Aerospace And Defence Spotlight Auditor's Considerations

The Aerospace and Defence (A&D) sector is an important industry in any country, playing a significant role in national security and economic development. This sector includes manufacturing and service activities besides research or development and deals in Aircraft, ships, spacecraft, weapon systems, and defence equipment etc.

Key Indian players in A&D sector include public sector undertakings like Hindustan Aeronautics Limited, Bharat Electronics Limited, and Bharat Dynamics Limited besides private sector players such as Tata Advanced Systems, Reliance Defence, Mahindra Aerospace, and L&T Aerospace

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While there are huge opportunities of growth in this sector, despite challenges on regulatory and operational front, in this article we will focus on a few accounting matters specific to this industry, to understand approach of an auditor while dealing with such matters before forming an opinion on whether financial statements of entities in this sector are presenting True and Fair view. Of course, the auditor will need to identify risks and plan audit procedures creating documentation as required under Standards on Auditing framework. Our discussion is based on assumption that the entities in this sector are mostly using IndAS framework of accounting, which are latest Indian Accounting Standards, almost similar to International Financial Reporting Standards (IFRS).

Manufacturing costs

Entities in A&D sector face challenge in recognizing and accounting for the costs associated with manufacturing. Accounting team struggles to record transactions like progressive payments from buyers or issue of recognising financing components, and the need to properly allocate direct and indirect manufacturing costs.

Generally, the period between performance and payment for that performance is more than a year. This means the cost indirectly includes finance cost, which must be recorded separately from the revenue from sale of the products in IndAS environment.

Another challenge involves accounting of research and development (R&D) cost, which can be substantial in the aerospace sector. Also, warranty provisions and other future maintenance obligations must be taken into account. Depending upon whether warranty is about service or assurance.

Auditor's Approach

(i) **Verification of progressive payments:** Auditors need to ensure that progressive payments received from the buyer align with appropriate revenue recognition method like percentage-of-completion. Accounting policy of revenue recognition should also be challenged.

(ii) **Interest income on delayed payments:** If the buyer has negotiated extended payment terms, auditors will need to review if the manufacturer has calculated the present value of future payments and recognized the difference as interest income over the contract period. Financing component should be appropriately separated from sale.

(iii) **Direct and indirect manufacturing costs:** Auditors need to review whether direct costs such as labour, raw materials, and production overheads are capitalised, as required and permitted by the accounting standards during the manufacturing process.

(iv) **R&D and customization costs:** Auditors should review if the R&D costs to observe, if only those directly attributable to the production of the aircraft are capitalized. Similarly, customization or modification costs requested by the buyer should

be appropriately capitalized rather than treated as separate expenses.

(v) **Warranty provisions and maintenance obligations:** Auditors need to review if the manufacturer has adequately estimated accrued warranty provisions and future maintenance costs.

(vi) **Deferred costs and completion stage:** If manufacturing of a product like aircraft is not completed by the end of the reporting period, auditors should review if deferred production costs are properly capitalized and reflected as work in progress.

Accounting for Intangibles

In the aerospace sector, intangible assets and development costs are significant due to long development cycles and the substantial investment in research and technology. These costs include expenditures on product development, engineering designs, software, patents, and licenses etc.

Accounting for these assets presents challenges in determining whether costs should be capitalized as intangible assets or recorded as expenses. Under Ind AS, intangible assets are recognized when they meet specific criteria, e.g. they must be controlled by the entity, have an identifiable future economic benefit, and have a finite useful life.

Similarly, they have substantial investments in software for systems that support flight operations, fleet management, maintenance systems, and compliance with aviation regulations. These software systems, once developed or acquired, must be capitalized as intangible assets. This involves judgment on determining the useful life, amortization methods, and assessing impairment risks, especially when technological advancements or changes in regulations occur.

Auditor's Approach:

(i) **Capitalization of development costs:** Careful assessment is required to ensure whether development costs meet the criteria for capitalization. This includes challenging the assumptions used by management for assessing technical feasibility of the project and whether the company has the intention and ability to complete it and use it in operations.

(ii) **Amortization and useful life of Intangible assets:** Auditors should also review the amortization policies for intangible assets, particularly in light of the industry's rapid technological advancements. Additionally, auditors should ensure that amortization is being applied consistently, in line with the expected consumption of economic benefits from the intangible asset.

(iii) **Impairment of Intangible assets:** Given the long development timelines and high capital investment in the aerospace sector, auditors must pay close attention to potential impairment issues related to intangible assets.

Estimation-at-Completion (EAC) Process

Given the nature of long-term, highly complex contracts in the A&D, revenue is recognized over time, in accordance with IndAS 115. Accordingly, the Estimate-at-Completion (EAC) plays a critical role to determine the total expected costs of completing a contract. The EAC is calculated by combining the actual costs incurred to date with the projected costs for completing the remaining work. A primary challenge in the EAC process is the estimation and allocation of cost elements to reflect the progress of the project. However, not all costs are easy to assign to the specific stages of contract completion. The evolving nature of A&D projects means that the EAC needs to be regularly monitored/updated for changes in scope, design modifications, supply chain issues, or external factors such as geopolitical risks, which can all affect cost projections.

Another significant issue is the use of management reserves requiring considerable judgement, which are typically set aside to cover potential future risks, such as cost overruns or unforeseen delays.

Auditor's Approach:

(i) **Cost estimates:** Ensure that uninstalled materials, advanced payments, and common inventory are correctly accounted for, as they may not reflect the current stage of contract progress. Only cost components which relate to project should be allocated to the contract.

(ii) **Management reserves:** Evaluate and regularly review the reasonableness and adequacy of management's reserves for potential risks such as cost overruns, delays, or unforeseen events. These should be based on historical trends, project-specific risks, and industry conditions.

(iii) **Regular updates to the EAC:** Ensure that the EAC is updated regularly to reflect the current and reliable information, especially in response to changes in contract scope, material costs, or external factors.

Lease Accounting for the Aerospace Sector

When A&D industry act as lessors for leasing an aircraft among others, they need to navigate several complex accounting issues. These revolve around the classification of the lease, the recognition of revenue, and the treatment of residual values, among others.

Primary issues is whether a lease should be classified as an operating lease or a finance lease. The classification affects the recognition of revenue and treatment in the financial statements.

Under Ind AS, the distinction between operating and finance leases for the lessor is based on whether the lease transfers substantially all the risks and rewards of ownership to the lessee. If it does, the lease is a finance lease. If not, it's classified as an operating lease.

For a finance lease, the lessor recognizes the leased asset as a receivable, which is equal to the net investment in the lease (the present value of lease payments plus any residual value guaranteed by the lessee). For an operating

lease, the lessor retains the aircraft on its balance sheet and recognizes lease income over the lease term, typically on a straight-line basis.

Revenue recognition for lessors depends on whether the lease is classified as an operating or finance lease. In finance leases, the lessor's revenue consists of the interest income (finance income) on the net investment in the lease and the amortization of the receivable. In operating leases, the lessor recognizes lease income as it is earned over the lease term, with depreciation of the aircraft typically recognized separately as an operating expense.

Another challenge for lessors is estimating and accounting for the residual value of the leased aircraft, what the aircraft will be worth at the end of the lease term. The lessor must determine whether the residual value is guaranteed (by the lessee or a third party), which influences the classification of the lease and the accounting treatment of the asset.

For finance leases, the lessor might recognize a residual value guarantee from the lessee, which affects the net investment in the lease. In contrast, if the same lease were classified as an operating lease, the lessor would continue to recognize the aircraft as an asset on its balance sheet and record rental income on a straight-line basis. The lessor would also depreciate the aircraft over its estimated useful life, factoring in residual value, and would need to assess if the aircraft's value is impaired at any point.

Auditor's Approach:

(i) **Assessment of lease terms:** Auditor need to review if the lessor has correctly classified leases based on detailed lease terms, duration, payment structure, and options to purchase or extend the lease.

(ii) **Revenue recognition:** Auditors need to verify that the lessor recognizes revenue in accordance with the lease classification, either on a straight-line basis for operating leases or based on interest income for finance leases.

(iii) **Residual value estimates**: Auditors should scrutinize the assumptions to estimate residual value of the aircraft, ensuring they are realistic and based on current market conditions.

(iv) **Impairment testing:** If the aircraft is classified as an operating lease, auditors must assess whether the aircraft is subject to impairment. If yes, then whether testing done as required.

Revenue Recognition

Complexity due to diverse nature of contracts, which often span extended periods and involve multiple performance obligations. Companies in this sector manufacture aircraft, helicopters, spacecrafts and spares, as well as provide repair and overhaul services. A core principle for revenue recognition is when control of a product or service is transferred to the customer, and the company expects to receive the corresponding consideration.

In the case of repair and overhaul services, revenue is recognized based on acceptance by the buyer's inspection agency or as otherwise agreed upon in the contract.

Development contracts involve significant expenditure and multiple stages of progress. Revenue may be recognized using either the output method (based on milestones) or the input method (based on costs incurred), depending on the nature of the contract.

Auditor's Approach:

(i) **Contract terms and performance obligations:** Auditors should evaluate the terms of each contract to ensure that all performance obligations are identified.

(ii) **Timing of revenue recognition:** For contracts involving multiple performance obligations (e.g., sale of goods, training, maintenance), auditors must verify that revenue is recognized appropriately at each stage based on specific performance obligations.

(iii) **Modifications and adjustments to contracts:** Auditors to review if modifications to contracts are properly assessed, with revenue adjusted to reflect changes in scope or pricing.

(iv) **Variable consideration and financing components:** Auditors should assess the treatment of variable consideration, such as performance-based adjustments, discounts, or penalties including any advance payments received.

(v) **Work-in-progress:** For development contracts or contracts where customer approval for changes is pending, auditors should ensure that costs incurred are properly classified as work-in-progress or intangible assets.

Inventory Valuation

Inventory management and valuation are critical issues in the aerospace sector, as companies deal with a variety of materials, components, and finished goods. A major challenge in inventory valuation comes from managing goods-in-transit, redundant materials, and surplus or unserviceable items. Obsolete or excess inventory must be valued at their net realizable value.

Auditor's Approach:

(i) **Valuation methods:** Auditors should assess the company's methods for inventory valuation, ensuring that appropriate costing methods are used for raw materials, for goods-in-transit and the overall inventory.

(ii) **Redundancy provisions and unserviceable inventory:** Auditors must review the company's approach to assessing and provisioning for redundant materials that are deemed surplus or obsolete.

(iii) **Consumables and unused inventory:** Auditors should review the company's policy regarding the treatment of consumables and must ensure that consumables issued from stores and left unused.

(iv) **Finished goods and work-in-progress:** Auditors should confirm that inventory is valued at cost (purchase cost, conversion costs and other necessary costs). Auditors should also verify that the company has made the appropriate write-downs in line with the accounting standards.

MRO Inventory Management

Maintenance, Repair, and Overhaul (MRO) inventory consists of spare parts, components, and materials required to maintain aircrafts, spacecrafts etc. The challenge for aerospace companies lies in efficiently managing a vast and diverse inventory while ensuring compliance with regulatory standards and minimizing costs associated with holding and sourcing inventory.

In many cases, MRO inventory includes both high-value and low-value items, with some parts being custom-made or highly specialized. The cost of maintaining such inventory can be substantial, and accurately valuing it for financial reporting purposes requires proper accounting for the cost of goods sold (COGS), inventory obsolescence, and write-downs for slow-moving or obsolete items.

Another challenge is the supply chain and sourcing. Aerospace companies must ensure they have access to the right parts at the right time, balancing inventory levels to meet maintenance demands without overstocking specifically for older aircraft or discontinued models.

Auditor's Approach:

(i) **Valuation:** Auditors should verify that the costing method used for MRO inventory is appropriate and should also assess the treatment of slow-moving or obsolete inventory.

(ii) **Classification and documentation:** Auditors must ensure that MRO inventory is properly classified as either work-in-progress or finished goods, particularly when parts are customized.

(iii) **Supply chain and sourcing compliance:** Auditors should review the company's procurement processes, ensuring that they have reliable sources for obtaining parts and that adequate supplier agreements are in place especially for critical components subject to safety and airworthiness standards and that those meet aviation safety standards and regulatory compliance.

(iv) **Inventory turnover and obsolescence risk:** Auditors should assess whether the company has an efficient inventory turnover system that minimizes the risk of obsolescence by evaluating whether inventory levels are optimized to meet demand while avoiding overstocking or understocking.

Environmental, Social and Governance (ESG)

In this sector, complex supply chain, environmental impact, and regulatory oversight are critical factors. Requirement include disclosure of environmental sustainability practices, such as carbon emissions and waste management, including their governance structures and social impact, including employee safety, ethical sourcing, and community engagement.

Key accounting issues in this sector arise from the varying methodologies for calculating emissions (especially considering different aircraft types and operational regions), inconsistent reporting on material sourcing (particularly rare metals and composites), and difficulties in assessing the lifecycle impact of aerospace products (such as from manufacturing to end-of-life recycling).

Auditor's Approach:

(i) **Emissions and environmental impact:** The auditor should evaluate the carbon footprint calculation methodology, ensuring it includes both direct emissions (from production and operations) and indirect emissions (such as those from suppliers).

(ii) **Social and governance issues:** The auditor should also evaluate the company's governance structure and social impact, particularly in relation to employee safety, diversity, and ethical business practices.

(iii) **Ensuring compliance with relevant reporting norms:** Auditor should ensure that the company complies with relevant reporting norms

Conclusion

Due to complexity of the sector, on one side, 'Those Charged with Governance' in these organisation need to be aware of issues and should be in a position to challenge, advise and guide accounting teams to remain careful in navigating various requirements of the Accounting Standards. And on the other side, the Auditors need to ensure that besides proper accounting, relevant and reliable disclosures are made to ensure that financial statements should be helpful to the users in taking decisions. Auditors need to carry out procedures as required under framework of auditing standards and keep record of audit work papers besides ensuring quality of audit.

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