quadrupled in 6 years



Source: Company Reports, Citi Research

Figure 31. Infosys – New client wins in Finacle

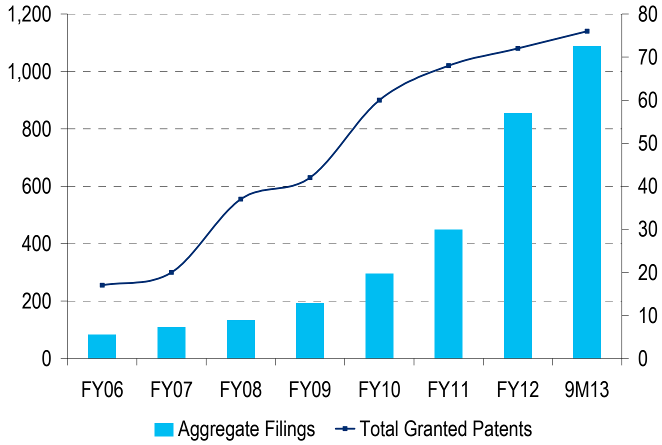


Source: Company Reports, Citi Research

TCS – Non Linear Initiatives

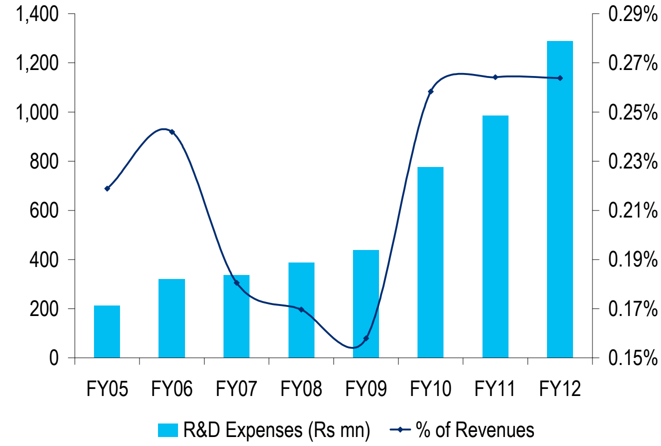
- **Higher focus on R&D and Innovation** — Since FY10, R&D spends and consequently patent filings have seen a spurt at TCS. This seems to be a follow through of TCS's non linear strategy which the company is pursuing through the following services: (1) Platform based BPO services (2) Products and (3) iON, an IT-as-a-service solution for small and medium business.

Figure 32. TCS has seen a spurt in patent filings since FY11



Source: Company Reports, Citi Research

Figure 33. R&D spends have also picked up since FY10



Source: Company Reports, Citi Research

Figure 34. TCS – Key non linear offerings

Platform based BPO	Process cloud wherein TCS manages client's business processes using a centrally hosted technology platform
TCS BαNCS	Core banking product offering
iON	Deliver a shared, centrally hosted business automation suite to small and medium businesses

Source: Company, Citi Research

(1) Platform based BPO

Through this solution, clients' business processes are managed with an own, centrally hosted technology platform. This combines intellectual property, infrastructure and BPO services into a bundled service offering to enable an end-to-end execution. Demand for these services is driven by surging interest in cloud adoption partly due to elimination of a need to invest in on-premise IT infrastructure, software licenses and maintenance staff.

Figure 35. TCS – Platform based BPO Offerings

1. Life insurance and pensions policy and administration
2. Analytics
3. Finance and accounts
4. Human resources outsourcing
5. Procurement
6. Niche offerings in warranty analytics and collection/ sourcing rolled out in FY12

Source: Company, Citi Research

- **Notable client wins** — Diligenta, the company's UK subsidiary, was formed in 2005 after TCS won a 12-year £486mn contract from the Pearl Group (now Phoenix Group) for services including administration of 3.6mn policies. In Jan 2008, Diligenta secured its second client in Sun Life Financial involving a further 0.5mn policies. TCS also secured a $2.2bn contract from Friends Life, a British financial services firm, in Nov 2011.

Figure 36. TCS Diligenta Platform – Key Client Wins

Date of contract	Client	Scale (no of policies, mn)
Apr-06	Phoenix Group (formerly Pearl Group)	3.6
Jan-08	Sun Life Financial	0.5
Sep-10	Phoenix Group	1.7
Nov-11	Friends Life	3.2

Source: Company, Citi Research

Figure 37. TCS BαNCS – Key Clients

Ahli Brokerage Company
ANZ
Arab African International Bank (AAIB)
Bahrain National Insurance
Bank of India
BankMuscat
BNP Paribas Securities Services
CDS Clearing and Depository Services Inc. (CDS)
City Union Bank
Community Alliance Credit Union (CACU)
Daiwa Securities
Indian Bank
Mizuho Trust & Banking Co. (USA)
Nasdaq Dubai
The National Depository Center (NDC)
Nova Ljubljanska Banka (NLB)
Philippine Depository & Trust Corp. (PDTC)
State Bank of India
Taishin Bank
Takaful International Co. BSC
Yuanta Commercial Bank

Source: Company, Citi Research

(2) TCS BαNCS

TCS financial solutions caters to the BFSI segment using the TCS BαNCS product suite which encompasses over 30 components covering core banking, insurance, payments, corporate actions, securities and treasury. In FY12, TCS financial solutions added 39 new clients, in addition to which 14 clients went live on TCS BαNCS.

In July 2012, TCS entered into an agreement with Savvis, a leading provider of cloud infrastructure for enterprises to offer the BαNCS product suite on a cloud-enabled hosted environment in North America in a move to increase penetration in the small and mid-sized banks segment.

(3) iON

iON is a cloud-based platform for small and medium businesses launched in Feb 2011 which delivers a centrally-hosted, shared business automation suite eliminating the need for them to invest in any IT assets/staff. The suite encompasses solutions across CRM, HRM, Payroll, Finance Management and other niche solutions across verticals.

TCS is marketing iON through a channel partner network of 109 cloud service providers (up from 90+ in Mar'11) with a significant penetration into tier 2 cities in FY12. Clients pay a monthly rental for the software, as per usage, instead of the traditional one-time license. As on Mar'12, iON had 256 mid-market customers (up from >150 in Mar'11).

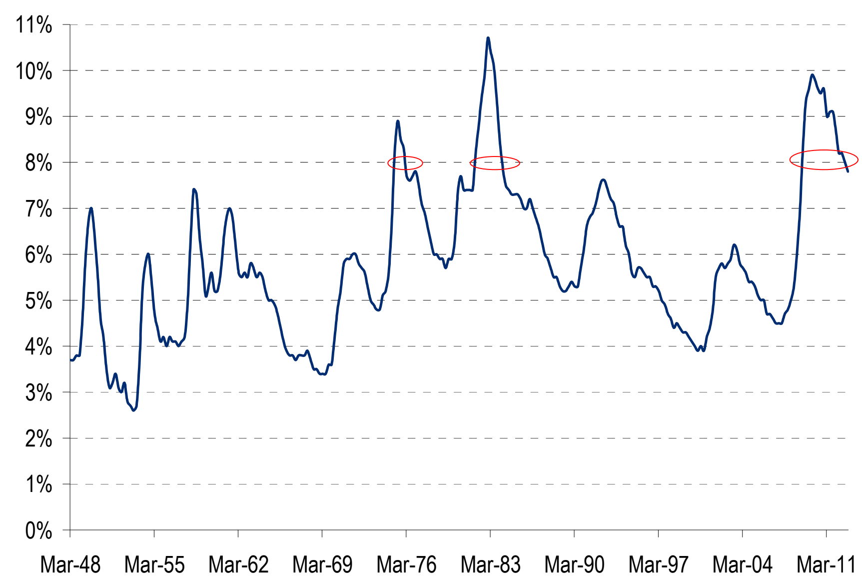
Change in Supply

Regulatory Changes

Visa rejection rates shot up in 2012 – partly due to protectionism – unemployment in US remains at high levels

- **High noise around protectionism** — Protectionist considerations came to fore yet again in the backdrop of US elections in late 2012, complemented by unprecedented rejection rates for work visas. Pressure on visas is particularly high given (1) the larger scale that Indian IT currently operates at (2) slower recovery in unemployment in the US, as compared to the past. While there are some expectations that visa situation could ease, Indian companies will need to invest in local hiring given the changing business models.

Figure 38. This is the longest that US unemployment rate stayed above 8%



Source: Bloomberg, Citi Research

Subcontracting has gone up over the past few quarters while we expect local hiring to continue to be a focus area

- **How are vendors coping?** — Indian IT companies have had to resort to higher subcontracting (in the short run) and local hiring/re-badging customer resources (in the long run) to meet the onsite demand – we expect these trends to continue until there is a let up on the visas front. This thesis is supported by a recent Gartner article, which suggests Indian companies will triple their onsite hiring by 2016 from current levels.[4]

- **Lower flexibility and higher costs?** — Interactions with the industry suggest that immediate cost implications may not be very high given that the Tier I companies pay competitive wages to employees sent onsite. However, increasing local hiring of potentially less mobile talent can reduce business flexibility in the future, in terms of the ability to adapt to cyclical changes. In the past, employees could be sent back offshore when the potential for billing was low or moved to other onsite locations.

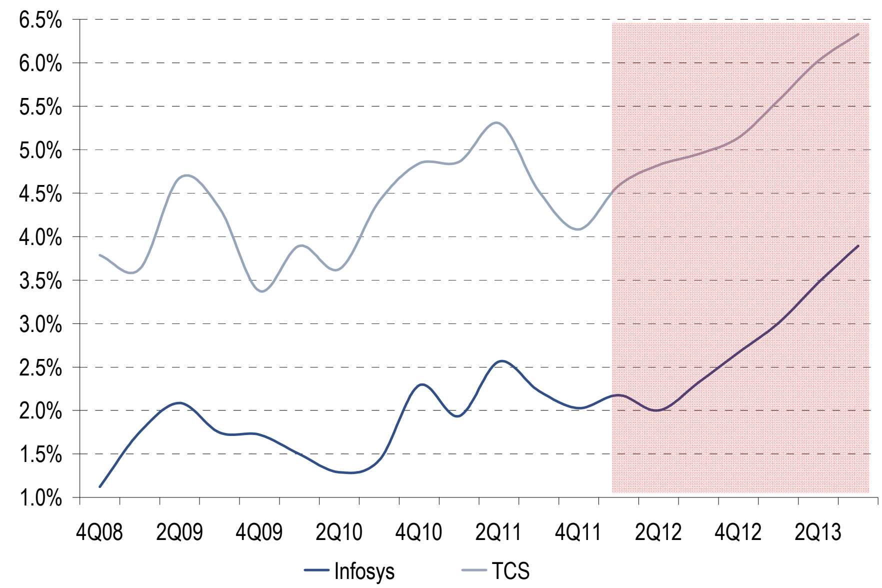
[4] http://www.livemint.com/Industry/V7pgdSKsNSLMMPDW9zFmGI/Top-Indian-IT-firms-to-triple-direct-hiring-in-US-by-2016-G.html

Figure 39. Indian IT – Increasing incidence of onsite hiring plans

Company	Expected Hiring	Time Frame	Location	Comments
Infosys	2,000	By end-2012	Wisconsin (US)	Looking to meet ~50% staffing in onsite locations through local hiring; Development centres in China, Poland, Czech Republic, Mexico and Brazil have ~90-95% local employees.
TCS	2,000	In FY13	Cincinnati, Milford and Michigan (US)	Hired ~1,600 employees in US in FY12.
Wipro	~50% of overseas employees	Next 2-3 years	NA	~40% of its ~10,000 employees in the Americas are local hires.
HCL Tech	10,000	By 2015	US/Europe	Collaboration with Consumers Energy to open centre of excellence in Michigan with plans to hire 300 tech professionals in the first phase. HCLT has also opened global delivery centre in Redmond, Washington.

Source: News Reports

Figure 40. Subcontracting costs have gone up over the past few quarters and at 5-yr peaks



Source: Company Reports, Citi Research; Subcontracting costs ($ mn) as % of revenues ($ mn)

Move Towards Managed Services

One factor that has surprised many analysts/investors is that most companies have spoken about improving prospects for growth in 2013 (compared to 2012); Campus hiring numbers are a lower year/year – even for companies which are running fairly high levels of utilization.

We believe this is partly due to increasing proportion of managed services contracts and partly due to the focus on just in time hiring, which lot of companies seem to be adopting. Also, companies are trying to work on the non-linearity aspect of the business model, which is more a longer term initiative for most companies.

With customers also driving managed services deals, companies need more experienced resources and are betting heavily no platforms/shared services to make the economics work better.

Engineers vs non engineers

While companies focus on managed services, just in time hiring and non-linearity, the industry will still need a significant pool of talent to grow low double digits over the next few years. The supply challenges become even more acute given that global players are also growing their India base at a pretty fast pace. Recently, Cap Gemini announced that they plan to grow their India employee base by ~18% CAGR over the next 3 years.

Supply constraint

Large talent pool and growing but quality/employability remains a key concern

- **Quality supply may not be as large as it seems** — India has a seemingly large pool of ~2mn engineering/MCA graduates who may be employed in its IT/BPO industry. However, when one looks at degree holders alone, the number comes down to ~1mn – still a very healthy number.

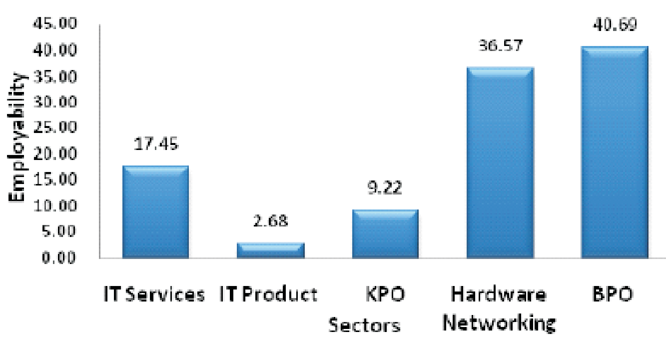
Figure 41. Program-wise Seat Analytics

	FY08	FY09	FY10	FY11	FY12
ENGINEERING AND TECHNOLOGY	825,791	1,087,283	1,400,270	1,783,431	1,905,802
UNDER GRADUATE	*473,102*	*607,673*	*784,170*	*962,150*	*1,066,489*
DIPLOMA	*324,314*	*446,676*	*577,562*	*767,690*	*770,509*
OTHERS	*28,375*	*32,934*	*38,538*	*53,591*	*68,804*
MCA	55,009	64,247	74,619	83,942	87,573
TOTAL APPROVED SEAT INTAKE	**880,800**	**1,151,530**	**1,474,889**	**1,867,373**	**1,993,375**

Source: AICTE, Citi Research

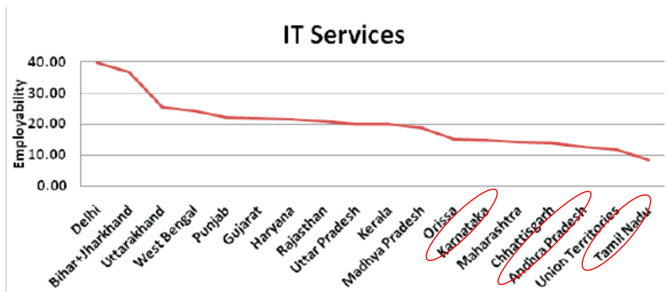
- **Doubts on employability; training becomes very important** — According to several Nasscom-administered assessment tests, only ~25% of these technical graduates are employable, suggesting an annual availability of ~0.5 million graduates. The National Employability Report 2011 said only ~17.5% of engineering graduates are employable in IT Services even after 3-6 months of training.

Figure 42. Employability of Engineering Graduates is low across sectors



Source: Aspiring Minds National Employability Report 2011

Figure 43. Low Employability in states with traditionally high recruitment



Source: Aspiring Minds National Employability Report 2011

- **Approved increase in engineering "seats" is not always filled** — While the AICTE (All India Council for Technical Education) approved intake has increased at ~23% CAGR over the last 5 years, a bigger constraint is the high vacancy levels. Anecdotally, ~50k seats in the state of Tamil Nadu are likely to be vacant in the current academic year (up ~20% yoy) – a vacancy rate as high as ~29%. Similarly, ~40k seats in the state of Maharashtra are likely to be vacant (~27% vacancy rate).

Figure 44. Higher focus on training

	FY08	FY12	CAGR
Infosys			
Number of Educators	338	891	27%
Trainee person-months	72,568	135.367	17%

Source: Company Reports

- **Progressively higher focus on training** — Excluding yoy fluctuations, Indian IT companies have invested significantly in training over the past few years. Infosys has increased its faculty members at ~27% CAGR since FY08. There is also enough anecdotal evidence of increasing training requirements.
- **Higher training costs could impact margins in long term** — As annual hiring approaches the tipping point of ~0.5mn mark, companies would be forced to look beyond the ~25% employable pool necessitating higher training. Infosys currently spends ~$180mn on training in a year (~$1,300/person-month). Assuming similar levels for the industry, the higher training could lead to significant margin impact.
- **Nasscom's NAC-Tech test to be used** — Companies are now increasingly making it mandatory for graduates to clear the NAC-Tech test by Nasscom by end-December to be eligible for placements (few exceptions based on GPA cut offs). This is a step to address the quality of graduates hired, and the consequent training costs incurred by the IT companies. In a pilot phase, the test was conducted in 18 states across India with ~23,000+ candidates appearing for it.

Top Picks

- **CTSH** — CTSH' prospects remain solid in our opinion based on continued solid demand for core offshore outsourcing. There also seems to be good demand to broaden out productivity savings (more BPO) and to support growth-related initiatives like mobility, social media and analytics. Our view is that CTSH is making the right investments to sustain above-market growth. So, even though CTSH' outlook for "at least 17%" revenue growth in 2013 is well above the industry average, we believe CTSH can exceed the lower end of the bar – we expect 20% revenue growth this year – which should help drive share price appreciation.

- **EPAM** — EPAM generates revenues from its core outsourced software development practice – doing quite well – and its fast-growing offshore outsourcing business. Its delivery facilities are located in Central & Eastern Europe and CIS and this enables EPAM to benefit from two secular trends (1) The trend to mitigate delivery risk by sending some of the incremental outsourced work to non-India destinations. (2) The trend among European corporations to increasingly outsource, often starting with near-shore projects which benefit EPAM given its leading East European presence. Lastly, we note that its recent acquisitions attempt to build a consulting front-end and subject-matter expertise which shows a maturity of thought process and a world-view that jives with our own view of IT Services evolution.

- **INFY** — 2Q and 3QFY13 did indicate some recovery in the business post some difficult quarters. Volume growth was better with ~3% and ~1.5% (in a seasonally weak quarter) in 2Q and 3Q respectively. Deal wins have been encouraging – there has been a good pick up over the past 2-3 quarters. Management is focusing on improving volume growth from a near term perspective as well as focusing on non-linearity, platforms, Europe etc. from a medium to longer term perspective. At ~16x FY14E, we believe valuations are reasonable – Infosys remains one of our top picks in Indian IT Services.

- **HCLT** — HCLT has been one of our top picks for the past 3 years or so. Deal win momentum has remained robust and revenue share gains continue. Margins have improved well over the past few quarters and so has the cashflow profile. Valuations at ~14x FY14E are still attractive both in absolute and relative to sector terms despite the sharp 50%+ up move over the past year or so.

- **CAP** — We believe management has, through globalisation and offshore bases, laid the foundation to transform the business model. The next phase is about leveraging 'dilutive forces' (such as supportive pyramid effects and rising low-cost leverage) to drive steady margin expansion independent of the broader macro environment. In addition, we note that valuation on a fundamental basis in terms of return on invested capital is also supportive. We derive our target price of €44 by applying a multiple of 14x to our 2014 adjusted diluted EPS forecast.

- **ATOS** — We like AtoS for three reasons – 1) stronger fundamentals for outsourcing (~54% of top line) in Europe, 2) continued realisation of merger synergies leading to 260bps margin expansion and 50% normalised EPS growth over a 2-year period (2011-13E), and 3) potential upside from value crystallisation of the payments business. Our DCF-based TP of EUR 67 factors in top line growth of 2-3% and reported EBIT margin of 6-7% beyond 2015, terminal FCF growth of 1% and WACC of 9.6%.

Figure 45. APPENDIX 1 – Valuation Comparables

Company Name	RIC Code	Year end	Citi Rating	MCap $ m	Current Price	Target Price	P/E CY13E	P/E CY14E	EV/EBITDA CY13E	EV/EBITDA CY14E	P/BV CY13E	P/BV CY14E	ROE CY13E	ROE CY14E
Accenture	ACN.N	31-Aug	1	51,713	US$ 74	US$ 76	16.8	15.2	9.3	8.4	8.0	6.7	60%	53%
Atos	ATOS.PA	31-Dec	1	6,012	€ 54	€ 67	11.4	10.2	5.4	4.7	1.7	1.5	15%	15%
Capgemini	CAPP.PA	31-Dec	1	7,598	€ 37	€ 44	12.9	11.7	5.2	4.6	1.2	1.1	9%	10%
Cognizant	CTSH.O	31-Dec	1	22,978	US$ 76	US$ 90	18.7	15.7	11.0	8.8	3.8	3.0	23%	22%
EPAM	EPAM.N	31-Dec	1	1,018	US$ 23	US$ 25	14.5	12.2	10.2	7.5	2.9	2.5	18%	20%
HCL Tech	HCLT.BO	30-Jun	1	9,865	Rs 772	Rs 820	14.4	13.1	8.8	7.9	3.4	2.8	27%	24%
IBM	IBM.N	31-Dec	1	236,566	US$ 212	US$ 250	12.6	11.2	8.5	7.9	11.6	10.0	89%	89%
Infosys	INFY.BO	31-Mar	1	30,056	Rs 2,864	Rs 3,035	16.4	14.9	10.7	9.3	3.8	3.3	25%	24%
TCS	TCS.BO	31-Mar	2	55,320	Rs 1,539	Rs 1,410	20.1	18.1	14.8	13.4	6.1	4.9	34%	30%

Source: Datacentral, Citi Research Estimates; Prices as on March 22, 2013

Figure 46. APPENDIX 2 – A Historical and Future Perspective of Spending Drivers in IT Services

	The 90s	2000-2009	2010-
Cyclical Impact	Good Economy, except for a modest U.S. downturn early in the decade and slower European growth. Generally, a good cyclical environment for IT.	Two downturns, one of them deep and global. Terrible underlying environment for IT.	A slow recovery in major IT markets. Better, albeit still-disappointing growth, outside traditional developed markets.
	Employment Growth	Stagnant Employment except for Healthcare and Government, followed by Decline	Slowest Employment Recovery on Record
Secular Impact	Core Computing Becomes Mainstream	Growth of Offshore Outsourcing	Growth of Social Media
	Growth of Enterprise Software - ERP, CRM, Supply Chain Management (SCM)	Outsourcing Mega-contracts in early part of decade	Growth of Mobility and mCommerce
	Growth of Corporate Email	Service-Oriented Architecture	Growth of Analytics and Big Data
	Growth of Internet and eCommerce		Mainstreaming of Cloud
			Globalization
			BPO Growth
			Digital Marketing Growth
			Shortage of IT Talent
Episodic Impact	Y2K Project Activity	Growth of Defense IT and Cybersecurity, at least from 9/11 through 2008.	Growth of Regulation
Other Impact	New Beginnings - Outsourcing Mega-Contracts	New Beginnings - BPO, Cloud, SaaS, Mobile Computing, Globalization, Analytics	Maturation of Thought Process on Outsourcing

Source: Citi Research

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

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	12 Month Rating			***Relative Rating***		
Data current as of 31 Dec 2012	**Buy**	**Hold**	**Sell**	**Buy**	**Hold**	**Sell**
Citi Research Global Fundamental Coverage	49%	38%	12%	7%	86%	7%
% of companies in each rating category that are investment banking clients	53%	49%	45%	60%	49%	55%

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