Case for Global Cloud Software – Built from India

Background: Cloud Software Is An Attractive and Maturing Industry Globally

Cloud computing has gained widespread acceptance over the years:

Cloud computing refers to the provision of software, storage and computational power to customers from remote data centers through the internet. It is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources. The concept of Cloud has been around for two decades but, has now become mainstream with the growing presence of “hyper scale” Cloud providers in big data, analytics, artificial intelligence and Internet of Things (“IoT”). Key characteristics include on-demand self-service, multi-tenant business models, digital network-based architecture, rapid elasticity, flexible pricing, zero capex and measured pricing capabilities. Figure 1 highlights the progression of computing architecture and infrastructure over the decades, beginning with introduction of early computers in the 40’s and 50’s to the proliferation of the current Cloud ecosystem.

Figure 1: Evolution of the computing industry

As Global Software & Service spend outpaces Hardware, Cloud market share in Global Software & Service spend is growing fast

While early significant events like the formation of Salesforce.com in 1999 (pioneer in delivering enterprise applications via the Cloud) and the launch of Amazon Web Services in 2002 (suit of Cloud-based computing services on a pay-as-you-use model) were pivotal moments for the industry, the real mass adoption of Cloud computing in enterprises took another decade.

The Global Software & Services market is forecasted to continue to increase from $1.3T in 2018 (55% of global IT Spend) to $1.7T by 2022 (63% of global IT spend). As part of this growth, Global Cloud spend is estimated to grow at 16.5% p.a. to reach
$345B by 2022, representing ~20% of Global Software & Services spend. This is mainly driven by the positive impact of trends such as: a) the ever growing complexity of technology related threats for enterprises to deal with, b) the changing regulation and compliance policy landscape across countries making it tough for enterprises to operate across the globe and c) hyperscale Cloud providers providing world class security tools, controls and engineering that are unavailable in-house. These trends led to a large number of enterprises moving to Cloud-first operations as a way of maintaining competitive advantages, flexible scaling and relevance. Large enterprises are likely to move workloads away from traditional and virtualized environments toward the Cloud at a relatively faster rate than prior Cloud adoption waves.

The current COVID-19 pandemic and ongoing disruptions are clearly and significantly accelerating this global movement towards Cloud. For example, as per the latest research by Gartner published in May 2020, while global IT spend is expected to reduce by 8%, global spend on Cloud is estimated to have increased by 19% in 2020. In addition, 50% of CIOs surveyed by Gartner are expecting an increase in automation spend given the new realities post COVID-19.

Figure 2: Global Cloud spend expected at 20% of Global Software & Services Spend in 2022

As Cloud grows, SaaS spend and adoption continue to rise globally:

The SaaS (Software as a Service) market is expected to contribute $129B in 2022, representing 37.5% of the Global Cloud Spend and 8% of the global Software & Services spend. Reskilling for advancements, investing in newer technologies and partnering to bring advanced capabilities are driving this growth. SaaS, as a mode of software delivery, has crossed the chasm to transition from an early adopter technology stack to mainstream status. That, in large part, has been driven by players such as Amazon Web Services (“AWS”), Microsoft and Google providing a highly effective and elastic underlying compute capability, but with additional players providing layers of security, personalization, visualization and optimization to make the SaaS value proposition extremely compelling.

SaaS spend and adoption has continued to grow quickly across all company sizes. Companies with fewer than 50 employees have a SaaS spend of approx. $25,000 per year, while companies with over 1,000 employees spend approx. $7M per year.
Interestingly, companies now spend more money per employee on SaaS than laptops, as the software toolset is now more expensive than the hardware it runs on. In 2018, the average cost per employee of SaaS subscriptions ($2,884) was more than double the cost of a new laptop ($1,299 for an Apple Macbook Pro). As more companies move to run entirely on SaaS, the software vs. hardware spending gap is likely to widen further.

Figure 3: SaaS is expected to be the largest component of Global Cloud spend in 2022

Note: IaaS - Infrastructure as a Service; PaaS - Platform as a Service
Source: NASSCOM Report: Cloud, Next Wave of Growth in India, 2019

Public markets acknowledge this shift in value to Cloud companies

Publicly traded Cloud companies have significantly outperformed public benchmarks. The EM CLOUD index is a NASDAQ listed emerging Cloud index that is designed to track the performance of emerging public companies primarily involved in providing Cloud services. The index, created by Bessemer Venture Partners, represents 52 underlying companies with a combined market capitalization of USD 2.3 trillion, and an average EV/Annualized Revenue multiple of 21.2x as of 29th September 2021.

As of 29th September 2021, the EM CLOUD index is up 1151.3% since inception in August 2013 vs. 303.8% for the NASDAQ index, 162.9% for the S&P 500 index and 127.4% for the Dow Jones index.

Figure 4: Outperformance of Publicly Traded Cloud Companies

Source: https://www.bvp.com/bvp-nasdaq-emerging-cloud-index, as of September 29, 2021
Current Opportunity – Cloud Software built from India for the World

Cloud Software from India: Proven Track Record and Massive Potential:

Over the past two decades, the broader Information Technology sector has emerged as a major contributor to India’s GDP. As per National Association of Software and Service Companies (“NASSCOM”), India’s broader IT and ITeS sectors grew to $194B in FY 2021 revenue. The IT sector in India employs the largest number of people in the private sector at more than 4.1M of which more than one-third are women. Five of the world’s eight most valuable technology services companies—Tata Consultancy Services (“TCS”), Infosys, Cognizant, Wipro and HCL Technologies—have been created in India. As of 29th September 2021, TCS is valued at USD 188.6 billion in market capitalization and the top five IT services companies built from India are collectively valued at USD 414.6 billion.

Figure 5: Five out of the eight largest tech services companies globally have been created in India

Source: Bloomberg – 29th September 2021

Per NASSCOM data, India is comfortably the leading sourcing destination for IT products and services, with a 55% global market share. With a burgeoning skilled workforce in the software development domain, it’s no surprise that a new generation of Indian cloud software/SaaS companies are emerging at an even stronger rate than previously. 45 of the 103 $1B+ tech outcomes created from India are in the cloud software (primarily SaaS) domain: Affle, Alation, Appydynamics, Apttus, Aura, Automation Anywhere, Axtria, BillDesk, BrowserStack, Chargebee, Citius Tech, Cohesity, Druva, Duck Creek Technologies, Eightfold.ai, FalconX, Freshworks, Gainsight, Glance, Gupshup, Harness, Highradius, Icertis, InMobi, Innovaccer, MindTickle, Mu Sigma, Netskope, Nutanix, o9 Solutions,
India’s success in building large companies in the enterprise services sector will provide vital learnings for this new generation as they seek to make India an important global hub for products and solutions. While traditionally a lot more attention has been paid by investors to the consumer facing segment, this is starting to change as new cohort of cloud software start-ups emerge from India. Three key ingredients are catalyzing the creation of the next generation of cloud software start-ups out of India:

- availability of talent both in terms of new graduates as well as the millions of trained software developers from the best IT services companies in the world;
- democratization of technologies such as AWS and other capex-light infrastructure which enable the creation of cloud companies from anywhere in the world; and
- ample availability of seed and early stage capital to spawn these start-ups.

**Figure 6: India enjoys a huge skilled labor cost and quantity advantage over other countries**

![Graph showing the comparison between India and other countries in terms of skilled labor cost and quantity advantage.](image)

**4x cost differential between India and the U.S.**

*Source: A new USD 50 billion Industry from India: SaaS for Global Audience - Google India and Accel Partners*

India is also the leading cost-effective provider of offshore call-centers for inside sales / tele-sales. For a large number of SaaS products, sales supported by tele-sales (known as inside sales in industry parlance) have proven significantly more effective than usual online sales. With a 5x cost advantage over the U.S. in this space, Indian SaaS companies have a strong competitive advantage, especially in SMB SaaS where direct sale in a country such as the U.S. is not commercially viable.
Figure 7: Tele sales effectiveness: 5x inside sales cost differential between India and U.S.

5x cost differential between India and the U.S.

Source: A new USD 50 billion Industry from India: SaaS for Global Audience – Google India and Accel Partners

With all of the above factors working in its favor, the Indian cloud software ecosystem of companies has a significant cost advantage over its counterparts in the U.S. in building cloud software products. The world’s largest five cloud software companies (Microsoft, Salesforce, Adobe, SAP and Oracle) have realized this for a while and established large presences in India, tapping into the country’s intellectual capital in developing cutting edge SaaS solutions for global markets.

Figure 8: Comparison of cost structure between Inside sales driven SaaS start-ups in India vs. counterparts in the U.S.

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>India</th>
</tr>
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<tbody>
<tr>
<td>Revenue</td>
<td>10.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Operating Costs - Hosting</td>
<td>1.50</td>
<td>1.50</td>
</tr>
<tr>
<td>Operating Costs - Support</td>
<td>1.00</td>
<td>0.25</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>7.50</td>
<td>8.25</td>
</tr>
<tr>
<td>Sales and Marketing Costs - Media</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Sales and Marketing Costs – Sales Reps</td>
<td>1.00</td>
<td>0.40</td>
</tr>
<tr>
<td>Contribution Margin</td>
<td>3.50</td>
<td>4.85</td>
</tr>
<tr>
<td>Maintenance: Product Dev + Support + G&amp;A</td>
<td>2.50</td>
<td>0.80</td>
</tr>
<tr>
<td>Profit</td>
<td>1.00</td>
<td>4.05</td>
</tr>
</tbody>
</table>

Source: A new USD 50 billion Industry from India: SaaS for Global Audience – Google India and Accel Partners

Another interesting trend that we have observed is the fact that these cloud software start-ups are moving their customer-facing operations and CEOs to Silicon Valley earlier in their life cycle. Indian entrepreneurs have become sophisticated and realize that they need to be physically close to their customers, especially during the early stages of establishing a product-market fit and initially scaling the business.
The domestic Indian market has also become a sizable opportunity for SaaS companies. A clear case in point is the 2019 acquisition of NowFloats by India’s largest business group, Reliance, to continue to provide a collage of SaaS products to the SMB segment through the Reliance Jio platform. NowFloats, an Iron Pillar portfolio company, was a mobile-first SaaS platform for enabling offline retailers to create and manage their online presence across various social and transactional websites. The Google India-Accel Partners study lists categories such as Customer Relationship Management, Data Visualization, Human Resources, Marketing, Healthcare and Education as ripe for big SaaS companies to emerge out of India.

Given all of the above, India is already becoming a major global supplier for SaaS products. Most of this is built for global enterprise customers, with North America being the largest consumer of Indian SaaS. This leads to a favorable forecast of SaaS exports from India which are estimated to reach $19 – 20B by 2022, contributing ~15% of global demand. Many large standalone homegrown companies have already been created in the space as shown in Figure 10. The pace of creation of these large companies is accelerating with more institutional capital investing in cloud software (mostly SaaS) start-ups from India.

As the cloud software shift to mobile continues to accelerate, companies building from India will have an edge as India is a “mobile first” and often a mobile-only country. Furthermore, a cost advantage in the areas of engineering, inside sales, onboarding and support will allow Indian cloud software firms to aggressively enter and scale in international markets outside of the U.S., especially in emerging markets. In addition to the large talent pool of English-speaking engineers and technology professionals, India also has a sizeable group of executives who have worked at leading global enterprise software companies. These executives bring strong domain knowledge, a deep understanding of enterprise and SMB sales and will help drive and scale the new generation of cloud software companies in India. Given the democratization of resources—financial capital, human capital and technology infrastructure—Indian start-ups are better suited than ever before to shine on the global stage. It’s no secret that the Indian diaspora is held in high regard on the global software stage with the likes of Satya Nadella (CEO of
Microsoft), Arvind Krishna (CEO of IBM) and Sundar Pichai (CEO of Google) setting high benchmarks. But there is also a strong feeling among these successful technology executives in Silicon Valley to give back to India, where many of them have their personal and professional roots. The way they are thinking about doing that, at least in part, is through investing in and advising the next generation of technology entrepreneurs through initiatives such as the Iron Pillar Network.

**Figure 10: Large Cloud Software companies built from India by valuation/market**

Source: Iron Pillar database

### Unique investment merits of Cloud Software built from India:

The prior section outlined the advantages of investing in cloud software companies built from India from a business opportunity standpoint. In addition to this already proven ability to build sustainable large companies in cloud software, investing in Indian cloud software companies offers a unique set of additional benefits for technology investors in India.

**A. Little to no currency risk**

Experienced investors in emerging markets would agree that one of the largest risks is currency depreciation. The Indian Rupee has been a weak currency for decades and a significant detractor in returns for VC and PE investors. Since 2010, the INR has depreciated on average by 5.1% annualised against the USD. However, given the fact that cloud software companies from India are mainly focused on global markets, their revenue is almost always concentrated or even 100% in USD. This mitigates or often eliminates one of the largest risks for overseas investors in India.
B. Better exit opportunities

A focus on cloud software opens up a global exit market for Indian technology companies. Most of the global cloud software companies are domiciled outside of India and have a global clientele which makes it easier to M&A or IPO these businesses globally, in stark comparison to their consumer tech counterparts. The largest listed tech company built from India is in the cloud software space (Zscaler: NASDAQ: ZS - USD 35.9 billion market cap as at 29th September 2021). Other recent large IPOs include Freshworks (NASDAQ: FRSH - USD 11.9 billion market cap as at 1 October 2021), Nutanix (NASDAQ: NTNX - USD 8.4 billion market cap as at 1 October 2021) and Duck Creek (NASDAQ: DCT - USD 5.8 billion market cap as at 1 October 2021). Cloud Software built from India has also seen large M&A exits such as the $3.7B sale of Appdynamics to Cisco and $4.7B sale of BillDesk to Naspers within a short period of time.

The predecessors of cloud software product companies from India are the enterprise services companies. The top five enterprise services companies from India have created a combined market cap of USD 414.6 billion as of 29th September 2021, which is significantly larger than the combined market cap of the top five companies in any other consumer categories in India as can be seen in Figure 12. This is a clear evidence of both liquidity and market support such companies can achieve even in the public markets.
C. Capital efficiency

The factors previously discussed which create significant cost advantages for cloud software companies from India have also manifested into strong economic returns for VC investors in these companies. As identified in the Tech Unicorns Market Landscape Report III published in September 2021, SaaS/B2B tech start-ups from India are proven to be twice as capital efficient as consumer-centric companies from India. The average equity capital raised by a global cloud software company built from India to reach Unicorn status ($1B valuation) was $110M, compared to $190M required for a typical consumer technology Unicorn. As a result, investors in a global cloud software Unicorn built from India generate 1.7x return on their investment compared with a India consumer-tech Unicorn.

Source: Iron Pillar – India Tech Trends – Volume III; Tech Unicorns Market Landscape
D. Lower dilution

Our analysis of Indian Unicorns has shown that global cloud Unicorns built from India have raised only four rounds of capital on average as opposed to their consumer tech counterparts who typically raise six rounds of equity financing. Hence, for growth stage investors, investment in a global cloud software company built from India will mean that they will have, on average, zero or one dilutive round post investment in a typical winning portfolio company vs. a consumer tech investment, which would have had at least three rounds of ownership dilution. More equity financing rounds also lead to a larger liquidation preference stack being built above a growth stage fund, which can be avoided or minimized in the case of global cloud software investments. Since meaningful ownership of winning companies at exit in the portfolio drives overall fund returns, fewer rounds and lower dilution are critical positives for investments in cloud software companies.

Figure 14: Average number of rounds raised by a $1B+ company

Source: Iron Pillar – India Tech Trends – Volume III; Tech Unicorns Market Landscape

E. Lower entry valuation

Compared to Silicon Valley, entry valuations for cloud software/SaaS companies built from India are lower. This is purely a factor of fewer sources of venture capital available for cloud software/SaaS businesses built from India. In 2020, the average Series B round for Indian SaaS start-ups was $18M and $63M for Series C and beyond. This would yield better investment returns for investors in Indian SaaS companies, as the eventual exits for both Indian and U.S. based companies would happen via globally competitive M&As or IPOs.
Cloud Software in the post COVID-19 era

While the global economy is dealing with the greatest disruption in modern history through COVID-19, it is also ushering in an era for companies leveraging Cloud infrastructure and building “must have” cloud software applications. No longer is cloud software a foreign concept. Moreover, the current pandemic has awakened the broader enterprise world to the need for Cloud-based connectivity, not only for back-up, but actually as a foundation for enterprise collaboration, productivity and efficiency.

The broader market globally is going through a difficult time but many companies in cloud software segments, both at the infrastructure and application levels, are experiencing unprecedented growth. For example, Uniphore, an existing Iron Pillar portfolio company, experienced their best quarter ever in the midst of the pandemic and continue to grow strongly every quarter from there. Uniphore provides a Cloud-based SaaS offering for call center and BPO industry workflow optimization, leveraging AI and Natural Language Processing (NLP). Their technology stack is purpose built for a distributed workforce, something that has become a reality under the global Work From Home (WFH) phenomenon. Similarly, multiple other companies in Iron Pillar’s current pipeline have seen their performance skyrocket in the last few months. Stellar performance of companies such as Zscaler, Zoom, Slack and Teladoc send a clear signal that companies solving a real problem, especially around remote access to needed products and services in the post-Covid world, will be valued highly.

SaaS companies performed well during the last recession. There were 17 public SaaS companies prior to the start of the 2008 recession. One of those companies, Omniture, was acquired by Adobe in 2009, but the other 16 all remained in business and independent through the downturn and into the recovery.
It is also important to note that many of the current large tech companies, including Slack, Uber, Cloudera and Airbnb, were created in the previous downturn. The most iconic SaaS company in the world, Salesforce.com, was created in 1999, right before the Dot Com bubble burst. The current environment will sow the seeds for future Unicorns. The recent shock to the system has also enabled a separation of leaders from followers, both in terms of individuals and start-ups. As ever, the best entrepreneurs will be able to adapt to the current scenario and shepherd their companies, not only to be able to survive, but also to thrive and take a lead over the course of the next several months and quarters. This disruption is also a real test for those entrepreneurs and companies with immeasurable qualities like grit, persistence, agility, flexibility and creativity. Finally, Global Cloud companies built from India, at least those that are providing “must have” rather than “nice to have” solutions, will excel by leveraging the incredible intellectual and human capital that India has to offer with the added benefit of lower cost development and delivery infrastructure.

A note on Exits

One of the ongoing criticisms for the Indian venture ecosystem has been a lack of exits, but that has changed drastically in the last few years. Based on the bottom-up analysis done by Iron Pillar, and shown in Figure 17 below, Indian technology start-ups valued over $1B alone have created $127B of liquidity to investors and founders in this decade through IPOs and M&As. It is also important to note that:

- more than 90% of this liquidity creation happened in last three years
- 11 of these 17 companies (65%) are global cloud companies, built from India
- $77B of the $127B of value created (61%) is by global cloud companies, built from India
In addition, since 1995, historical global data shows that years of high value creation from enterprise technology globally is often driven by a cohort of exits versus consumer value creation that is often driven by large, individual exits. The chart in Figure 18 illustrates this, showing a side-by-side comparison of exits and value creation. It is important to note that while enterprise tech has created more value ($884B since 1995; $349B from M&A and $535B from IPOs) for VCs, compared to consumer tech ($773B since 1995; $153B from M&A and $620B from IPOs) in the last 25 years, the distribution of exits have been significantly more broad-based for enterprise tech vs consumer tech. This result in the returns from consumer tech being highly skewed towards a few big winners (mostly IPOs) as opposed to enterprise tech where a large number of $1B+ outcomes drove the returns (more evenly between M&A and IPOs). As observed in Figure 18, the top 50 consumer tech exits accounted for 74% of all the total cash returned from consumer tech deals whereas the top 50 enterprise tech deals accounted for only 38% of the total cash returned from enterprise tech deals.
Figure 18: Side by side comparison of top global Enterprise tech and Consumer tech exits

Source: Sapphire Ventures - #OpenLP Series: Which investments generate the greatest value in venture: Consumer or Enterprise?

Figure 19 shows data from Bloomberg on 29 September 2021 from all SaaS IPOs post 1 January 2018. Among these 65 IPOs, 52 are still in positive territory. The median company is up 52% with the average stock up by 184% post IPO. It is equally of significance that the best performing company among all these IPOs is Zscaler, a company built from India.

Figure 19: 2018, 2019 and 2020 SaaS IPO performance as of 22 Jan 2021

Source: Bloomberg – 29 September 2021. Includes companies founded by Indian entrepreneurs/develop products from India but may be domiciled outside of India.
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