

Rating criteria for software industry

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Executive summary

While assessing a player in the software industry, CRISIL evaluates its business, financial, and management risk profiles. Business risk analysis covers market position and operating efficiency. Evaluation of the market position entails assessing revenue mix, scale of operations and presence in the overseas market, client profile, and strategy for mergers and acquisitions. Operating efficiency includes assessment of productivity parameters such as revenue and profitability per employee. It also covers human resources (HR) and knowledge management, systems and processes, employee utilisation rate, offshore-onshore employee mix, and contract mix. While assessing the financial and management risk profiles of a software company, CRISIL follows the standard criteria used for all service sector companies.

Scope

While the broader criteria for service sector companies¹ applies to software companies too, this article² details the industry-specific factors affecting the credit risk profiles of entities operating in this industry.

CRISIL's assessment of software companies

The Indian software industry has strong international linkages, with export dominating revenue. The industry is marked by low capital intensity, dependence on a steady supply of trained manpower, and susceptibility to risks related to technology. The past few years saw healthy growth, especially in export. However, due to multiple reasons (including softness in client spending, headwinds in terms of currency volatility), export growth has slowed. Domestic growth is expected to pick up and partially offset the slow growth in export over the medium term. Inherent advantages include the availability of a vast pool of skilled, English-speaking software professionals at lower cost than that in Western countries.

The value chain of software services and products comprises data processing, application outsourcing, maintenance, systems integration, consultancy, and products. Indian software services export, traditionally driven by rising spend in the banking, financial services, and insurance (BFSI) sector, is also supported by increase in information technology (IT) spend in the retail, energy and utilities, and healthcare segments. Nevertheless, the BFSI sector will continue to dominate and drive IT offshoring in the country.

The Indian software services industry also has a geographic skew in export to the US, which could reduce as Indian companies explore new geographies in Europe and the Asia-Pacific. Indian IT service companies are also likely to focus on non-linear³ streams of revenue, including digital services, to diversify and drive revenue growth, and thereby improve efficiency. Indian IT players provide custom application development (CAD) services, infrastructure management services (IMS), and application management services (AMS).

¹ The detailed criteria is present on the CRISIL website under the 'Criteria and Methodology' section—'Rating Criteria for Manufacturing and Services Sector Companies' and 'CRISIL's Approach to Financial Ratios'.

² For accessing previous published document on "Rating Criteria for Software Industry", kindly follow below mentioned link: https://www.crisil.com/content/dam/crisil/criteria_methodology/information-technology/archive/CRISIL-Ratings-criteria-software-industry_2007.pdf

³ Includes cloud-based offerings and services, platform-based business process outsourcing (BPO) services, and products; and intellectual property (IP)-based solutions

The Indian software industry is subject to challenges related to macroeconomic uncertainty and protectionist measures in key geographies, intensifying competition from global services vendors, and a potential resource crunch as services provided become complex. Software companies are evolving from being pure-play service providers to end-to-end project implementation. CRISIL believes ability to customise solutions and provide value-added services will help maintain growth over the long term. Growth in digital services shall remain a key monitorable over the medium term. The other key success factor in the industry is the ability to attract, train, and retain professionals.

CRISIL's analysis of the management and financial risk profile of software companies follows the standard criteria for the assessment of manufacturing and service sector companies. CRISIL considers the following key parameters in evaluating a software company's business risk profile: (a) market position and (b) operating efficiency.

Business Risk

Market position

Scale of operations

Scale of operations is critical in the Indian software industry. The larger the scale, the greater the benefits of economies of scale, and the ability to withstand profitability pressures. CRISIL believes ability to provide complete solutions and win large global orders for high-end services hinges on scale of operations. CRISIL also considers benefits of a company's niche focus areas, for example, engineering design for a specific industry segment. This may provide a small company with considerable competitive advantage compared with larger peers. Large available employee base provides flexibility to deploy employees across projects under simultaneous implementation, while leaving sufficient resources to undertake new contracts on short notice.

Revenue mix

CRISIL analyses the various vertical and horizontal segments in which a company operates.

Vertical segments are defined in terms of client industries such as manufacturing, insurance, and banking. CRISIL analyses the business prospects of key segments in these industries. Presence in diverse segments lends stability to earnings. However, most companies tend to focus on specific verticals in which they have expertise, to build a significant presence in that vertical. Most Indian software companies operate in horizontal segments such as training, software projects and services, consultancy, and products, as well as customised services. Companies that are proactive in expanding the scope of their services to include emerging segments and increasing focus on non-linear revenue streams are better placed in this regard. Given the rapidly changing business dynamics with divergent trends in the growth of traditional IT services compared with digital services, CRISIL also analyses ability to innovate and adapt to changes.

Within each area, specific platforms and technologies used are analysed in terms of technology risks, growth potential, and user base.

CRISIL also examines a company's revenue mix, for the nature of contracts it implements. Onshore contracts bear risks related to restrictions in the number of visas (such as the H1B visas in the US) granted to professionals. Offshore projects are gaining importance, due to such restrictions abroad and the improvement in India's communications infrastructure. A higher proportion of onshore contracts ensures high sales growth, whereas that of offshore contracts results in a better operating margin. A software company has to strike a balance between offshore and onshore contracts to ensure growth and stability in its operating margin. Maintaining a right balance is

particularly important given changing regulations on immigration as well as increasing contribution of digital and consulting-led contracts that require higher onshore presence.

Contracts could also be classified as time and material contracts, or fixed-price contracts. Fixed-price contracts require more project management expertise than time and material contracts, but may have a higher operating margin if the company's project management skills are sound. Time and material projects are less risk-prone as time and cost overruns do not affect the service provider. However, the potential upside is lower than fixed-price contracts. The IT services industry has seen a rise in fixed-price contracts over the past three years.

Billing rates

IT service providers operate on an hourly billing rate model, wherein the client is billed for each man hour provided in time and material contracts, and a pre-decided number of hours in fixed-price contracts. India's IT vendors have traditionally focused on providing low-end services such as CAD. However, due to low billing rates and the commodity nature of CAD services, players have begun to realign their efforts towards high-end (non-discretionary) services to improve ability to command higher billing rates. CRISIL believes that IT companies with a strong position in the high-end services market will command higher billing rates from customers, and may thus maintain higher operating margin, even in a challenging economic environment.

IT companies are also increasing focus on consulting services on a fixed-fee basis, or digital deals that link part of the vendor's remuneration to actual realisation of the project's benefits, for transformational projects that solve specific business problems through IT. A fixed-fee or risk-sharing IT consulting contract is most likely for projects with well-defined outcomes. Such a billing arrangement requires controlling of cost by increasing utilisation rate. At the same time, a high level of expertise is required to execute the project within specified timeline, without cost overrun, or else profitability may be impacted.

Geographic diversity

The geographic spread of revenue is an important parameter in analysing a company's business risk. While the domestic software industry is growing, the overseas market accounts for most of the industry's turnover. The US (still accounts for over half of export) and Europe (30%) are the main export markets. Although geographic diversity mitigates business risk, the skew is unavoidable given that the US has the largest IT spend in the world. However, if there is a slowdown, geographic concentration poses risks related to spending in the company's key markets and other factors such as visa restrictions for software professionals. These concerns have been magnified in light of the recent change in visa norms in the US and plans for Brexit.

As Indian software companies derive most of their revenue from overseas markets, it is crucial that they develop a strong marketing base in these regions. The business is essentially relationship-driven, and clients need to be assured of the service provider's capabilities before they decide to outsource critical aspects of their IT initiatives. Hence, CRISIL examines whether the company's revenue is geographically diversified, and also assesses the geographical diversity of its delivery centres. This plays an important role in mitigating business continuity risks, which could entail high monetary costs as well as reputation risk for a company.

Client profile

CRISIL's analysis of highly-rated software companies indicates that they have established relationships with large clients, which lead to repeat business and provide stability to earnings. However, dependence on a single client increases risks as any setback following loss of the client could be substantial. New client acquisitions and the quality of such clients are indicators of a company's marketing and delivery capabilities. Trends in the proportion of

business that a company generates from its top 5-10 clients, the proportion of repeat business, and the number of new clients added every year are analysed to determine the company's business risk profile.

Mergers and acquisitions

Many Indian companies are acquiring companies in the US and other countries to capitalise on existing client relations, and acquire domain expertise. Successful and speedy integration of the acquired company is critical for this strategy to yield optimal gains. CRISIL assesses new acquisitions in the light of ability to successfully integrate acquired businesses, and their synergy with the existing business strategy. Furthermore, inorganic growth will be a key driver, with companies specialising in artificial intelligence, machine learning, automation, and analytics being acquired.

Operating efficiency

Productivity

CRISIL believes billing rates will be constrained by intensifying competition, both in India and overseas. Operating margin will increasingly be constrained by rising employee cost, and the necessity to retain quality talent. Conversely, the increased use of automation should improve productivity. In such a scenario, the key variables that companies will be able to control are productivity and time taken to implement projects.

CRISIL tries to understand a company's software engineering process and project management abilities. These are essential to ensure completion of projects within the budgeted cost and time. CRISIL also assesses productivity parameters such as revenue and profitability per employee. Many companies follow a library approach to reduce development time by having standardised codes for repetitive tasks. Other ways of minimising development time and cost are also examined.

Employee utilisation rates, offshore-onshore employee mix, and contract mix

Employee utilisation rate, offshore-onshore employee mix, and contract mix are the typical levers that IT companies deploy to improve efficiency. While each of these levers can help increase operating margin, each has its own attendant risks. For instance, while increase in utilisation rate results in better operating margin, it impairs ability to quickly deploy bench workforce for potential large contracts. Similarly, while offshore employees can help increase profitability, an adequate number of employees onshore is essential for critical transition work. Also, by ensuring that all contracts are on time-and-material basis, players may have a low operating margin, but are susceptible to fewer risks than fixed-priced contracts.

Another parameter that CRISIL evaluates as a measure of an IT company's operating efficiency is support staff and selling expenses as a percentage of revenue. This percentage typically declines with increasing scale of operations. However, companies with many offshore development centres and sales teams across geographies tend to have large support and selling expenses, unless they take proactive steps to improve efficiency.

A software company's most important assets are HR and accumulated knowledge. The outflow of software professionals from India to developed markets has a two-fold impact on domestic firms: high employee attrition and increasing wages.

Given the industry's high employee attrition, a study of a company's HR policies assumes great importance. Ability to attract, train, motivate, and retain quality manpower is critical to business. Attrition rates at various levels are compared with industry trends. Companies with sound HR sourcing strategies are better placed to minimise the

impact of high employee attrition. Many companies have also put in place knowledge management systems to safeguard their knowledge base.

Systems and processes

Many software organisations began as small companies driven by a group of people. Thus, they relied on a few individuals, who guided the organisation through various stages of its evolution. As companies grow in size, the organisation relies less on individuals and more on established systems and processes. This ensures a degree of replication in its software development methodologies.

CRISIL assesses the extent to which processes are documented, standardised, and improved continuously. One of the indicators of the quality of an organisation's processes is the Capability Maturity Model developed by Carnegie Mellon University's Software Engineering Institute. Indian companies have taken a lead in this area and have been assessed at the highest possible Level 5. Another critical aspect is the implementation of secure back-ups and disaster recovery centres to alleviate data loss risks.

Financial Risk

For the analysis of the financial risk profile of a software company, CRISIL follows the standard criteria used for all service sector companies, articulated in detail in our publications 'Rating Criteria for Manufacturing and Services Sector Companies' and 'CRISIL's Approach to Financial Ratios'.

Management Risk

For assessing the management risk profile of a software company, CRISIL follows the standard criteria used for all service sector companies. The criteria are presented in detail in CRISIL's publication, 'Rating Criteria for Manufacturing and Services Sector Companies'.

Conclusion

CRISIL believes that the key success factors for the software industry include:

- Scale of operations
- Optimal revenue mix
- Diversity in product/service offering: digital/traditional, industry vertical, client, and geography
- Position in value chain in service offering
- Extent of repeat business
- Ability to improve billing rate
- Ability to successfully integrate mergers and acquisitions, high utilisation and retention of work force
- Use of automation in work processes
- Optimal employee utilisation rate, offshore-onshore employee mix, and contract mix
- HR and knowledge management
- Systems and processes

About CRISIL Limited

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