

CHAPTER I: MINISTRY OF CIVIL AVIATION

Airports Authority of India

1.1 Review of revenue generation and its realisation

Airports Authority of India (AAI) was constituted under an Act of Parliament and came into existence on 1 April 1995 by merging the erstwhile National Airports Authority and the International Airports Authority of India, with the responsibility of creating, upgrading, maintaining and managing civil aviation infrastructure both on the ground and in the air space in the country. AAI operates 137 airports, including international, customs, domestic, civil enclaves at defence airfields and six airports operated through joint ventures¹ formed by AAI with private airport operators.

Audit was carried out to ascertain effectiveness of the approved credit policy/ finance manual, efficiency in revenue handling and timely realisation of dues at the airports operated by AAI.

Revenue of AAI consists of aeronautical revenue and non-aeronautical revenue. Audit reviewed revenue generation and realisation activities (aeronautical and non-aeronautical) of AAI over the period from 2013-14 to 2017-18, at four airports operated by AAI in its Northern Region, viz., Amritsar, Jaipur, Lucknow and Varanasi. Relevant activities at three Directorates of Corporate Headquarters of AAI viz. Revenue, Commercial and Operations and also at Northern Regional Headquarters, were also reviewed.

Audit findings are given in the succeeding paragraphs.

1.1.1 Deficiencies in internal control mechanism in revenue management

Aeronautical revenue is the major source of revenue for AAI and comprises revenue from Route Navigation Facilities Charges (RNFC²), Terminal Navigation Landing Charges (TNLC³), Landing, Parking & Housing charges, Passenger Service Fee (PSF⁴), and User Development Fee (UDF⁵). Corporate Headquarters of AAI monitors timely realisation of aeronautical revenue which contributed approximately 50 per cent of the total revenue of AAI.

Non-aeronautical activities are the other source of revenue, which mainly comprise ground handling, duty free shops, advertisements, car parking, retail shops etc. In this regard, the following deficiencies were noticed in audit.

¹ (i) DIAL – Delhi International Airport Ltd., (ii) MIAL – Mumbai International Airport Ltd, (iii) BIAL – Bangalore International Airport Ltd., (iv) GHIAL – Hyderabad International Airport Ltd., (v) CIAL – Cochin International Airport Ltd. and (vi) MIL – MIHAN India Pvt. Ltd.

² RNFC – Charges for navigating the aircraft to its destination from the departed airport.

³ TNLC – Charges for guiding the aircraft up to the point of touch down.

⁴ PSF – Charges for facilities provided in the terminal as well as for security arrangements at the airport.

⁵ UDF – Charges to cover any deficit in revenue so as to ensure fair return on investment.

1.1.1.1 Non-availability of optimum security deposits and non-recovery of penal interest

As per AAI's credit policy for aeronautical dues (June 2007), schedule/non-schedule operators, willing to avail the credit facility, are required to furnish a security deposit (SD) in the form of cash or bank guarantee, equal to average billing of two months. Further, as per Chapter V of the finance manual of AAI, in case of an increase in the operations of an airline, the SD is required to be enhanced proportionally.

On the basis of their schedule of operation, credit facility is granted by AAI to regional, national and international airlines (schedule operators). In the case of non-scheduled operators, credit facility is approved, based on their past operations.

Audit reviewed the SD⁶ available with Corporate Headquarters, as on March 2018, alongwith outstanding dues and billing details of 67 airlines/parties (excluding Air India). It was seen that in 11 cases⁷, the available SD was short by ₹122.46 crore and the shortfall ranged between ₹0.25 crore (two *per cent*, Air Arabia) and ₹78.07 crore (Jet Airways, 53 *per cent*) from the required amount of SD.

Similarly, in case of non-aeronautical activities, the finance manual stipulated⁸ that dues should not exceed the SD at any point of time. In addition, concerned directorates were advised to raise claims for interest as per agreement/existing policy in case the dues were not settled in time. Audit reviewed non-traffic dues outstanding as on 31 March 2018 at Amritsar, Jaipur, Lucknow and Varanasi airports and noticed that out of total dues of ₹42.55 crore outstanding from 281 parties, dues of ₹29.91 crore outstanding against 176 parties (excluding Government parties) were higher than the available SD.

Audit further observed that instead of claiming penal interest on delayed payments by raising bills on regular basis, AAI had been recovering interest for delayed payment only when the concerned parties approached AAI to obtain 'No Dues' certificate. Due to non-compliance with the conditions stipulated in the finance manual, not only did AAI not recover penal interest on delayed payments as and when due, it also increased the risk of non-recovery from the parties who had stopped operations at airports.

As a result, due to lack of monitoring and timely review by the Management, SDs available with AAI remained short to the extent of ₹152.37 crore (March 2018).

The Management in its reply on aeronautical dues (July 2017) stated that dues of most of the airlines were within SD. The Management also stated that the position of dues changed every minute and so did the requirement of SD. Further, the position has improved considerably and is still improving. AAI has taken various initiatives for technological upgradation to further improve the efficiency; the result of which will be visible in forthcoming years.

⁶ As per details provided by Finance Department at Corporate Headquarters of AAI

⁷ (i) Aeroflot Russian Airlines, (ii) Air Arabia, (iii) Interglobe Aviation Ltd., (iv) Jet Airways, (v) Jet Lite, (vi) KLM Royal Dutch Airlines, (vii) Oman Air, (viii) PHL, (ix) Qatar Air, (x) TURBO Megha Airways Pvt. Ltd., and (xi) Turkmenistan Airlines.

⁸ Item II (iv) of Chapter V

In respect of non-aeronautical activities, the Management replied that out of total outstanding dues at these airports, major portion pertained to M/s Air India, which is not paying its dues regularly. The Management further stated that SAP software of AAI crashed in the year 2014 affecting the process of raising of financial bills. Due to this reason, license fee was not deposited on time resulting in delay. The Management further assured that these airports would continue to take necessary action in this matter. Since Corporate Headquarters was continuously monitoring and reviewing the matter, it had been reiterated to Airport Directors to follow provisions of finance manual with regard to collection of optimal SDs and suspend temporarily the licenses of defaulting parties whose outstanding dues were more than three months' license fees.

In our view, the Management reply is general in nature, the fact remains that the Management failed to assess and obtain the adequate amount of SD in a timely manner and could not comply with its own credit policy and provisions of Finance manual. Instances have been given in subsequent para no. 1.1.1.2, where parties closed operations without settling dues and the dues remained unrealised even after adjusting the available SDs.

1.1.1.2 Delay in settlement of aeronautical dues from private airlines

As per AAI credit policy for aeronautical revenues, bills were to be raised on a fortnightly basis and payment was to be received within 15 days. In case of airlines not availing the credit facility, payment for aeronautical services was to be done immediately before take-off, failing which the aircraft might not be allowed to take off. Aeronautical dues also arose in the case of foreign airlines flying over Indian airspace, where route navigation was provided and overflying charges were levied based on weight of the aircraft and distance flown. The data for raising Route Navigation Facilities Charges (RNFC) and overflying charges in such cases was to be provided by each regional office of AAI to IATA⁹. The credit policy for aeronautical revenues was also applicable for such bills raised on foreign airlines.

Review of outstanding aeronautical dues for the period 2015-16 to 2017-18 revealed that significant amounts were outstanding beyond the allowed credit period of 15 days as detailed below:

Table 1.1: Statement showing details of outstanding aeronautical dues

(₹ in crore)			
Year	Total aeronautical dues ¹⁰	Total aeronautical dues beyond 15 days	Interest on dues outstanding beyond 15 days
2015-16	407.80	232.33	69.41
2016-17	455.77	240.90	75.06
2017-18	513.09	288.74	78.24

Detailed scrutiny of above dues revealed the following deficiencies:

- (i) AAI failed to realise more than half of the dues within the allowed credit period of 15 days.

⁹ *International Air Transport Association*

¹⁰ *Schedule Domestic Airlines, Foreign Airlines and Foreign Airlines-Overflying Charges*

- (ii) With reference to an amount of ₹213.04 crore outstanding against 61 parties as on 31 March 2018, in 54 *per cent*¹¹ of the cases, dues of ₹60.60 crore were unsecured.
- (iii) Though credit policy of AAI stipulated that delay in payment would attract penal interest at the rate of 12 *per cent*, AAI did not raise bills for interest on delayed payments by the airlines and lost the opportunity of earning interest amounting to ₹78.24 crore as on 31 March 2018. Further, despite implementation (June 2012) of SAP-ERP, there was no system available for calculating the penal interest on dues outstanding beyond credit period.
- (iv) AAI allowed (October 2005) credit facility to M/s Paramount Airways (the party). Operations of the party were suspended by DGCA on 3 August 2010 and despite lapse of considerable time, traffic dues to the extent of ₹1.59 crore remained unpaid (March 2018). Further, despite being aware that the operations of the airlines were suspended in August 2010, party was allowed to occupy space at various airports¹² even after suspension of its operations, and dues to the tune of ₹0.77 crore (March 2018) remained unpaid for commercial space. Reasons for non-eviction of airline from commercial space even after suspension of operations were not available on record.
- (v) Review of outstanding dues of foreign airlines as on 31 March 2018 towards traffic and overflying charges revealed that eight parties¹³ had ceased/suspended their operations between the period March 2007 and March 2016. Against total dues of ₹10.42 crore outstanding against these parties, SD of ₹0.83 crore only was available with AAI. Thus, although the parties were in default, AAI could not adjust the available SD (March 2018). This resulted in blockade of funds of AAI to the extent of ₹9.59 crore (after adjusting available SD), chances of realisation of which were remote.
- (vi) Similar instances of default in payment of dues amounting to ₹172.69 crore by M/s Kingfisher Airlines were commented on by Audit in Para 2.3 of C&AG's Report No 21 of 2015, where also AAI had failed to obtain adequate SD as mandated by its credit policy.

The Management stated (July 2017) that during the credit period sometimes operations of the airlines increase and SD falls short. However, SD was reviewed from time to time and wherever there was shortfall, airlines were asked to enhance SD accordingly. Further, most of the foreign airlines were paying through IATA and were regular in making payment. Some airlines were operating since the period when credit policy was not in vogue. Those airlines have been approached to provide sufficient SD. In case of overflying charges, in some remote cases, where address of the airline was not available, AAI approached through their embassies and trade consulates for obtaining their addresses to pursue recovery. However, defaulting operators were charged interest on delayed payment as per the credit policy.

¹¹ 33 cases

¹² Madurai– November 2012, Kolkata–May 2013 and Coimbatore & Chennai – November 2013 - on the basis of non-traffic bill details available in AIMS/SAP for relevant profit centre code

¹³ Alitalia Airlines, North West Airlines, Kyrgyzstan Airlines, Krasnoyarsk Airlines DBA K, RAK Airways, Aerosvit Airlines, United Airways Bangladesh and Business Air Thailand

The Management reply is silent on the reasons as to why it was unable to recover majority of its dues within the credit period. Further, SD obtained is for two months billing, i.e., billing equivalent to four fortnightly cycle while dues are to be settled within one fortnightly period. Therefore, there was adequate scope for timely review of SD amount and AAI should have taken adequate steps to ensure that dues did not accumulate beyond available SD. Further, while comparing the operational efficiency of Delhi Airport International Limited and AAI as on 31 March 2018, it was noticed that DIAL was being managed well in regard to realisation of its dues as it had only 14.78 per cent of trade receivables to total operational income in comparison to 46.27 per cent in case of AAI. Also, due to non-compliance with the credit policy and Manual provisions, in the last five years, and in the cases pointed out by Audit, there were instances of default in payment of dues by airlines amounting to almost ₹185 crores¹⁴ on account of the fact that dues accumulated beyond the available SDs. Finally, though the Management did not furnish the details of interest charged and recovered from defaulting airlines, Audit worked out an amount of ₹69.41 crore, ₹75.06 crore and ₹78.24 crore for the years ended on 31 March 2016, 31 March 2017 and 31 March 2018, respectively, which was recoverable from the defaulting airlines. Audit further observed from the SAP data of AAI, that against the amount worked out by Audit, AAI had charged an amount of ₹0.19 crore, ₹1.06 crore and ₹0.75 crore only towards penal interest during the same period, respectively. A system for auto calculation of penal interest, for dues outstanding beyond credit period, needs to be developed at the earliest, so that the claim for penal interest can be raised and recovered from the parties making default.

1.1.1.3 Delay in recovery of Passenger Service Fee (Security Component) and User Development Fee (UDF)

In terms of Rule 88 of the Aircraft Rules, 1937, the licensee of an airport is entitled to collect Passenger Service Fees (PSF), Security Component (SC) from embarking passengers at the rate specified¹⁵. As per the Standard Operating Procedure for PSF, AAI was to be considered as a single licensee in respect of all its airports for this purpose with the liberty to pool the PSF (SC) collections from such airports and use the same for meeting the security related expenses. It was noticed that the rate of PSF (SC) of ₹130 per passenger had remained unchanged since its last revision in April 2001. The year wise details of PSF (SC) collection *vis-a-vis* expenditure are given in the table below:

Table 1.2: Statement showing total PSF (SC) revenue and expenditure there-against

Particular	(₹ in crore)				
	2013-14	2014-15	2015-16	2016-17	2017-18
PSF (SC) recovery	480.69	520.54	610.10	736.54	866.89
PSF (SC) Expenditure	592.72	665.41	766.22	882.28	1011.01
Shortfall (-)/Excess	-112.03	-144.87	-156.12	-145.74	-144.12
Shortfall %	23	28	26	-20	-17

Source: Annual Report of AAI

¹⁴ ₹184.64 crore = ₹172.69 crore + ₹9.59 crore + ₹0.77 crore + ₹1.59 crore

¹⁵ Initially the amount of PSF was to be decided by Ministry of Civil Aviation (MoCA) in terms of order dated 20 June 2007. After Airports Economic Regulatory Authority (AERA) became functional in January 2009, PSF was to be fixed by AERA.

Since PSF (SC) recovery had not kept pace with the mounting expenditure to be met out of the same, deficit to the tune of ₹702.88 crore had accumulated during the period 2013-14 to 2017-18. Deficit in collection of PSF (SC) was being met by AAI from its own sources of revenue, thereby placing huge burden on financial resources of AAI.

Similarly, User Development Fee (UDF) is levied under Rule 89 of the Aircraft Rules 1937. Airports Economic Regulatory Authority (AERA) determines the amount of UDF in respect of major airports¹⁶. In respect of non-major airports, UDF is determined by the Ministry of Civil Aviation (MoCA). As on 31 March 2017, AAI was collecting UDF at 13 airports, which increased to 17 airports¹⁷ as on March 2018.

Status of recovery of PSF (SC) and UDF during the period 2013-14 to 2016-17 was as under:

Table 1.3: Statement showing total PSF (SC)/UDF billed and recovered within the credit period

(₹ in crore)

	2013-14		2014-15		2015-16		2016-17	
	Total amount billed/ booked	Collected within credit period (% of recovery)	Total amount billed/ booked	Collected within credit period (% of recovery)	Total amount billed/ booked	Collected within credit period (% of recovery)	Total amount billed/ booked	Collected within credit period (% of recovery)
PS (SC)	480.69	118.80 (25%)	520.54	200.80 (39%)	610.10	264.00 (43%)	736.54	412.40 (56%)
UDF	525.43	156.46 (30%)	766.57	375.47 (49%)	943.15	564.04 (60%)	1134.73	761.22 (67%)

Source: Data of amount billed extracted from SAP and timely collection calculated based on collection charges data

On review of the recovery mechanism of PSF (SC) and UDF, the following deficiencies were noticed:

- (i) AAI was to collect PSF (SC) in a fiduciary capacity on behalf of Government of India. MoCA issued instructions (October 2009) on 'Administration of PSF' stating that the airport operators were bound to maintain separate accounts in respect of PSF charges collected and expenditure therefrom. Ministry's instructions also stated that the PSF collection cannot be equated with 'Other revenues' of the operators as it was the property of the Central Government. Despite instructions to maintain separate account for PSF (SC), AAI did not maintain any separate account for PSF (SC). As a result, audit could not assess the effectiveness of timely recovery of dues.

¹⁶ Major airports mean any airport which has, or is designated to have, annual passenger traffic in excess of 1.5 million or any other airport as the Central Government may by notification specify for this purpose.

¹⁷ (i) Chennai (ii) Kolkata (iii) Trivandrum (iv) Ahmadabad (v) Jaipur (vi) Lucknow (vii) Guwahati (viii) Amrītsar (ix) Udaipur (x) Trichy (xi) Vishakhapatnam (xii) Mangalore, (xiii) Varanasi, (xiv) Calicut, (xv) Goa Civil Enclave, (xvi) Srinagar Civil Enclave, and (xvii)Pune Civil Enclave.

- (ii) Passenger Service Fees and User Development Fee are collected by airlines from passengers and on receipt of bills from AAI, airlines were to remit the same within credit period of 15 days. Though there was improvement in timely collection of PSF (SC) and UDF over four years up to 31 March 2017 as shown in the table above, actual collection was not satisfactorily managed, having ranged between 25 per cent (2013-14) and 67 per cent (2016-17) of total dues of PSF (SC) and UDF respectively.
- (iii) It was further observed that the invoice in respect of PSF and UDF are raised based on the passenger details (number) provided by the airlines. However, AAI did not have any IT based mechanism to verify the correctness of the figures provided by the airlines for the number of passengers who finally boarded on the aircraft. Thus, AAI could not ensure the correctness of revenue earned on account of PSF (SC) and UDF.
- (iv) As per the credit policy, receipt of payment beyond credit period of 15 days would attract interest at the rate of 12 per cent from defaulters. Review of records revealed that there was no organised system in place for claiming interest for delay in remittance of PSF (SC) and UDF along with other dues as highlighted in para 1.1.1.2. Audit further noticed that in limited cases, AAI started raising interest bills for delay in receipt of total traffic dues. Test check of bills pertaining to interest charged from Go Air, as on 31 March 2016, revealed that there was delay of 16 to 1,271 days in remittance of PSF amounting to ₹63.14 crore and 16 to 951 days in remittance of UDF amounting to ₹21.63 crore during the period 2013-14 to 2015-16, which resulted in loss of interest of ₹5.44 crore¹⁸ to AAI. However, the recovery of the same is yet to be made.
- (v) Audit sought (November 2017 and October 2018) details regarding actual delay in realisation of PSF (SC) and UDF dues and interest levied on airlines for delayed remittances. However, AAI did not provide the details. In absence of details, Audit was unable to work out the amount of interest recoverable from airlines on delayed payments of PSF (SC) and UDF for the year 2017-18.

Thus, non-existence of an effective control mechanism for timely realisation of dues along with failure of AAI in penalising the delay by airlines, resulted in financial burden and loss of revenue by not claiming interest from defaulting airlines. The objective of these levies was to meet legitimate security expenditure (PSF) and to ensure fair rate of return on investment made in creation of infrastructure at the airports (UDF) which was also not being fully achieved.

The Management stated (July 2017) that bills for PSF/UDF were raised on airlines along with the other airport charges. Payment by the airlines was also made with other bills. Presently, some incentive has been offered as collection charges to the airlines to encourage them to make payment of PSF/UDF on priority. The Management also stated that the main defaulters were Air India Group (National Carrier).

¹⁸ PSF - ₹4.50 crore and UDF - ₹0.94 crore

The Management reply was, however, silent on the issue of gaps in AAI's processes, as a result of which it failed in timely recovery of PSF/UDF and raising of bills for interest from defaulting airlines. The Management needs to develop a system-based generation of penal interest, for dues relating to PSF and UDF outstanding beyond credit period, at the earliest, so that the claim for penal interest can be raised and recovered from the parties making default.

1.1.1.4 Non-recovery of dues from M/s Air India Group

AAI provides aeronautical and non-aeronautical services to companies under the Air India Group¹⁹ (National Carriers) but due to significant outstanding dues from the National Carriers, a Memorandum of Understanding (MoU) was signed (August 2013) between Air India Limited (AIL) and AAI, on the advice of MoCA, to reconcile the dues payable upto 31 March 2012.

Review of outstanding dues of M/s AIL as on 31 March 2018 revealed the following:

- (i) As per the credit policy, National Carriers were required to deposit two months billing as SD but contrary to this, against the requisite SD of ₹182.76 crore, AIL had deposited SD of only ₹1.95 crore with AAI (March 2018).
- (ii) Review of total dues recoverable (traffic and non-traffic) from AIL for the period 2013-14 to 2017-18 revealed that recovery of dues was very slow even after settlement had been done for the period upto March 2012 (as per MoU). Total dues of AIL which were ₹1,460.15 crore in March 2013 had increased to ₹2,678.57 crore as on March 2017. The position improved in 2017-18 and dues reduced to ₹2,411.13 crore but fact remains that AAI did not recover dues from AIL, on annual basis, due to which outstanding dues continuously increased from ₹1,460.15 crore in March 2013 to ₹2,411.13 crore in 2017-18.
- (iii) As per the MoU, interest at the rate of nine *per cent* was to be charged on delayed payments by AAI from AIL. The amount of interest on the outstanding bills as on March 2018 worked out to ₹624.87 crore²⁰, however, AAI did not raise any claim for realisation of the amount from AIL.
- (iv) MoU signed between AAI and AIL in August 2013 was valid for a period of two years, i.e. upto August 2015. AAI, however, did not insist for renewal of the MoU beyond August 2015.

As a result of the above, a significant amount remained unrecovered from the National Carriers and AAI continued to suffer revenue loss of interest due to delay in recovery.

¹⁹ Air India, erstwhile Indian Airlines, Alliance Air and Air India Express

²⁰ Division of outstanding dues and interest as on 31 March 2018

	Period upto August 2015	From September 2015 to March 2018	Total (₹in crore)
Principal	1229.52	1181.61	2411.13
Interest	511.24	113.63	624.87

Note- As per approved credit policy, rate of interest is 12 per cent but in case of Air India Group rate of interest is considered @ 9 per cent as agreed in the MoU signed in August 2013

The Management replied (July 2017) that AAI was consistently following up with Air India Group for recovery of dues. The Ministry of Civil Aviation had also been requested to intervene and the matter was under active consideration.

The fact remained that dues were lying unrecovered from Air India Group and no claims for interests were raised by AAI on AIL, though an agreement was reached in this regard in the MoU (August 2013). Further, MoU signed with AIL in August 2013 was valid till August 2015, however, efforts made by AAI, if any, for extending validity of the MoU beyond August 2015, were not found on record. Thus, AAI was not in a position to pursue realisation of their dues from AIL on the basis of the MoU after its expiry.

1.1.2 Ground Handling Services

Ground Handling activities mainly comprise aircraft handling, cleaning and servicing, loading and unloading, security handling, surface transport, terminal and flight operations, etc. AAI notified its Ground Handling Regulation 2007 (GHR) in October 2007, which was recently revised as Ministry of Civil Aviation (Ground Handling Services) Regulation, 2017. As per GHR only three agencies, viz., (1) Airport Operator or its Joint Venture (JV) Companies, (2) subsidiary/JVs of AIL or (3) an agency selected through tender, were entitled to carry out ground handling activities at metropolitan²¹ airports and all other airports.

1.1.2.1 Failure to raise claims for royalty on ground handling revenue of AIATSL for third party handling

As per the GHR, subsidiary companies of AIL or its joint ventures specialised in ground handling, were entitled to carry out ground handling activities. Third party handling was permitted to these subsidiaries or their joint ventures on the basis of revenue sharing with AAI.

Air India Air Transport Services Limited (AIATSL), a subsidiary of AIL, is an independent entity for ground handling services. AIATSL signed a Memorandum of Understanding (MoU) with AIL on 19 April 2013 and the latter agreed to transfer its ground handling business at various locations across India. Further, AAI decided (15 April 2014) that AIATSL would be required to pay royalty at the rate of 13 *per cent* of gross turnover (GTO) for third party ground handling services with effect from 1 April 2014.

Audit observed that:

- (i) Though AIL or its subsidiary/JV may be permitted to provide third party handling, subject to revenue sharing with AAI, but the latter did not enter into any formal agreement with either AIL or its subsidiary, i.e., AIATSL even after a lapse of more than three years.
- (ii) As per the financial statements of AIATSL, AIATSL earned revenue by providing ground handling services to Group Companies as well as third parties. However, review of ground handling revenue of AAI revealed that despite decision taken in

²¹ *Metropolitan airports: Delhi, Mumbai, Bengaluru, Hyderabad, Chennai and Kolkata airports*

April 2014 to levy a royalty at the rate of 13 *per cent* in respect of third party ground handling, corresponding bills were not raised at all airports²² by AAI. Failure of AAI to ensure compliance with its own GHR and non-raising of royalty bills resulted in loss of revenue of ₹184.54 crore (March 2018) as detailed below:

Table1.4: Statement showing shortfall in revenue from AIATSL

(₹ in crore)				
Year	Revenue from 3 rd party ground handling of AIATSL	Royalty accrued at the rate of 13% as per AAI's GHR	Actual ground handling revenue collected from AIATSL ²³	Shortfall in revenue
[1]	[2]	[3=2 x 13%]	[4]	[5=3-4]
2014-15	455.56	59.22	2.59	56.63
2015-16	365.57	47.52	0.98	46.54
2016-17	406.51	52.85	8.15	44.70
2017-18	345.38	44.90	8.23	36.67
TOTAL	1573.02	204.49	19.95	184.54

The Management agreed (July 2017) that no agreement was signed between AAI and AIATSL and stated that efforts were now being made to enter into an agreement with AIATSL. Further, as AIATSL was not providing GTO details, AAI was unable to raise the bills. The Management added that AIATSL had approached MoCA and accordingly MoCA issued directions (26 July 2013) to AAI not to put pressure for paying royalty by non-issuing entry passes to AIATSL. Reply further stated that based on the audit observation, AAI was in the process of raising the bills on AIATSL.

Reply was not acceptable as the Management did not ensure compliance with its own Regulations and with the decision for charging royalty at the rate of 13 *per cent* from AIATSL. Further, MoCA had only directed not to implement the rates which AAI had received through tender process and did not prohibit AAI from charging royalty from AIATSL. Fact also remained that the Management did not devise any mechanism to ensure timely raising of bills for royalty from AIATSL.

1.1.2.2 Failure to finalise ground handling tariff of licensee and non-existence of mechanism to verify correctness of gross turnover reported by the licensee

M/s Indo Thai Airport Management Service Pvt. Ltd. (M/s Indo Thai, the licensee) was awarded (December 2010) ground handling contract at Amritsar, Varanasi, Lucknow, Jaipur, Udaipur and Dehradun²⁴ airports w.e.f. 01 January 2011 for a period of 10 years at a royalty share of 21 *per cent* of GTO subject to the minimum GTO of ₹40 crore per annum. However, non-entitled²⁵ entities continued to provide ground handling services at

²² Patna, Madurai, Jodhpur, Coimbatore, Chennai, Goa, Gaya, Shillong, Kullu, Varanasi, Kolkata, Agra, Tirupati, Bhuj, Bhubaneswar, Bhavnagar, Jamnagar, Port Blair, Amritsar, Calicut, Vishakhapatnam and Tezpur.

²³ AIL or its subsidiary, i.e., AIATSL

²⁴ In place of Srinagar airport, Udaipur and Dehradun airports were given to M/s Indo Thai

²⁵ As per the Ground Handling Regulation 2007, all entities apart from (i) AAI and its Joint Venture, (ii) Subsidiary Company of National Carrier i.e. Air India, (iii) any other agency appointed through bidding process by AAI and (iv) Self Handling by airlines excluding foreign airlines are treated as non-entitled entities.

all six airports, thereby intruding upon the business of M/s Indo Thai. Due to this, AAI decided (February 2011) not to charge the minimum guaranteed GTO to M/s Indo Thai and levy only a royalty share percentage on actual turnover till abolition of such non-entitled agencies. In January 2013, AAI decided to assess notional loss in the turnover suffered by M/s Indo Thai and to charge royalty share on actual GTO till non-entitled entities were abolished. Based on the assessment of the notional loss, the above decision was to be revisited by AAI. However, AAI had not made any such assessment.

Audit observed as under:

- (i) There was no uniformity in the royalty sharing arrangement with the non-entitled agencies operating at various airports with some of them paying 21 *per cent* of GTO while others were either paying only 13 *per cent* of GTO or making lump sum payments to AAI (March 2017). The status of rates charged during the year 2017-18 is awaited from the Management.
- (ii) Clause 24 of the agreement with M/s Indo Thai stated that the licensee shall have its tariff approved by AAI before levying the same and the same should be in compliance with rules and regulations imposed by AERA (for AERA airports) and by Government (for Non-AERA airports). Ground handling charges for Jaipur and Lucknow airports (AERA airports) were approved by AERA vide order dated 25 January 2012. In respect of non-AERA airports (*viz.*, Amritsar, Varanasi, Dehradun and Udaipur), M/s Indo Thai submitted (March 2013) provisional ground handling charges to AAI for approval by MoCA, however, the same have not been approved till date (October 2018) and the licensee continued to charge provisional rates. Reasons for delay in tariff finalisation for ground handling services were not available on record. Later, in view of the new ground handling policy, AAI gave a 180 days' notice (12 February 2018) to M/s Indo Thai for termination of existing license/contract, which was further extended to another 180 days, i.e upto 30 June 2019.
- (iii) In a meeting held on 20 March 2013 between AAI and M/s Indo Thai, it was agreed that 85 *per cent* of the rate would be treated as minimum revenue/ GTO for both AERA and non-AERA airports. As per tariff for Lucknow airport the maximum rate of ₹1,12,066 per flight was approved by AERA for scheduled aircraft of type B-737. Accordingly, minimum revenue/GTO per flight of B-737 type of aircraft worked out as ₹95,256. Audit carried out a test check of GTO figures submitted by M/s Indo Thai for the month of March 2018 in respect of Lucknow airport and noticed that against the minimum rate of ₹95,256 per flight of B-737 type of aircraft, M/s Indo Thai had charged an amount ranging between ₹5,800 and ₹63,837 per flight. Thus, AAI was unable to realise the minimum revenue, as per tariff approved by AERA, from M/s Indo Thai. In the absence of complete detail relating to various categories of flight handled by M/s Indo Thai, Audit could not undertake the calculations for arriving at the amount of revenue which AAI needed to realise from M/s Indo Thai.

- (iv) After a review of ground handling services at various AERA and non-AERA airports, a number of deficiencies like non-verification of monthly GTO statements submitted by M/s Indo Thai since July 2013 to March 2016, charging lower than the provisionally approved rates, non-submission of complete details of flights handled, rate actually charged to airlines, etc. were pointed out by AAI to M/s Indo Thai. There was no evidence of remedial action taken, if any, by AAI to address the aforesaid issues.
- (v) Despite directions of Corporate Headquarters of AAI and provisions of GHR, non-entitled agencies were not removed from airports. Further, AAI failed to make an assessment of notional loss of M/s Indo Thai as decided by AAI in January 2013, therefore, the revenue share of royalty at the rate of 21 *per cent* on minimum guaranteed GTO of ₹40 crore, as quoted by M/s Indo Thai in their bid, could not be executed. Had non-entitled agencies been removed as per GHR and minimum GTO criteria implemented, revenue loss to the extent of ₹6.64 crore²⁶ to AAI could have been avoided (March 2018).
- (vi) Though M/s Indo Thai had been operating for more than five years, AAI failed to devise an effective control mechanism to ensure correctness of GTO being submitted by M/s Indo Thai. Thus, as observed by Audit in case of Lucknow airport, accuracy of GTO figures reported by M/s Indo Thai during the period of its operations could not be ensured.

The Management stated (July 2017) that as the matter was pending in Hon'ble Supreme Court of India, non-entitled agencies could not be removed. It was further stated that lump sum payments of royalty charges were not permissible; however, the same would be checked and discontinued. As far as the methodology for correctness of GTO is concerned, the same was being verified by the concerned Directors of Airports and the same would be revisited and modified. The Management further stated that tariff approval in respect of M/s Indo Thai was in process. In respect of Lucknow airport (Major airport), ground handling services rates were being charged as approved by AERA.

The reply was not acceptable as ground handling charges were being collected at Lucknow airport at the rates which were lower than the rates prescribed by AERA. AAI should devise a system to avoid the possibility of manipulation in GTO reported by parties.

1.1.3 Duty Free Shop

Commercial manual of AAI stipulates that Duty-Free Shops (DFS) are to be maintained at international/custom airports run by AAI. The contracts for DFS being operated at 13 airports expired between December 2011 and February 2015. However, the tender process for all these DFS was started only in the month of March 2015 and completed by September 2016; as a result, re-awarding of DFS was delayed by 7 months (Trichy airport) to 50 months (Pune airport).

²⁶ *The amount has been worked out on the basis of difference between royalty to be earned based on minimum GTO of ₹40 crore and royalty amount actually earned by all ground handling agencies during 2013-14 to 2017-18.*

1.1.3.1 Surrender of partial space due to delay in award of Duty-Free Shops

As stipulated in Para 2 of Chapter 5 of commercial manual of AAI, the tender process for an existing facility should be initiated six months prior to the date of termination of the existing contract, so that on expiry of the existing contract, new contract would be in place. However, because of delay in re-award of the tender, M/s Flemingo Duty Free Shops Pvt. Ltd. (M/s Flemingo) surrendered (between 30 April 2015 to 12 June 2015) DFS spaces at departure side, out of the spaces allotted to them at seven airports²⁷, citing non-responsiveness of AAI and lack of clarity on tenure of the contracts. Subsequently, AAI extended (October 2015) all DFS contracts of M/s Flemingo (except departure side area at Calicut and Ahmadabad), upto 31 March 2016 or till award of new contract, whichever was earlier. AAI allowed gestation period of 15 days to M/s Flemingo to reset the shops of already surrendered area and obtain applicable permits. Accordingly, M/s Flemingo took repossession of the space for DFS at seven airports, after a gap of nearly six months. Thus, due to delay in timely decision making by the Management, AAI sustained loss of ₹9.88 crore²⁸ for the period 12 June 2015 to 10 November 2015 (after considering 15 days gestation period).

1.1.3.2 Reduction in MAG without proper assessment

Request for Proposal (RFP) for DFS at Amritsar airport for a period of 10 years at Minimum Annual Guarantee (MAG) of USD 15,67,564 was issued in the month of March 2015. Subsequently, due to various administrative reasons, 16 corrigenda were issued to modify the conditions of the RFP before AAI decided to call off the process of tender (27 and 29 August 2015) at all airports, including Amritsar airport.

Subsequently (September 2015), AAI reduced the amount of MAG in RFP from USD 15,67,564 to USD 10,50,200 citing non-responsiveness to the Notice Inviting Tenders. Finally, the DFS was awarded (19 February 2016) to the highest bidder, viz. M/s Flemingo Duty Free Shop Pvt. Ltd. (a subsidiary company of existing licensee) at an MAG of USD 10,50,200 or 40 *per cent* of GTO, whichever was higher. The new licensee, i.e. Flemingo Duty Free Shop Pvt. Ltd. commenced its operations in July 2016, after obtaining statutory clearances from Reserve Bank of India (RBI), Foreign Investment Promotion Board (FIPB) etc.

In this regard, Audit observed that:

- The existing MAG for DFS was USD 13,16,508.82 with annual escalation at the rate of 10 *per cent*. AAI approved extension of the contract for six months from 10 June 2014, which was further extended from time to time till June 2016, at the existing MAG. Thus, the party continued its operations during the extended contract period of 24 months, till June 2016, at MAG of USD 13,16,508.82.
- In the meantime, due to inordinate delay in award of DFS at Amritsar, the existing licensee M/s Flemingo DFS Pvt. Ltd. offered (June 2015) to continue at the

²⁷ Ahmedabad, Amritsar, Calicut, Goa, Jaipur, Lucknow and Trivandrum airports. Stipulated date of completion of existing contract at these airports was between January 2012 and February 2015.

²⁸ AAI had computed estimate loss of ₹7.18 crore upto 30 September 2015 based on which the Competent Authority decided (October 2015) to extend the contracts of M/s Flemingo. Audit has worked out the amount of ₹9.88 crore based on the amount computed by AAI.

tendered MAG of USD 15,67,564 subject to firm extension by two years. This indicated that existing higher MAG was profitable.

- Hence, decision of AAI for reduction in the amount of MAG by 33 *per cent*²⁹ cannot be considered as prudent in view of para 3 of Chapter 4 of the commercial manual of AAI which clearly stipulated that in case of non-participation after re-tender, MAG should be reduced upto a maximum of 30 *per cent* only.

Thus, due to inordinate delay in decision making and frequent modification in RFP and reduction in MAG to USD 10,50,200 without seeking recommendation from the respective airports and ignoring the fact that the existing licensee was operating at a much higher MAG, AAI suffered loss of revenue of USD 5,17,364 per annum. Review of revenue earned during 2016-17 and 2017-18 revealed that AAI has suffered a loss of ₹2.77 crore (USD 4,26,822)³⁰ during 2016-17 (w.e.f. 4 June 2016) and ₹3.29 crore (USD 5,06,013) during 2017-18 due to reduced amount of MAG.

The Management stated (July 2017) that though M/s Flemingo offered to continue DFS at Amritsar airport with tendered MAG, but it did not participate in the regular tender, which led to non-responsiveness of the regular tender. Hence, as per para 3 of Chapter 4 of commercial manual of AAI, retendering was initiated with downward revision in MAG by 30 *per cent* with the approval of competent authority.

The contention of the Management that MAG at Amritsar airport was reduced due to non-response to the tender, could not be substantiated in Audit as the Management did not furnish documentary evidence in support of their reply. Moreover, the existing licensee M/s Flemingo DFS Pvt. Ltd. continued its operations at higher MAG, which indicated that reducing the MAG from USD 15,67,564 to USD 10,50,200 was not justified. Hence, AAI should devise a mechanism for timely award of existing tenders with comprehensive inputs from airports.

1.1.4 Loss of revenue due to grant of rebate beyond agreed period and non-recovery of dues

M/s Meena Advertisers (M/s Meena) was awarded advertisement rights at Jaipur airport for a period of five years (with effect from 4 June 2007 to 3 June 2012) at a license fee of ₹0.23 crore per month with 10 *per cent* annual escalation. After commissioning of new terminal building in April 2009, the total traffic at Jaipur airport got split between two terminals. M/s Meena requested for sites at both terminals. However, AAI asked them to shift to the new terminal and sites at the new terminal were handed over in a phased manner. Aggrieved by this, M/s Meena sought relief of 40 *per cent* rebate on the annual license fee. As AAI did not agree for the rebate claimed, the party invoked the arbitration clause of the contract. The award pronounced (17 November 2011) by the arbitrator considered for a discount of 28 *per cent* in license fee. Aggrieved by the award, the party filed its objection under section 34 of the Arbitration and Conciliation Act, 1996 in the District Court, Jaipur. Both the parties mutually agreed for an out of court settlement (28 May 2012) according to which a rebate of 34 *per cent* was allowed to M/s Meena

²⁹ *USD 15,67,564 per annum minus USD 10,50,200 per annum = USD 5,17,364 per annum (i.e. 33 per cent reduction)*

³⁰ *1 USD= INR 64.79 as on March 2017 and INR 65.07 as on March 2018*

which was effective from 1 July 2009 till 3 December 2012 (as six months extension in the existing contract expiring on 3 June 2012 was also allowed to the party) and M/s Meena was required to withdraw court case filed before the District Court, Jaipur.

In this regard, Audit observed that:

- (i) AAI continued allowing rebate to M/s Meena beyond the last date of extended contractual period, i.e. 3 December 2012. Thus, AAI sustained an avoidable loss of ₹2.38 crore³¹ (December 2012 to August 2016) due to granting rebate beyond the agreed period to M/s Meena.
- (ii) As per out of court settlement (May 2012), M/s Meena agreed to pay to AAI the amount of ₹0.88 crore outstanding (May 2012), towards license fee and also to withdraw the case filed in District Court, Jaipur within 30 days of the settlement. However, the court case was settled only on 17 December 2014, i.e., after a period of 30 months. Further, AAI also failed to recover its dues from M/s Meena. The total amount recoverable from M/s Meena as on 31 March 2018 was ₹3.32 crore, against which full provisions exists in the accounts of AAI (March 2018). The matter of recovery from M/s Meena is pending with Hon'ble Supreme Court of India (31 January 2019).

The Management stated (July 2017) that the rebate was granted after verification of audited accounts of M/s Meena to establish its claim of losses. Further, the contract was temporarily extended from time to time due to non-response to the tenders. Non-invitation of tenders on expiry of contract in 2012 was attributed to frequent changes in the policy of the GoI towards management of airports (including Jaipur airport) through PPP mode in 2013, having a direct bearing on policy/ periodicity of commercial contracts for Advertisement Rights etc. Finally, the tender was invited during April 2016 with 'Novation³² clause' with MMG of ₹30.90 lakh.

The reply is not acceptable since the process for inviting tenders was delayed despite the fact that the party did not comply with the conditions of out of court settlement. Justification given by the Management that the delay in inviting tenders was due to frequent change in the Government policy was also not acceptable, as AAI should have completed the tender process before expiry of the existing contract on 3 December 2012. Further, the tender process could have been started just after receipt of instructions of the Government in October 2013 for adopting PPP mode for development of Jaipur airport, by inserting 'Novation clause', as AAI did later while inviting e-tenders for vehicle parking at International Airport Jaipur in November 2014.

1.1.5 Lack of control mechanism over the reporting of GTO figures

AAI follows two different revenue models for its commercial facilities, i.e., fixed amount of license fee or percentage of revenue (GTO) sharing and MAG amount, whichever is higher. AAI awarded a number of commercial facilities like ground handling, Common

³¹ *On the basis of rates agreed in the contract (₹0.38 crore to ₹0.50 crore) and rates awarded to new party (₹0.33 crore), whichever is lower and applicable escalation*

³² *Novation: The substitution of a new contract for an old one. The new agreement extinguishes the rights and obligations that were in effect under the old agreement.*

Use Terminal Equipment (CUTE), Scratch and Win facilities, DFS, Baggage Wrapping etc. on percentage sharing of GTO basis.

Audit reviewed contracts awarded by AAI on percentage sharing of GTO basis and noticed that AAI had no mechanism in place to ensure correctness of GTO reported by the concessionaires as highlighted regarding ground handling agency in para no. 1.1.2.2, so that AAI could recover from the concessionaires its correct due share in the GTO as per revenue share agreed with the concessionaire and possible loss of revenue due to misstatement of GTO by the concessionaires could be avoided.

A few of the cases noticed in Audit, relating to misstatement of GTO are given below:

- (i) The license for in-flight sales was granted to M/s AVA Merchandising Private Ltd. (AVA) on experimental basis for six months, w.e.f. 01 August 2007 at 13 airports on payment of two *per cent* of GTO or MAG of ₹0.03 crore per month, whichever was higher. This was subsequently extended from time to time on the same terms and conditions at 28 airports including Jaipur, Amritsar, Lucknow and Varanasi covered in Audit. Revenue sharing percentage was enhanced subsequently (December 2008) to 13 *per cent* without corresponding increase in the MAG. MAG was revised to ₹3,30,000 while granting extension to the contract for a period of three years w.e.f. 1 April 2010. Audit noticed that average turnover of the party was ₹1.50 crore (August 2007 to May 2008) when GTO share rate was two *per cent*. However, when the rate of GTO share was increased to 13 *per cent* turnover was reduced to ₹0.23 crore (December 2008). This indicated possible misreporting of GTO figures by M/s AVA. Thus, while the MAG remained stagnant, the turnover figures reported by the concessionaire kept changing based on revision of revenue share rate. This issue was also examined by the Vigilance Department of AAI during inspection of turnover at four airports³³ in January 2014 and February 2014. The Vigilance Department observed that against the GTO reported by the party, the actual GTO was higher by ₹0.16 crore at Chennai, ₹0.03 crore at Ahmedabad, ₹97000 at Jaipur and ₹13000 at Srinagar.

Thus, the Management failed to take cognizance of a sudden reduction in the GTO reported by M/s AVA after increase in revenue sharing percentage.

Though the royalty sharing model was prevalent since August 2007 and also cases of under reporting were noticed in vigilance inspection, the AAI, even after lapse of more than eight years, did not devise any mechanism to verify the turnover reported by the licensee.

The Management stated (July 2017) that GTO mechanism on revenue share was delayed due to legacy issues arising out of policy decision taken by the government in 2013 regarding operation and management of major airports through PPP model and necessary Request for Proposals (RFPs) to the effect was also floated. Thereafter, various meetings at the level of Government/ Planning Commission had taken place.

The Management reply is not acceptable as it is non-specific and silent on the audit observation. An effective control mechanism to avoid any possibility of manipulation in GTO amount reported by licenses/parties may be devised by AAI at the earliest.

³³ Ahmedabad, Jaipur, Chennai & Srinagar

The matter was referred to the Ministry in December 2018; their response was awaited (May 2019).

1.2 Review of security at airports operated by Airports Authority of India

1.2.1 Introduction

AAI was constituted by an Act of Parliament and came into existence on 1 April 1995 by merging the erstwhile National Airports Authority and International Airports Authority of India. The merger brought into existence a single organisation entrusted with the responsibility of creating, upgrading, maintaining and managing civil aviation infrastructure, both on the ground and air space in the country. All the airports of AAI are categorised into five regions namely Northern, Western, Southern, Eastern and North-Eastern Region. AAI manages 137 airports across India, of which 97 airports were operational as of March 2018.

1.2.2 Role of Agencies involved in Security Operations at airports

1.2.2.1 Bureau of Civil Aviation Security

Bureau of Civil Aviation Security (BCAS) is recognised as an independent department under the Ministry of Civil Aviation (MoCA) and is responsible for laying down standards and measures in respect of security of civil flights at international and domestic airports in India. The main functions of BCAS are to lay down Aviation Security Standards in accordance with Annex 17 to Chicago Convention of International Civil Aviation Organisation (ICAO), monitor the implementation of security rules and regulations and carry out survey of security needs and also to ensure that the persons implementing security controls are appropriately trained and possess all competencies required to perform their duties.

1.2.2.2 Airports Authority of India– Airport Operator

AAI, being an airport operator, is required to provide and maintain necessary security infrastructure as per the specifications and directions of BCAS. It fulfils its responsibilities through the following:

Table 1.4: Responsibilities of the unit/ office

S. N.	Name of unit / office	Responsibility
1.	Directorate of Airports Security, established at Corporate Headquarters	<ul style="list-style-type: none"> ▪ Ensuring the installation and effective functioning of requisite equipment; ▪ Proper coordination for policy matters related to airport security; ▪ Monitor implementation of BCAS security guidelines; and ▪ Induction and other related issues with regard to Central Industrial Security Force (CISF)
2.	Directorate of Airport System	<ul style="list-style-type: none"> ▪ Planning, procurement, installation and maintenance of various security and surveillance equipment/technology
3.	Chief Security Officer	<ul style="list-style-type: none"> ▪ Assist Airport Director for all security needs at airport level; ▪ Coordinate with the security agency maintaining the security operations to ensure smooth security operations at airport level

1.2.2.3 Security Agency (CISF/ State Police)

The Central Industrial Security Force (CISF) or State police are responsible for security operations at airports. AAI deployed CISF at 53 airports whereas in case of 44 airports, State Police were deployed for security of the airports (March 2018).

Chief Airport Security Officer (CASO) from the Security Agency heads security at airport level and is mainly responsible for operations of security apparatus provided by AAI for safeguarding passengers, crew, ground personnel, aircraft, aerodrome; enforcement of access control measures in the restricted area of the aerodrome; security of perimeter area; screening of passengers; surveillance within and around aerodrome; liaison with local police and intelligence agencies and enforcement of overall security measures at airports.

1.2.3 Audit Objectives and Scope

The objective of the audit was to assess adequate provision/availability of mandatory/recommended security equipment/infrastructure/technology, performance of the existing monitoring mechanism and availability of adequate and trained security personnel to ensure effective security at the airport.

Audit covered Directorate of Airports Security and Airport System at Corporate Headquarters of AAI and five airports³⁴, namely Airport-1, Airport-2, Airport-3, Airport-4 and Airport-5³⁵, for the period from 2013-14 to 2017-18.

1.2.4 Audit Findings

Airport security refers to the resources (manpower and equipment), techniques and methods used for protecting the passengers, staff, aircraft, and other airport assets/property from accidental/malicious harm, terrorist, crime, and other threats. The area of an airport can be divided into two major parts, i.e. airside and landside. Airside is the movement area of an aircraft on the airport surface whereas landside covers areas where passengers arrive/depart the airport terminal building and move through terminal building to board the airplane. Audit reviewed the security activities at different areas/stages to check compliance with the guidelines/directions given by BCAS for effective security at airports and the audit findings have accordingly been clubbed as per the stage of security check and sector of the airport.

Chart 1.1: Map of airport showing airside and landside area



³⁴ Two hyper-sensitive airports (Airport-1 and Airport-2), two sensitive airports (Airport-3 and Airport-4) and one non-operational airport (Airport-5)

³⁵ Airport-5 is a non-operational airport and only non-schedule flights, i.e. chartered flights, helicopter services are being operated

As per BCAS instructions of 2006, each airport operator is required to prepare, maintain and implement a written airport security programme (ASP) which contains details of security measures, equipment to be installed, responsibilities of different stakeholders, etc. The ASP is a commitment on the part of the airport operator and is approved by the BCAS. All security procedures at the concerned airport are followed in accordance with the approved ASP.

Non-compliance of provisions of approved ASP for relevant airport is discussed in para No.1.2.4.1(ii) and para 1.2.4.2(i).

1.2.4.1 Airside area of an airport

The entire airport area is enclosed, and the perimeter forms the outer-most border. Typically, a combination of barriers (fencing, etc) and surveillance (electronic equipment like surveillance cameras or patrolling through human resources) protect the perimeter area and guard the airside of the airport. This airside area mainly consists of runways, taxiways, ramps, etc. and perimeter security plays a vital role in deterring inadvertent or premeditated access of an unauthorised person in a non-public area of the airport.

As mandated by the BCAS, security at airside of any airport consists of provision of a perimeter wall, fencing, all-weather road for patrolling, lighting for perimeter and any other sensitive area, watch towers and installation of electrically/mechanically operated bird scaring devices. Further, after considering potential threats that an intruder may scale the wall to gain access to airport facility, BCAS decided that modern and mechanised technology like Perimeter Intrusion Detection System be installed so as to increase the effectiveness of the force deployed.

(i) Provision of perimeter walls, perimeter roads and watch-towers

As on 31 March 2018, the status of perimeter walls and roads, as required and actually available for airside security at airports selected in audit is given below.

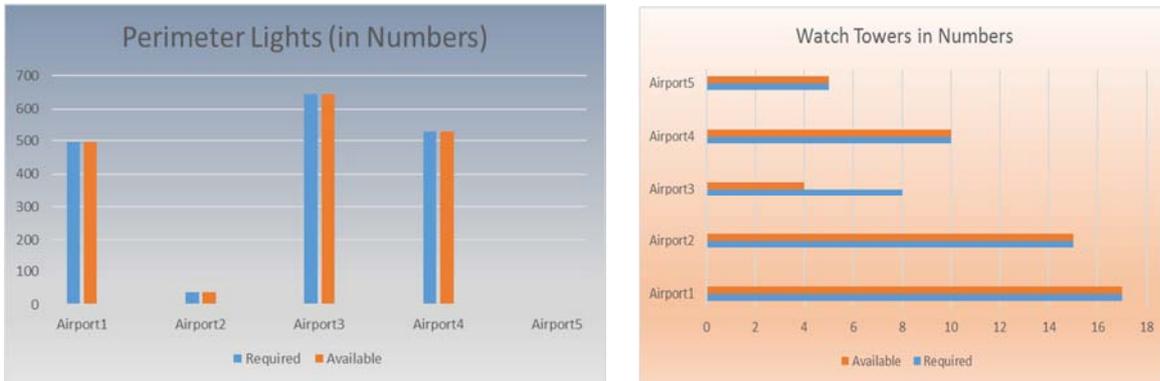
Table 1.5: Status of security infrastructure/equipment at airside of airports

Particular	Airport-1		Airport-2		Airport-3		Airport-4		Airport-5	
	R	A	R	A	R	A	R	A	R	A
Perimeter Wall (Length-km)	13.5	13.5	2.2	2.2	10	10	7.6	7.6	6	5.5
Perimeter Wall (Height-ft)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Perimeter Road (Km)	13.5	13.5	1.6	1.6	9.5	9.5	7.6	7.6	6	0

R – Required; A - Available

As regards watch towers, BCAS provided (July 2002) the requirement and specification of watch towers which were finalised on the basis of report given by a committee comprising officers of AAI, CISF and BCAS. As per specifications provided, the level of platform should be 8 ft. high above average ground level and height of the watch tower cabin above platform should be minimum 2.10 mtr. Review of records at Airport-3 revealed that against the requirement of eight watch towers, only four watch towers were available till

March 2018 while four other watch towers were provided in the form of huts, which did not meet BCAS specifications.



Charts 1.2: Status of perimeter lights and watch towers at airside of airports

As can be seen from the table and figures, there was no major shortfall in the provision of security infrastructure/equipment at the perimeter area of airport except shortage of watch tower at Airport-3 and of perimeter road at Airport-5.

The Management stated (December 2018) that remaining four watch towers could not be constructed due to NOC issue, i.e. in-sufficient distance from the basic strip. However, in place of four watch towers, four huts have been provided, and also land acquisition is in process for the said work.

While the Management has extended a factual reply, the fact remains that non-availability of watch towers, as per the standards specified by BCAS, adversely affects the effectiveness of perimeter security at airport. Further, the Management should initiate all required steps to expedite the construction of watch towers as per standards, in order to avoid all possible security breaches in perimeter security.

(ii) Perimeter Intrusion Detection System

Perimeter Intrusion Detection System (PIDS) aims to deter, detect, assess and track potential or actual breaches of the perimeter in a proactive manner. They also enhance the efficiency of security personnel in responding to security breaches and so provide a high level of protection for persons and property within the secured areas of an airport. Being a technology-based solution, other advantages through reduction in the requirement of manpower may also accrue.

In July 2006, BCAS had directed AAI to take immediate necessary action to install PIDS at all hyper-sensitive airports and also specified that the installation should be at Airport-6, Airport-7, Airport-8, Airport-9, Airport-10 and Airport-11 in the first phase. Subsequently, specifications for the PIDS were issued by BCAS on 14 February 2007.

Audit observed that despite the BCAS directions, no immediate steps were found on record to install PIDS at hypersensitive airports. After a lapse of almost two years, AAI

decided (April 2009) to install PIDS at eight³⁶ hyper-sensitive airports and constituted a team for site survey at selected airports. Nonetheless, till date, after more than 11 years of the initial decision, PIDS has not been installed at any of the selected airports.

Audit review revealed that, in the mean-time, the issue of PIDS continued with examination of alternative solutions as well. For instance, during the meeting of Committee of Secretaries held in April 2011, BCAS suggested for introducing a technology driven Radio Frequency (RF)/ buried cable in technique and CCTV to detect intrusion. However, it was stated that success of such technology based solutions has not been proven and the option of installing PIDS would entail financial resource of about ₹15 crore per airport, and the experience of JV airports is not encouraging. However, at Airport-10, a high voltage Direct Current (DC) based technique is used very effectively, but there are regulations with such DC current which have to be resolved in case this solution is to be used. Accordingly, after detailed discussion, it was decided that MoCA would pursue the technology-driven solution for detection of intrusion at the perimeter with DRDO and finalise a suitable mechanism to be introduced as soon as possible. Thereafter, AAI deliberated upon this issue but considering the prohibitive cost of the system and reports of other airport operators, the Secretary (CA) decided (May 2011) that AAI may hire an international expert on the subject to carry out a study and submit a report within six months. Though audit requisitioned the relevant report and correspondence, AAI stated (October 2018) that no report/information in this regard was available at the Security Directorate. As a result, the same could not be reviewed in audit.

Subsequently, the Advisory Committee for Civil Aviation Security decided (September 2013) that the technical specification committee of BCAS in consultation with DRDO would explore a cheaper technology solution to make this equipment cost effective. It was also advised that PIDS be installed at all metro airports within 18 months and BCAS would draw-up the modalities for the same. However, the outcome of this decision taken by the aforesaid committee was neither found on record nor any reply provided.

Recently, considering the advances in technological innovation, changed scenario and increased threat perception, BCAS replaced (April 2017) its earlier specification of PIDS given in February 2007 and suggested upgraded technologies of PIDS which were to be integrated along with CCTV System. Accordingly, in a meeting held on 2 January 2018, it was decided to install PIDS at Airport-8, Airport-11 and Airport-17.

The Management stated (December 2018) that BCAS and CISF had raised concerns over the false alarms generated by PIDS installed at Airport-6 and Airport-7 due to which reduction of manpower could not be implemented. Further, Airport-10 had installed PIDS but as the same was a green field airport and no watch tower was available since beginning; reduction of manpower with installation of PIDS could not be ascertained. In a meeting convened by BCAS in December 2013, AAI was requested to coordinate with Airport-18 to develop specification for suitable technologies and report of the same was to be submitted by January 2014. As regards installation of PIDS at metro airports, i.e., Airport-8 and Airport-11, which were proposed to be managed through PPP, it was decided to install PIDS at airport other than the airports where RFQ have been issued. It

³⁶ *Eight selected airport – Airport-1, Airport-12, Airport-13, Airport-14, Airport-11, Airport-15, Airport-8 & Airport-16*

was also stated that the technical specification issued in 2007 did not meet the requirement either at Airport-6 or Airport-7 which prompted BCAS to go for revised specifications with latest technologies which was issued only in 2017. AAI has now published Expression of Interest for installation of PIDS at Airport-8, Airport-11 and Airport-17. As far as saving of manpower *viz-a-viz* the PIDS installation can only be ascertained once PIDS is fully functional at any of the airport to the satisfaction of CISF and BCAS so that the manpower reduction can be implemented. It was also stated that tried and tested measure are in place at all airports, like watch towers, perimeter wall with concertina coil and perimeter road and perimeter light.

In audit opinion, given that AAI Management had decided as early as April 2009 to install PIDS at eight airports and in October 2013 to install PIDS at airports other than airports selected for PPP, it should have taken decisive action to implement the same. In fact, AAI had committed to provide electronic intrusion detection system at Airport-1 and Airport-3 in its approved Airport Security Programme (ASP) and non-compliance with the provisions of the approved ASP would be a serious breach of security provisions because the ASP is a series of inter-linked measures and dependencies. Further, BCAS had, time and again (July 2006 and September 2013) given target dates to install PIDS at hyper-sensitive and metro airports. However, AAI neither complied with the directions given by BCAS nor took exemption from BCAS for installing PIDS at airports.

(iii) Unauthorised use of fire crackers for bird scaring and non-installation of electronically/mechanically operated bird scaring devices

Airborne birds or animals on runways pose a serious risk to human lives and the aviation industry³⁷. Generally, different techniques to scare away birds include use of crackers, shooters with double-barrel guns, pyrotechnic lights and gas-operated bird scaring devices.

In the backdrop of detection of explosive material on-board airlines, BCAS decided (18 June 2010) that usage of sharp-shooters with shot-guns/12 bore guns would not be allowed in the airside with immediate effect. It was also directed to install electrically/mechanically operated bird scaring devices which did not contain any explosive materials at all the airports by 31 July 2010. Further, the current stock of crackers and ammunition at the airports was to be completely exhausted and confirmation be given by 31 July 2010. Accordingly, AAI decided (July 2010) to follow BCAS mandate and most suitable equipment would be procured by concerned regional offices/airports.

In August 2010, while revising the timeline for installation to 31 October 2010, BCAS suggested alternative technologies like sound waves, non-lethal weapon system and electronically operated disabling devices to be installed as bird scaring devices.

Audit noticed that despite lapse of more than seven years and even prohibition by BCAS, Airport-4 and Airport-5 continued to use fire crackers and zone gun for bird scaring in

³⁷ According to Report on Annual Safety Review 2017 of DGCA, during the period of 2013-2016, reported bird strike per 10000 movements for 18 major airports in India was ranging between 3.16 and 4.92 whereas reported wildlife strike at all airports in India per day was between 1.97 and 2.3.

contravention of guidelines. Moreover, no exemption was on record from BCAS for continued use of fire crackers by these airports.

The Management stated (December 2018) that this is a safety issue dealt by Operation Department of AAI and bird scaring devices are procured and maintained by Airside Department at each airport. Further, fire crackers are being used as per SOP given in the BCAS circular 19/2010 and proper record is being maintained at Airport-4.

The reply only states facts of responsibility and offers no justification for acting in contravention of the most recent BCAS guideline according to which the installation of mechanised device in place of existing fire crackers system for bird scaring was to be completed by 31 October 2010. Given the instances of explosive material being found on board aircrafts, the issue is not merely an operational one but also one of security, for which BCAS has issued specific instructions. Further, the Management itself decided in July 2010 to install suitable equipment for bird scaring but the same could not be complied at above mentioned airports even till date. Therefore, adequate provision for mechanised bird scaring device must be ensured for avoiding any possible security breach at airports.

1.2.4.2 Landside area of airport: deficiencies in security measures noticed

The landside area mainly covers airport entry, parking, terminal building, etc.



Chart 1.3: Airport Terminal Building

AAI, as airport operator, is expected to implement various security measures in accordance with the risk assessment. In this regard, deficiencies noticed in audit are detailed below.

(i) Security equipment required for acting as obstacle to unauthorised/non-tracked vehicle entry at airport

BCAS recommended (14 February 2007) installation at airport specific security equipment for creating entry barriers, designed to stop vehicles from entering either by disabling the vehicle or creating a physical obstacle. These include Crash rated Electro-Hydraulic Bollard System, Crash rated Electro-Hydraulic Tyre Killer, Crash rated Electro-Hydraulic Road Blocker

AAI is responsible for ensuring that the required physical barrier and infrastructure at city side are available at each airport for the aviation security services and had even made

provision for bollards and tyre killers in its approved ASP³⁸. However, Audit found that despite lapse of more than 10 years, the aforesaid security equipment could not be installed at four out of five selected airports; i.e., Airport-1, Airport-3, Airport-4 and Airport-5. Moreover, no alternate arrangement was found at these airports to prevent unauthorised entry of non-armoured or non-tracked vehicles at the airport.

The Management stated (December 2018) that there was no mandate of BCAS in 2007 to install this equipment. Security vetting at these airports was recommended with alternative and cost-effective measures like zig-zag barricades, boom barriers on approach road and fixed Bollards available in front of the terminal building. Further, AAI has taken a decision to install Bollards/ Tyre Killers/ Road Blockers at all hyper sensitive airports and sensitive airports and in-principle approval for procurement has been given to all regional offices.

While Management has initiated action to procure the equipment, it is unlikely that the equipment will be installed before June 2019. As far as mandate of BCAS in 2007 is concerned, BCAS lays down the security standards required to be maintained at the civil airports and accordingly, BCAS in 2007 had directed to install this security equipment at airports. Therefore, the process of procuring and installing the required physical barrier and infrastructure at city side must be expedited.

(ii) Access control for employees

In the background of perceived threats to hurt India's economic growth and target vital installations of the nation, the Minister of State for Civil Aviation reviewed (12 July 2006) the security arrangement at all operational airports and directed that installation of gadgets for upgrading the security at airport needed immediate attention. One of these measures was the introduction of Bio-metric Access Control System (BAC system) at all operational airports in India. The BAC system would have significant advantages over the manual system like doors and access points would be released only to authorised personnel after they had been identified by the system and system would also be able to generate any level of information required on the personnel in the building at any given point of time. The system would also provide comprehensive historical data of all personnel who had visited the building and also the solution would have minimal manual operation for overall success.

Consequently, BCAS directed (26 July 2006) AAI to take necessary action to install BAC system at all airports in India as early as possible commencing with hyper-sensitive airports with immediate effect. Although specifications for the BAC system were to be communicated to all airport operators by BCAS within six weeks, the same were provided on 14 February 2007, i.e., after a period of around 28 weeks. No action was initiated by AAI to procure /install the systems and subsequently, BCAS modified the specification of the BAC system in February 2009.

BCAS constituted (13 June 2012) a committee under the Chairmanship of Joint COSCA³⁹, BCAS and comprising members from MoCA, IB⁴⁰, CISF, AAI and NIC to examine the

³⁸ *Airport-4 (February 2015), Airport-1 (October 2015), Airport-3 (October 2015) and Airport-5 (January 2018)*

³⁹ *Jt. COSCA: Jt. Commissioner of Security of Civil Aviation*

⁴⁰ *IB: Intelligence Bureau*

modalities of BAC system through Smart Card at Indian Airports. Based on the Committee's deliberations, BCAS finalised the technical specifications of the BAC system and replaced the earlier specification of AVSEC Circular No. 02/2007 with AVSEC circular dated 19 November 2013.

Audit noted that even though revised specifications were issued as late as 2013 and the urgency of this equipment had been realised by MOCA/ BCAS as early as 2006, AAI issued a purchase order only on 23 December 2016 for SITC⁴¹ of BAC system at 43 airports including Airport-1, Airport-2, Airport-3 and Airport-4 to M/s Broadcast Engineering Consultant India Ltd. (BECIL).

Further, the work of software of access control system was taken up by BCAS with the task of developing the software being given to Electronics Corporation of India Limited (ECIL). However, ECIL defaulted in completion of the project. As a result, although equipment was received at airports⁴², the same could not be made operational till date (March 2019).

The Management in its reply (October/December 2018) submitted various deliberations made by various stakeholders to decide modalities of the system, as a result of which the specifications given in 2007 were revised in November 2013. As per Management, based on the revised specification received from BCAS, AAI awarded the work in December 2016 for SITC of biometric access control system at 43 airports to BECIL, which was to be completed by June 2017. However, installation is in process and the same will be completed by December 2018. It was further stated that the work for corresponding central system of BAC system was taken up by BCAS through M/s ECIL and the system is expected to go-live on 31 December 2018.

The reply only repeats the facts without offering reasons for initial inaction and delay in installation of BAC system upto June 2012. Further, the same has not been operationalised till date. Thus, the installation of BAC system needs to be expedited so that risk of possible security breach at airport is reduced.

(iii) Pre-embarkation security check for passengers: shortages of screening equipment

Weapons, explosives, or any other dangerous devices, articles or substances, if concealed and taken into the airport or on-board an aircraft pose a serious threat and may be used to commit an act of unlawful interference. In order to prevent this, BCAS prescribed mandatory screening of persons, hand baggage, hold baggage, cargo, etc. through DFMD, HHMD, XBIS and ETD before embarkation.

An assessment carried out by AAI Management during April 2014 to June 2014, calculated the shortage of XBIS as 370; DFMD as 448; ETD as 182; and HHMD as 905.

Audit reviewed the requirement (June 2014) and actual availability of security equipment during the period March 2016 to March 2018 in respect of selected airports and noticed that the shortages had largely remained unaddressed.

⁴¹ *SITC – Supply, Installation, Testing and Commissioning*

⁴² *Airport-1, Airport-2, Airport-3 & Airport-4*

Table 1.6: Percentage shortfall of equipment

		Airport-1	Airport-2	Airport-3	Airport-4	Airport-5
XBIS	Jun-14 (R)	21	11	10	07	02
	Mar-16 (A)	09 (57%)	08 (27%)	04 (60%)	04 (43%)	00 (100%)
	Mar-18 (A)	19 (10%)	14 (-27%)	06 (40%)	07 (Nil %)	02 (Nil %)
DFMD	Jun-14 (R)	18	13	15	07	04
	Mar-16 (A)	07 (61%)	09 (31%)	06 (60%)	02 (71%)	00 (100%)
	Mar-18 (A)	18 (Nil %)	16 (-23%)	08 (47%)	07 (Nil %)	03 (25%)
HHMD	Jun-14 (R)	62	19	37	24	10
	Mar-16 (A)	62 (Nil %)	31 (-63%)	18 (51%)	11 (54%)	00 (100%)
	Mar-18 (A)	50 (19%)	53 (-179%)	35 (5%)	30 (-25%)	02 (80%)
ETD	Jun-14 (R)	08	04	04	04	01
	Mar-16 (A)	03 (63%)	03 (25%)	02 (50%)	03 (25%)	00 (100%)
	Mar-18 (A)	08 (Nil %)	04 (Nil %)	04 (Nil %)	03 (25%)	01 (Nil %)

*Note – R – Requirement; A – Available and shortage in percentage shown in bracket
Requirement of security equipment was assessed by AAI in June 2014*



Chart 1.4: Availability of equipment at selected airports

As can be seen from the figures, the availability position since assessment was deficient for two out of the three years during the year 2015-16 to 2016-17 and reached the desired level only in the year 2017-18.

However, minor shortages in availability of XBIS, DFMD, ETD and HHMD continued at airports even as on 31 March 2018. In the case of Airport-5, the initial provisioning itself was done in the last year.



Audit also observed sub optimal use of equipment in two out of five airports in respect of XBIS equipment. In the case of Airport-4, although X-BIS was provided in November 2017 the same could not be installed due to space constraints and was lying un-utilised at the airport (October 2018). Similarly, at Airport-3, the new X-BIS machine was installed (November 2017) at the entry point but the same was not being utilised due to non-availability of trained CISF personnel (October 2018). Consequently, mandatory provision of random screening could not be complied at Airport-3 and Airport-4 for the period since August 2011 to March 2018.

The Management stated (December 2018) that the tendering process is time consuming and many tenders were cancelled/recalled due to various reasons leading to delay in procurement.

While Audit acknowledges that the procurement process may get delayed, however, given the criticality of the equipment, the sensitive nature of the airports, and the fact that it is the responsibility of the Management to ensure prompt availability of adequate security equipment, the absence of the equipment for such extended periods points towards poor planning and casual attitude. In fact, BCAS had highlighted the acute shortage of equipment in their audit (January 2017), which would also result in congestion and discomfort to the passengers due to long queues and more time taken for pre-embarkation checks at the airport. Further, as there were shortages in the available number of security personnel as highlighted in para no. 1.2.4.5(i), shortages in security equipment would adversely impact level of airport security. Therefore, adequate provision of required security equipment needs to be ensured for avoiding any possible security breach at the airport.

The Management accepted (October 2018) the fact that random screening could not be done due to space constraint at Airport-4 and non-availability of manpower at Airport-3.

1.2.4.3 Surveillance at airside and landside area of airport

Surveillance through Closed Circuit Television (CCTV) system is required to ensure effective surveillance of an area as well as to create a tamper-proof record for post-event analysis. In November 2003, BCAS directed AAI to install CCTVs at all hyper-sensitive and sensitive airports in the country covering passenger terminal, apron, cargo complex and car parking etc. This was re-iterated in a meeting taken by the Minister of State for Civil Aviation on 12 July 2006 wherein it was suggested that CCTVs, which are useful for both surveillance and detection, should be available at all operational airports and must be provided at all hyper-sensitive airports within six months as first phase of the programme.

Accordingly, BCAS provided specifications in respect of Surveillance CCTV System on 14 February 2007, which were reviewed⁴³ from time to time considering the security requirements. It was observed that by and large requirements, in terms of numbers, were met. However, at Airport-3, there was a shortage of 24 cameras against the requirement assessed (January 2017) by the security agency deployed at airport.

Bureau of Civil Aviation Security had communicated (February 2007) important areas for coverage purposes by surveillance CCTV and reiterated the same in April 2017. These areas included (i) complete perimeter, (ii) vital installation (ATC, Fuel Installation, etc.) and (iii) isolation bays. However, it was noticed that these areas were not covered at four airports⁴⁴ out of five airports audited, except coverage of ATC at Airport-1 and Airport-5. Cargo complex at Airport-2 was not covered under CCTV surveillance.

Further, BCAS directions provided protocol for the working procedures, back-up requirements etc. Audit review of compliance of these directions at selected airports revealed that though BCAS had advised (25 November 2003 and 4 August 2011) that the recordings of the CCTV system be kept for a minimum period of 30 days, in case of Airport-3 and Airport-4, the recordings were kept only for 20 days.

Further, in order to strengthen security from the city side of airports, BCAS directed (02 February 2011 and 5 April 2017) that photographs of the drivers and registration number of vehicles should be recorded and CCTV cameras should be installed in vehicle parking areas immediately. However, Audit found that there was no mechanism, through CCTV technology, for taking the photograph of drivers and recording the registration number of the vehicles entering the airport at four⁴⁵ out of five airports. Further, as far as CCTV coverage of parking area is concerned, separate cameras were not installed exclusively for parking area at Airport-4 and Airport-5; instead coverage was being done from the camera installed at the terminal building.

The Management stated (September 2018 and December 2018) that:

⁴³ *Requirements of CCTV reviewed on 2 February 2011, 4 August 2011 and 5 April 2017*

⁴⁴ *Airport-1, Airport-3, Airport-4 and Airport-5*

⁴⁵ *Airport-1, Airport-3, Airport-4 and Airport-5*

- In respect of Airport-2, the provision of camera for coverage of cargo complex is under progress.
- In respect of Airport-5, CCTV installation was completed in February and March 2018 and setup of CCTV cameras at Airport-5 was done as best could have been done with limited cameras. It was further submitted that there is no isolation bay and no perimeter road.
- In respect of Airport-3, Management accepted the audit observation and has already initiated the procurement of CCTV cameras.
- At Airport-1, process started for operation of cameras for photo recording of driver and vehicle at entry and exit gates.
- In respect of Airport-4, it was stated that due to non-availability of compatible hard disk drive with the existing system, 30 days recording was not available. However, recording time for 10 cameras has been increased to 30 days, while the process for other cameras is in progress. It was also stated that camera installed at departure gate and terminal building cover the parking area and installation of camera on ATC building is in process which will also cover the isolation bay.

The Management accepted the audit observations and has initiated action in most cases. It may be ensured that the final outcomes are strictly in conformity with BCAS directions.

1.2.4.4 Non-availability of BDDS equipment

On the basis of discussion held at MoCA on 12 July 2006, BCAS directed AAI and CISF to work out requirement of staff and equipment to raise Bomb Detection and Disposal Squads (BDDS) at all hyper-sensitive airports and send a comprehensive proposal latest by 31 August 2006 to BCAS for approval. While AAI took no action initially, CISF submitted (26 September 2006) the manpower requirement and required list of BDDS equipment (total 22 equipments) to BCAS. Accordingly, BCAS approved (August 2007) the required strength of 117 CISF personnel for BDDS units at all hyper-sensitive airports and also requested the MoCA to take up the matter with Ministry of Home Affairs (MHA) to sanction the establishment of BDDS as per the requirement of CISF. BCAS also directed (August 2007) AAI and other Airport Operators to procure the equipment for establishment of BDDS at airports. Later, CISF requested (20 March 2008), AAI to procure the bomb disposal and detection equipment for establishment of BDDS at all hypersensitive airport. However, AAI in May 2008 informed MoCA that no specification for equipment had been indicated either by CISF or BCAS and requested MoCA to provide guidelines/instruction in this regard. Nonetheless, AAI started the process by provisioning the budget for the procurement of BDDS equipment in December 2008. Eventually, specifications of 18 equipment were provided in August 2010; in respect of six equipment specifications provided earlier in December 2004 and February 2007 were available; and specifications for balance equipment were provided in November 2011.

Accordingly, AAI decided (July 2010) to initiate the procurement process for 28⁴⁶ BDDS equipment and establishment of BDDS. Further, MoCA decided (April 2011) that this would be implemented in 18 airports during first phase and gave target date of December 2011 to procure BDDS equipment for 18 hypersensitive and international airports operated by AAI.

Audit noted that AAI had been very slow in establishing the BDDS. The initial directions were given in July 2006 and even as per the revised target dates, the first phase was to be completed by December 2011 but despite lapse of considerable time of more than 12 years, 2 out of 28 BDDS equipment could not be provided even at airports selected for first phase. Further, there was inordinate delay of more than 13 years in respect of procurement of the Explosive Vapour Detector (EVD) for which the specification was provided by BCAS as early as December 2004 but procurement was completed only in October 2018. Similarly, procurement of balance two BDDS equipment is still (December 2018) under process.

It was further noticed that one of the BDDS equipment, i.e., Non-Linear Junction Detector (NLJD) was lying non-functional since 2013 at Airport-2, which was sent to OEM for repair but the same was not received till June 2018. In case of Airport-1 also, the same was non-functional.

In principle, the BDDS equipment was to be provided in the first phase for 18 airports, which were either hyper-sensitive or providing international operations. However, Audit observed that as on date (March 2018) eight⁴⁷ more airports were either under hyper-sensitive category or providing international operations, but no action/ decision was found on record for providing BDDS equipment at these airports (March 2018).

As a result, the bomb disposal and detection squad could not be fully operational at all airports as mandated by the BCAS.

The Management stated (December 2018) that delay in procurement was due to various reasons like limited availability of vendors, repeated failure of offered equipment during technical evaluation, resultant single tender situations, revision of specification for equipment like Bomb suite and EVD etc. Also based on request from AAI regarding huge financial implication of procurement of all 28 equipment for all airports, BCAS prioritised this equipment vide AVSEC Circular 13/2017 dated 20 October 2017 and 13 no. of equipment were mandated as Priority-I for activation of BDDS team at any airport. It was further stated that after successful procurement of Priority-I equipment, AAI has already initiated tenders process for 10 out of 13 Priority-I BDDS equipment as on date for all remaining airports including the mentioned airports. It was further submitted that the NLJD was beyond repair and the same is being replaced in the tender currently under progress.

⁴⁶ *BCAS initially (September 2010) provided list of 29 no. of BDDS equipment, whereas in August 2011, the Technical Specification Committee decided that one equipment, i.e., Telescopic Metal Detector is not useful in the airport environment. As a result, there are 28 no. of BDDS equipment.*

⁴⁷ *Hypersensitive – Airport-19, Airport-20 & Airport-21 and International Operations - Airport-22, Airport-23, Airport-24, Airport-25 and Airport-26*

Audit appreciates the difficulties arising from the huge financial implications, however, the reasons for delay submitted by the Management are procedural only and could have been addressed through appropriate mechanism in a timely manner. Though CISF provided the list of 22 equipment in September 2006 and specification for six equipment were available since February 2007, the Management did not take any concrete action to procure the equipment and only made budgetary provision by 2008. Further, though the procurement process commenced belatedly in July 2010, it has not been completed till date and two equipments are still to be procured.

1.2.4.5 Non-compliance of directions for deployment of security personnel

Till January 2000, security functions at all the airports in the country used to be performed by the police personnel requisitioned from State Governments. In the backdrop of security threats, GoI decided that in order to bring in uniformity of practices and procedures and also to have effective control and supervision by the MoCA, airport security would be entrusted to the CISF at all civil operational airports in the country. Pursuant to this decision, induction of CISF for airport security was to be commenced and completed in a phased manner. As of March 2018, over 15 years since the process began, out of 97 operational airports, CISF is deployed at only 53 airports.

(i) Shortage in deployment of security personnel

BCAS vide its orders dated 6 March 2002 forwarded the SOP, duly approved by MoCA, for the Aviation Security Group (ASG) of the CISF to AAI. The SOP stipulates that deployment of CISF personnel at civil airports would be in accordance with the norms drawn by BCAS in consultation with CISF and Airport Operator.

The objective of induction of CISF was to provide a standardised level of security for civil aviation operations in accordance with the norms of the ICAO and NCASP⁴⁸. Besides, since professionally competent and passenger compatible aviation security would be provided with a service provider's approach, it was expected that smooth functioning and harmonious relationship among all agencies would be facilitated at the airports.

As on March 2018, the position of sanctioned *vis-a-vis* actual deployment of security personnel at airports selected in audit is given below.

Table 1.7: Statement showing status of required and actual manpower

Airport	March 2018		October 2018	
	Required manpower	Actual manpower	Required manpower	Actual manpower
Airport-1	614	557	614	602
Airport-2*	149	212	149	201
Airport-3	255	181	255	243
Airport-4	204	168	204	168
Airport-5*	74	55	74	36

* State Police deployed at Airport-2 and Airport-5

⁴⁸ NCASP: National Civil Aviation Security Programme



Chart 1.5: Percentage shortfall in deployment of CISF

As can be seen from the table and figure, the position of deployment was in excess at Airport-2. However, in all other cases, there was shortfall ranging from 9 per cent to 29 per cent in March 2018. The situation improved at Airport-1 and Airport-3 by October 2018, nonetheless, shortages remained at all four airports ranging from 2 per cent to 51 per cent.

The Management stated (October/December 2018) in respect of Airport-2 and also keeping enhanced threat (on the basis of intelligence input), they deployed excess number of police personnel but the billing is done only for 149 personnel.

(ii) Deployment of inadequate trained security personnel

Frisking and screening is a key function to detect any unlawful interference for the purpose of securing the aerodrome operations. In line with the SOP, BCAS has given (13 January 2011) instructions that authorised and suitably trained and equipped armed personnel of CISF, NSG and concerned State/UT Police, as the case may be, should be readily available for deployment at the civil airports in India to assist in dealing with suspected or actual cases of unlawful interference with civil aviation; and all the personnel involved in the implementation of preventive security measures should be knowledgeable of the requisite procedures to be followed and the chain of command and communication in an emergency situation. In fact, BCAS has issued repeated instructions⁴⁹ to deploy only trained and certified officers for screening at airports and for securing the safety of aircraft operations. Some of the important SOP provisions for training of personnel include:

Clause 3.4	CISF personnel who would be deployed would focus at the designated airport well in advance and undergo the required training programme to be organised by the BCAS.
Clause 3.4.9	After giving training to CISF officers in frisking and x-ray screening and related subjects, a test of the CISF officials would be conducted by BCAS and those who pass the test would be given a certificate/rating for frisking/x-ray screening and only rated personnel should be allowed to perform frisking of passengers and x- ray screening of hand baggage.
Clause 6.4.2	To improve professional competence, the staff of the ASG should be put through regular training and tests; and, those who do not maintain the minimum prescribed standards should be posted out with a suitable replacement provided.

⁴⁹ BCAS instructions on deployment of trained security personnel– 13 June 2005, 28 August 2006, 5 January 2011 and 13 January 2011.

Chart 1.6: Actual strength vis-a-vis AVSEC qualified personnel



Thus, as per the requirement of BCAS, the Airport Director would be security coordinator at the airport and would be responsible for coordinating the implementation of security measures in accordance with the legal provisions and instructions issued by BCAS from time to time. The security coordinator would, in turn, designate a Chief Security Officer (CSO) who would be responsible for establishing a process for resolution of deficiencies or concerns identified in the security task delegated to the Airport Operator and other entities at the airport level. CSO would encompass all security controls at the airport level for which security coordinator was responsible. As per the requirement of BCAS, CSO should be Aviation security (AVSEC) trained/ certified, however, as intimated by the Airport-4 and Airport-5, the CSO posted was not AVSEC trained/certified.

Moreover, only AVSEC qualified security personnel are to be deployed for airport security but audit scrutiny revealed that there were huge deficiencies in the deployment of AVSEC qualified security personnel. In terms of percentages, shortage at, Airport-1 was 61 per cent, Airport-2 - 95 per cent, Airport-3 - 60 per cent Airport-4 - 61 per cent and Airport-5 - 100 per cent.

Further, the validity of the X-Ray screener certification was for two years from the date of successful passing the initial examination. Before the expiry of two years' period, a candidate would have to appear and clear the certification test for re-validation of the screener certificate. Review of records, as on March 2018, revealed deficiencies in availability of certified screeners as per the requirement of BCAS, shown in table below.

Table 1.8: Status of screeners deployed and trained

Airport	Total screeners	Certified screeners	Screeners certificate valid as on 31 March 2018	Screeners certificate expiry range
Airport-1	110	109	51	59 (required date for revalidation not provided by Airport-1 airport)
Airport-2*	04	Nil	Nil	NA
Airport-3	40	40	12	August 2007 to January 2018
Airport-4	28	25	18	April 2012 to March 2018
Airport-5*	Nil	Nil	Nil	NA

*State Police deployed at Airport-2 and Airport-5

Audit observed that no certified screeners were deployed at Airport-2 and Airport-5. In case of Airport-1, Airport-3 and Airport-4 only 47 *per cent*, 30 *per cent* and 72 *per cent* screeners, whose certificate was valid as on March 2018 were deployed for screening.

Further, on review of record it was noticed that while conducting dummy check by BCAS in the month of April 2017 at one airport, it was found that at three check points established at the airport for screening/frisking, screeners/friskers failed to detect the prohibited item.

The Management stated (December 2018) that BCAS had issued instructions to deploy only trained and certified officers for screening at airports and also for the purpose of securing the safety of aircraft operation. The screeners deployed at pre-embarkation Security check are from CISF and they have full-fledged ASTI (Aviation Security Training Institute) for CISF persons. Further, as on 01 October 2018, there are 22 qualified screeners at Airport-3.

The Management reply is not acceptable as noticed at airport compliance of training requirement was not fulfilled at all airports and deficiency at Airport-2 and Airport-5 on account of certified screeners were 100 *per cent*. Further, Airport Operator is also responsible to ensure compliance of guidelines issued by BCAS for deployment of trained security personnel and should take up such issue with concerned agencies for imparting requisite trainings so as to comply with the directions of BCAS. Therefore, availability of adequate number and of adequately trained security personnel should be ensured to strengthen the airport security.

1.2.4.6 Improper maintenance of online data of security equipment and infrastructure in Airport Information Management System (AIMS)

In the background of non-existence of regular reporting system of security equipment and infrastructure in Directorate of Security, it was decided (May 2016) to introduce a Security Equipment and Infrastructure portal in AIMS. Access to the same was provided by Directorate of Security vide its letter dated 31 May 2016 to all RCSO and CSO at the airport level for regular feeding and updating the data of security equipment and infrastructure.

While ascertaining the status of updation of the data at Airport-1, Airport-2, Airport-4 and Airport-5, audit was intimated that the user ID and password for AIMS required to update information is not available at the Station level. It was also noticed that available information in the portal is not matching with the available security equipment (old and new) at the station level.

Thus, the purpose of establishing an online system to monitor the status of available security equipment and infrastructure and also to ascertain shortages against requirement as mandated by concerned authorities so as to avoid any security hazard, has been defeated due to non-updating of the data regularly.

The Management stated (December 2018) that all RCSO and CSO of all airports have been instructed to maintain the online data of security equipment and infrastructure in AIMS. It was further stated that out of 40 airports the data has been updated at 18 airports,

which includes 4 airports pointed out by audit and in respect of the balance 22 airports (including Airport-5), the updation is in progress.

1.2.5 Conclusion

AAI has been slow in procuring and installing security equipment/technology as mandated/recommended by BCAS for enhancing the efficiency of security personnel in responding to security breaches and also provide a high level of protection to persons and property at the airport. Delays were noticed in assessment and procurement of major security equipment required for security check. Despite lapse of considerable time, some of the security equipment/technology are yet to be procured/ installed at selected airports. Non-availability of adequately trained security personnel and cases of un-qualified screeners deployed at airport were also noticed. An online system established for monitoring availability of security equipment could not be utilised optimally, which is essential to monitor the adequacy and efficiency of security equipment at airport level.

The matter was referred to the Ministry in December 2018; their response was awaited (May 2019).

1.3 Information Technology Audit of SAP ERP

1.3.1 Introduction

AAI was constituted under an Act of Parliament and came into existence on 1 April 1995 by merging the erstwhile National Airports Authority and the International Airports Authority of India, with the responsibility of creating, upgrading, maintenance and managing civil aviation infrastructure both on the ground and in the air space in the country.

AAI manages 137 airports, which include International Airports, Customs Airports, Domestic Airports, airports operated through Joint Ventures and Civil Enclaves at Defense airfields. Main Services of AAI include providing Passenger Facilities, Air Navigation Services, Security, Aerodrome Facilities etc.

1.3.2 Organisation Structure of Information Technology Directorate

Information Technology (IT) Directorate is headed by Executive Director, who is overall in-charge of all activities pertaining to IT. He reports to Member (Operations). Day to day activities of IT Directorate are handled by General Managers who are further assisted by Joint General Manager, Dy. General Managers, Asst. General Manager and others Sr. Managers of the directorate.

1.3.3 SAP ERP in AAI

AAI was using Integrated Financial and Personnel Information Management System (IFPIMS) developed (for Finance and HR) by M/s RAMCO since 2007. As IFPIMS was unable to meet the changed requirements of AAI and was working only partially, hence, a decision was taken to pre-close the same in March 2012. Consequently, SAP Enterprise Resource Planning (ERP) with R/3 architecture was implemented in the AAI in

March 2013 through System Integrator (SI), M/s KPIT Cummins Infosystems Ltd (June 2012⁵⁰), at a total cost of ₹16.07 crore. The application went live from 1 April 2013. M/s KPIT Cummins Infosystems Ltd. provided the technical support of SAP/ERP including the core functionalities of 'Human Resource Management (HRM)', 'Finance', 'Material Management (MM)' and 'Project System (PS)' from September 2013 to August 2014, the period was extended upto October 2015. However, later on, AAI decided to take direct services from M/S SAP India for quick resolution of issues which commenced from December 2015 for three years at a cost of ₹8.18 crore (including support for SAP SRM e-taps⁵¹). In addition to this, AAI has been incurring revenue expenditure at the rate of 22 *per cent* of the cost licenses of SAP per annum. There are 1312 professional SAP users licenses in AAI. In addition, there are 17,610 employees' self-service user licenses of SAP/ERP.

1.3.4 Functional Modules of SAP ERP in AAI

Following four modules were implemented in AAI:

- **Financial Accounting and Controlling Module (FICO).** It collects and stores the financial transactions data. FICO basically contains various sub-modules *viz.* General Ledger, Accounts Receivable, Accounts Payable, Asset Accounting, Banking, Cash and Bank Accounting, etc being used in AAI.
- **Human Resource Management Module (HR):** HR Module manages employee data for personnel and administration, payroll, employee self-service, time and leave management. All aspects from training to appraisal are covered in this module.
- **Material Management Module (MM):** This helps to manage the procurement activity of an organisation from procurement to payment. It supports all aspects of material management *viz.* material resource planning, inventory management, purchasing and maintenance of master data of vendors.
- **Project System Module (PS):** PS Module helps to manage project works of an organisation. It includes project planning budgeting, project implementation and completion.

1.3.5 Scope of Audit

Audit examined the records relating to implementation of SAP/ERP with respect to envisioned objectives of AAI with desired benefits and their achievement. Audit also covered the customisation and functioning of FICO, HRM, MM, and PS Modules and their Sub-Modules in SAP/ERP at the Head Office of AAI. For the purpose of data analysis, data for one year i.e for Financial Year 2016-17 was used alongwith samples of data.

⁵⁰ *Date of agreement : 4.6.2012*

⁵¹ *SAP E-Procurement application used earlier in AAI.*

1.3.6 Audit Objectives

Audit was conducted with the objective to ascertain whether:

- i. Business processes were sufficiently re-engineered to incorporate rules, regulations and procedures of the AAI and to achieve the organisational objectives.
- ii. IT controls; general and application, are in place to ensure:
 - a) that there exists a well-defined and documented IT Security policy/rules to ensure management and control of physical and environment security, business continuity, incident reporting, Backup, Restoration, log, password etc.
 - b) availability of accurate, reliable and complete information/data; and
- iii. Performance of the service provider have been effectively monitored.

1.3.7 Audit Criteria

Audit criteria for assessing the achievement of audit objectives were derived from:

- i. Directives, instructions policies, rules or procedures laid down by MoCA/Govt. of India in connection with IT and Agenda and Minutes of meetings of the Board of Directors and Delegation of Powers.
- ii. Agreements with the Service Providers and System Developers
- iii. End User Requirement Specifications and Business blue prints of various modules for implementation.
- iv. Users Manuals.
- v. Best practices in IT.

1.3.8 Audit Methodology

Methodology adopted for achieving audit objectives with reference to audit criteria was:-

- i. Review of Agenda and Minutes of meetings of the Board of Directors and Directive/circulars, instruction orders issued by the Management.
- ii. Review of examination of agreements with Service Providers.
- iii. Review of Business Blue Prints and user manuals.
- iv. Review of general and application controls.
- v. Review of MIS reports, logs reports and audit trails and analysis of exception reports/incident reports.
- vi. Analysis of the data from application.

1.3.9 Audit Findings

1.3.9.1 System Planning, Acquisition and Implementation

AAI entered into an agreement with M/s KPIT Cummins Infosystems Ltd (KPIT) on 4 June 2012 for "Implementation of SAP ERP solutions" at a cost of ₹16.07 crore with a further fixed cost of 22 *per cent* on licenses procured. The basic objective of the project was to integrate the functions and locations of AAI leading to standardisation of processes and to achieve transparency in working at the airport. The delivery period for the total project was nine months from the date of award. The project was to be completed in two phases which included stages of project preparation, business blueprint, realisation phase, final preparation, post Go-live support. Go-live of all the modules (i.e. FICO, MM, PS and HCM Module) were declared from 1 April 2013. Following deficiencies were observed relating to planning, acquisition and implementation of the project:

(i) Inadequate market assessment and absence of cost benefit analysis

In May 2011, Chairman, AAI, directed a team of senior executives to visit public enterprises wherein HR and Finance Modules of SAP was implemented to seek information regarding functionality of SAP. The team visited ONGC and recommended that as SAP ERP system is working satisfactorily at ONGC since 2004, a similar system needs to be implemented in AAI so as to have a uniform procedures and working across the organisation. Thus, despite availability of other ERP solutions/applications in the market, these were not assessed or considered. Further, cost benefit analysis with other existing ERP packages was not undertaken before going in for implementing SAP ERP. SAP implementation agreement was entered into with M/s KPIT (previous Service Provider) at a cost of ₹16.07 crore. In addition to this, the average support and maintenance cost ranged from ₹3 crore approx. to ₹4 crore yearly. More competitive bids and services could have been obtained if other ERP packages were considered before implementation.

The Management in its reply (October 2018) stated that already a product from RAMCO system was being used in AAI but due to its limited functionality, management took the decision to go for SAP ERP software. The Management reply is not tenable as the fact remains that other similar softwares were not assessed nor a cost benefit analysis was undertaken which led to foregoing of more competitive bids and services.

(ii) Declaration of go-live status even before achieving online status in various sub-modules

SAP ERP project was declared Go-Live on 01 April 2013 despite non-availability of various modules/functionality *viz.* Performance Management System, Vigilance in Employee Self Service, Governance and Risk Control, E-Recruitment, which were developed as late as upto February 2014.

The functionalities were delayed due to:

- Non availability of Core Team Members (CTM) which could only be made available after a delay of three months from the planned date of 13 June 2012.

- Delay in providing ERP servers to KPIT although the tenders for procurement of servers for ERP was started in May 2012. However, the servers were made available to SI only in November 2012 due to non-finalisation of installation site.
- Master data was made available to System Integrator during March 2013 as against the stipulated date of 30 September 2012 and 14 January 2013 for Phase I and Phase II respectively.

Thus, due to delay in providing basic requirements by AAI to M/s KPIT, AAI could not enforce its right to impose penalty for above incomplete functionalities and resultantly waived a penalty of ₹0.29 crore leaving imposition of a penalty of ₹0.13 crore only.

The Management vide its reply (October 2018) stated that it was management decision to go live with available functionalities as on date and commission other functionalities progressively with the maturity of system and resolution of constraints.

The Management reply confirms the audit observation. Progressive development of these functionalities with maturity of system was not in line with the terms and conditions of the agreement.

(iii) Deficient agreement clauses

The following clauses of the agreement (June 2012) were found to be deficient to the extent as follows:

- As per clause 1.3.1 Airports Information Management System (AIMS)⁵² was to be integrated with SAP ERP to capture revenue information directly. However, the scope of work was restricted to upload Flat Files⁵³ generated through AIMS, which was accordingly provided by M/s KPIT. Due to deficient scope of work, seamless integration with AIMS had to be subsequently developed (03 January 2017) by M/S SAP India at an additional cost of ₹1.05 crore.
- As per Annexure VII of agreement and business blueprint, M/s KPIT was to provide Specific Minimum functionalities viz,
 - Interface with Bank portal for e-payment and bank reconciliation,
 - Depreciation area as per Income Tax Act. However, these functionalities were also not developed by M/s KPIT and were later provided by M/s SAP India Pvt. Ltd at a total cost of ₹1.63crore⁵⁴.

Although, M/s KPIT was providing its service to AAI upto October 2015, however, due to non-inclusion of specific penalty clause for non-completion of services, AAI could not impose adequate penalty on the service provider and had to bear an extra financial burden of ₹2.68 crore which was well within the scope of M/s KPIT.

⁵² AIMS- Application developed for maintaining data pertaining to operational activities of AAI.

⁵³ Excel File

⁵⁴ (₹104.14 lakh and ₹58.83 lakh for two functionalities respectively)

The Management vide its reply (October 2018) in respect of non-inclusion of seamless AIMS Integration has stated that Flat file upload was accepted since the integration servers were not available, later on when the servers were provided, the automatic interface was developed. Further, in respect of non-inclusion of penal clause, it has submitted that in our contract proportionate deduction clause is available if the default is on the part of vendor. In this case PI servers required for deploying bank interfaces were provided after the termination of contract with M/s KPIT.

The Management's reply is not tenable as integration servers were prerequisite of AIMS Integration and could have been envisaged while framing the contract clauses. Thus fact remains that requirements were not adequately assessed and were not included in the agreement.

Further, the Management reply in respect of non-inclusion of penal clause is also not tenable as the penalty imposed on the service provider was only for delay in completion of project. Non completion/incomplete development of application were not considered part of the penalty.

1.3.9.2 IT General Controls

General controls include control over data centre operations, system software acquisition and maintenance, access security, and application system development and maintenance. Following deficiencies were observed in General Controls applied in AAI.

(i) Non formulation of Business Continuity Plan

AAI formulated (October 2016) Business Continuity and Management Policy (BCMP) to ensure that well-defined and tested business continuity plan exists at AAI to enable timely resumption of its critical business processes, information, and information processing facilities and safeguard its personnel in the event of disasters, long term outages and disruptions due to security failures. However, audit observed, that no business continuity plan was formulated in AAI, even after a lapse of almost two years of formulation of BCMP and the incident of data loss in July 2014.

The Management vide its reply (July 2018) has accepted the audit observation and assured that process to formulate business continuity plan is in process along with setting up of disaster recovery site. The Management has further assured (November 2018) that recovery strategy and continuity strategy are being updated as AAI Data Recovery Centre will be available within next few months.

(ii) Non-maintenance of Disaster Recovery Site in AAI

A Disaster Recovery Site (DR) or work area recovery site is a location where an organisation can relocate its lost data following a disaster, such as fire, flood, terrorist threat or other disruptive event. Audit observed that even after five years of SAP/ERP implementation, AAI does not have a DR site to host a scale down version of the applications to meet any disaster or in case of non-functioning of the main data center which is being maintained at New Delhi. Non maintenance of DR poses a risk towards business continuity of AAI in the event of a disaster.

The Management vide its reply (November 2018) has accepted that audit observation and has assured that the process of tender for establishment of DR has already been set into motion and going through mandatory financial approvals, once those approvals are received tender will be floated shortly within next few days.

(iii) Non-compliance to minimum standard requirements in relation with maintenance of Data Centre

Department of IT, Government of India, Ministry of Communications and IT in January 2010, published “Guidelines for Implementation of Security Controls”. Point No. 10 pertaining to ‘Protection against other External and Environmental Threat’ of the said guidelines require that every Centre or State Government organisation should provide physical protection to their Information System against damage from temperature, flood, earthquake, explosion, civil unrest and other form of natural and man-made disaster. Location for Information processing facilities (DATA Centre) should be carefully planned to avoid damage from flood, water logging, rampage arising from civil unrest etc.

Audit observed that the ‘Data Centre’ of AAI hosting the SAP/ERP application located at the Ground Floor of Hangar⁵⁵ Building at Safdarjung airport was not flood resistant and being in hangar building may not withstand earthquakes. Further, though the Environment and Security Policy of AAI specifically provides for fire hazards, it did not provide guidelines on prevention from other natural hazards like floods and earthquakes.

The Management vide its reply (November 2018) accepted the audit observation and assured to take corrective action plan\ including observations from both internal & external audits (as a part of ISO 27001 processes). Additionally, Disaster Recovery Centre, which will be created in Hyderabad will be in first floor and hence the audit observations regarding flood will be adhered to.

(iv) Non-compliance to the provisions of IT Policies

The documented policies and procedures guide the overall IT environment of the Company, ensuring that the corresponding controls and enforcement mechanisms are in place. In AAI various IT policies were adopted only in October 2016 i.e after the incident of loss of SAP ERP data. Following issues of non-adherence to the provisions of policies were observed:

(a) Incident Management Policy

The Incident Management Policy (October 2016) of AAI defines formal systems and procedures for detecting and reporting incidents and corrective actions to be taken to contain the damage and avoid the recurrence of such events in future. The policy also provides for formation of various teams⁵⁶, to monitor all the activities related to IT. The teams were also required to categorise the occurrences as events and incidents and to report the same through a monthly report along with a Corrective and Preventive Action Plan (CAPA).

⁵⁵ A hangar is closed building structure used for protection from the weather, direct sunlight, maintenance, repair, manufacture, assemble and storage of aircraft on airfields.

⁵⁶ IT Helpdesk (Support team), Physical Security and Health & Safety Help Desk.

Audit observed that despite requirement of preparation of monthly report, only one CAPA report was prepared in October 2017. Review of the said 'status' report revealed that as against targeted completion date of 31 March 2018, out of 50 incidents⁵⁷ reported in the CAPA, status (upto June 2018) only five incidents were shown as closed, for 37 incidents the status was 'blank' and for eight 8 incidents it was 'still in progress'. The Management vide its reply (November 2018) informed that Incident Management Policy strict implementation and monitoring is currently underway. Further, corrective action plans are formulated and closed under management supervision.

(b) Password Policy

Password Policy (October 2016) of AAI requires that:

- The minimum length of the password shall be 8 characters. In case of system/ applications which do not allow this, the length should meet the maximum permissible limit. A document / list of such exceptions need to be maintained.
- User Password shall be a combination of alphabets (lowercase and uppercase), numeric and special character.
- User Password shall not contain their Names/DOB/Name of any family person.
- User Password shall not be a part or same as user name or user ids.
- User Password shall not be a dictionary word.
- Password shall expire after a maximum period of 90 calendar days. The authentication system should check for the expiration of this period and force the users to select a new password.

Audit observed that none of the above stipulations were mapped on the login of SAP ERP. Further, out of 17,633 users⁵⁸, 8,801 users did not change their passwords for more than five years (upto June 2018), 3,825 users had not changed their password since last 3-5 years, 570 users had not changed their passwords for last 2-3 years and 2,303 users had not changed their passwords for last 1-2 years. It is pertinent to mention that AAI had witnessed incident of database crash in July 2014 and one of the reasons for the said incident was not changing of default passwords. However, despite database crash, the password policy was not implemented.

The Management in its reply (November 2018) accepted the audit observation and stated that the policy rollout requires production downtime which got postponed and is expected to rollout before commencement of payroll activity for Nov 2018.

(c) Physical & Environmental Security Policy

Physical & Environmental Security Policy & Procedure of AAI (October 2016) require that Fire Safety and Evacuation Drill, Fire mock drills were to be practiced and

⁵⁷ *Major incidents with resolution time of one day-19 nos, Minor incidents with resolution time of upto one week-13 nos, Other incidents & Observations with resolution time of upto 03 weeks.-18 nos.*

⁵⁸ *All users into SAP/ERP excluding Deactivated users, Super, Test ESS users, Upload KPIT users, and blank users.*

documented as per the periodicity mentioned in the onsite emergency plan. However, no fire and evacuation drills have been conducted since formulation of this policy.

The Management in its reply (November 2018) accepted the audit observation and informed that AAI Fire Department was scheduling a fire drill shortly.

(v) Non-monitoring of resolution of incidents

The IT Service Management (ITSM) is a SAP application used in AAI for reporting and resolution of problems and incidents in SAP usage. It allows the end users to create/raise tickets for issues in usage and AAI Core Team Members to process/ resolve the issues with assistance of SAP team. Audit observed that the system was only partially used by the AAI and since its implementation in August 2017, only 73 incidents were reported upto June 2018 through ITSM as against an average issues/complaints of 8-12 per day which are raised through mail. Further, there were delay ranging from 1-209 days in resolution and closing of incidents reported through ISTM.

The Management vide its reply (June & November 2018) accepted the audit observation and assured that ISTM shall be utilised to its full potential.

(vi) Lapses in dealing with incident of crash of ERP database

On 19 July 2014, the disk volume information of the ERP system was deleted by an unknown identity through access to HP storage. After restoration of the system (November 2014), data upto 23 June 2014 could only be recovered and therefore, AAI had to re-build the data from 24 June 2014 to 19 July 2014. The rebuild work was completed by M/s KPIT along with technical support from M/s Stellar Information System Pvt. and M/s Symantec Software Solutions Limited at total cost of ₹2.79 crore. In this regard, following lapses in handling the whole incident, on part of AAI, were observed:-

- The factory default username and password were not changed at the time of installation of hardware, which was a basic requirement. Change in password could have prevented the intruder from gaining access to the system. Password policy was also not formulated by then.
- The last backup, before the incident of crash, was taken almost three months before the crash i.e. on 26 April 2014. Subsequently, no backup of database was taken out by the data centre. The backup policy was formulated by AAI in October 2016 i.e. after a period of two years from the incident. Had, the policy been formulated in time and regular back-ups taken at periodical intervals by AAI, the recovery of data could have been made without much delay. Further there was no Disaster Recovery Site which further delayed restoration.
- The incident was reported to the Board of Directors by the Management only during 162th Board Meeting held on 17 October 2014 i.e. after a delay of almost three months. The Board took a serious note on this delay and directed to fix the responsibility of concerned. The incident being critical in nature should have been apprised to the Board at the earliest appropriate time.

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- Absence of restriction on use of Team Viewer⁵⁹ software made the IT environment, including the database, more vulnerable and prone to such cyber-attack.

While accepting the audit observations, the Management in its reply (June 2018 & November 2018) informed that a committee was duly formed to investigate the matter but could not come out with a definite conclusion. The fact remains that due to failure to implement necessary controls, the AAI had to suffer data loss and rebuild the same at additional cost of ₹2.79 crore.

(vii) Error in generation of SAP default user report

a). Test check of 'User Information System' dashboard by providing criterion for list of user who have not logged on for one year revealed that list so generated contained records of users who have logged in within that period. Thus, due to programming error in SAP, erroneous reports were being generated.

b) Similarly out of 22,412 users records (existing as on 06 September 2018), in 3,727 user records, the last login time with corresponding last login date was not punched. Gaps in time stamping of the login activities points out system programming error/bugs and may result in serious security lapse.

The Management in its reply (November 2018) has accepted the above audit observation and has stated that error has to be resolved by SAP for which an official message has been raised to SAP for resolution.

(viii) Incomplete Vendor Master and Customer Master Database

An analysis of databases containing the Vendor Master and Customer Master revealed the following:

- Due to absence of validation check, out of the total number of 20,626 registered vendors (excluding employees) with AAI (as on 18 June 2018), the GST number for only 4,961 vendors were captured. Further, after implementation of GST, 753 vendors were registered during the period from 01 July 2017 to 31 March 2018 without any GST number. Similarly, out of 12230 registered customers with AAI as on 18 June 2018, GST number for only 3012 customers was captured. Vendors/customers not requiring GST registration were not separately identified. Thus, system did not made it mandatory to fill GST information and vendors and customers could easily get away without filling the GST information.
- Non-feeding of information like postal code, district name and in-correct feeding of postal codes like 111111/ 123456 and dummy PAN numbers like PAN1361 /PAN1385 were observed in both of the above databases. Further, there was no provision in both the databases for triggering/ segregating the blacklisted vendor/customers. Fields such as PAN number and complete address of the vendors and

⁵⁹ *Team Viewer is proprietary computer software for remote control, desktop sharing, online gaming, web conferencing and file transfer between computers over the internet browsers and is also available free of cost to non-commercial buyers.*

customers should have been made mandatory in order to ensure deduction of statutory liabilities and to keep a track of vendor/customer.

The Management in its reply (October 2018) informed that new customers/vendors are not permitted to be created in the system without GST number. The data of dummy PAN number and postal code in vendor/ customer master was being modified and updated to ensure that dummy numbers were not incorporated and provisions for segregating/triggering data of blocked customer and vendor are now available.

1.3.9.3 Application Controls

Application controls particular to an application and are used to provide assurance that all transactions are valid, authorised, complete and recorded.

(i) Financial Accounting and Controlling Module (FICO)

FICO module of SAP in AAI was implemented to collect and record data of all business transactions for preparation of Financial Statement in unified formats, duly integrated with other modules viz. MM, PS and HR on real time basis. Following deficiencies were observed in FICO module.

(a) Non mapping of accounting policies, inadequate input control and data validation

Audit observed that:

- As per the accounting policy for 'Trade receivables', debts more than two years old recoverable from parties other than Government departments are considered doubtful and provided for. However, due to non-mapping of the above mentioned policy, as against the eligible debtors of ₹116.53 crore in FY 2016-17, a provision of ₹155.01 crore was created, under Northern Region of AAI. Thus, non-mapping of controls led to creation of an excess provision of ₹38.48 crore against ineligible debtors, which was in violation of accounting policies.

The Management in its reply (September & November 2018) stated that users erroneously put the facilities for incorporation of bad & doubtful debts in case of disputed cases and the error was rectified in FY 2017-18.

- As per significant accounting policy of AAI for the year ended 31.03.2017 "Assets individually costing less than ₹5000 are charged off to Revenue Expenses". However, during FY 2016-17, 8506 assets (line item wise) were capitalised out of which in 83 cases the cost was less than ₹5000. Thus, due to improper validation checks, system allowed capitalisation of assets valuing less than ₹5000 which needs to be rectified in line with the accounting policy. Further, out of the above 8506 capitalisations, no narration/text was found to be fetched/entered by the system in 325 entries.

While accepting the audit observation, the Management stated (October 2018) that validation had been implemented for assets less than ₹5000 & accordingly no assets creation less than ₹5000 had been allowed to be capitalised in the system thereafter. The Management also stated that necessary validation for narration had been made mandatory

for assets related document type for the financial year 2018-19 onwards and the text also have been updated in records with blank text.

(b) Under-utilisation of functionality of SAP/ ERP

The following functionalities of SAP/ERP were not utilised/ under-utilised resulting in non-achieving the benefits of automation and reduced manual intervention.

- Though the functionality of uploading of supporting documents of Journal Vouchers/entries in FICO is available, the same was not being utilised in AAI.
- Cash flow statement, which is an integral part of the Company's Financial reporting requirement, is being generated in AAI by using excel utility and not by SAP/ERP.

While accepting the audit observations, the Management in its reply (September & November 2018) assured that as upload facility was a recent development, the usage would increase in the coming period & the Cash Flow statement Generation in SAP system was being developed and shall be available in Fiscal year 2018-19.

(ii) Human Resource Management Module

Human Resource module of SAP ERP in AAI was implemented to manage personnel administration, organisational management, payroll and time management. Following deficiencies were observed in HR module:

(a) Non mapping of HR Rules and absence of validation checks

- **Master Data:** As per the requirements of agreements entered into with M/s KPIT, the system was to maintain Master Data of employees including details such as employee number, name, educational qualifications, date of birth, date of joining etc. Master data having basic details of total 28,514 employees has 17,589 active employees, 25 inactive employees, and 10,900 withdrawn employees. Audit observed absence of validation check and lack of input controls as detailed below:
 - Out of 28,514 employees, the 'date of separation' was not fetched/populated by the system in case of 340 employees, despite availability of date of birth. Out of said data, the date of separation in respect of 'active employees' was not captured/populated by system for 19 cases. SAP, being fully automated and integrated, should be able to automatically calculate date of separation on the basis of date of birth/joining of the employee and should not require any manual intervention for feeding the same. However, even such basic calculations are missing from the system. The Management vide its reply (November 2018) has informed that necessary rectifications in the application in view of observation of Audit have been made.
 - In case of 76 active employees, the 'length of service' was more than 60 years ranging from 61-85 years. Further, in case of 310 inactive/withdrawn employees, the length of service was coming to more than 60 years and ranged

from 61-90 years. This emphasises the fact that either the date of birth/joining or dates of separation from the organisation are incorrectly calculated or fed into the system. Thus, controls were not available in the system to check whether the date of birth/ joining or dates of separation captured in the system are correct or not. On being pointed out by audit, the Management vide its reply (November 2018) corrected the date of birth and the date of superannuation in respect of active employees and stated that the concerned users were directed to correct the data in respect of the separated officials which was under process.

➤ Status of 80 records was found to be 'withdrawn' or 'inactive' however, the date of separation and type of separation was found to be blank. As these employees have already left the organisation, thus, date of separation should have been auto captured/fed into the system. This emphasises the fact that date of separation is not being calculated by the system, it was also not a mandatory field. In absence of date of separation, payment of retiral benefits and other such allowances get affected and cannot be paid without manual intervention, thereby defeating the very purpose of automation. On being pointed out by Audit, the Management vide its reply (November 2018) had made necessary changes.

➤ Basic pay in respect of five inactive/ withdrawn employees was shown as '0' (zero). In absence of basic pay, the monthly salary and other allowances are being calculated manually and may result in manipulation. Further, such fields should be made mandatory in the system and should be auto-populated on the basis of 'post' and date of joining. The Management vide its reply (November 2018) stated that the basic pay had been maintained "Zero" for only one inactive official i.e. Sh. Alok Sinha, Ex-Chairman because he was not getting the pay and allowances from AAI. The Management reply was not complete as management has only replied about one entry and not about the remaining form.

➤ In respect of 17,589 active employees, educational qualifications were appearing as 'blank' in case of 8,498 employees and in case of 295 cases 'category' of employees was blank. Similarly pan card numbers were also missing in respect of eight active employees. The weight column had weights ranging from '0 to 6', similarly the height of employees was fed in 'inches', however, details of '0 to 5' inches was also found. Such basic information like education & category is important for promotion and other enhancements, however, these fields are not mandatory. The Management accepted (November 2018) the audit observation and data updation was under completion stage.

• **Loans and Advances**

Employees of AAI can avail House Building Advance, Conveyance Advance, Computer Advance, Festival Advance, Children Education Loan, Emergency as per admissibility and prescribed limits at specified rate of interest as per rules. Installments to be fixed for recovery of the same are accordingly laid in the rules.

Audit observed that rates of interest to be charged for each type of loans/advance was not fetched/appearing in 1,861 records out of 1,864 records and was appearing as '0' in these cases. The conditions pertaining to rate of interest were not mapped in the system. This

highlights the fact that in absence of 'rate of interest' to be charged against each category of loan/advance, the monthly instalments are being calculated manually and fed into the system. Thus, despite availability of functionality, the rate of interest against loans/advances is not mapped.

The Management in its reply (November 2018) accepted the audit observation and stated inadvertent omission would be addressed during fiscal year 2018.

- **Leave Encashment**

As per AAI (Leave) Regulation, 2003 (as amended from time to time), on retirement or resignation & on death, an employee (or his legal heir) will be entitled for encashment of unutilised earned leave due and admissible at the credit of the employee on the last day of his service without keeping any residual leave subject to a maximum of 300 days. Analysis of extracted data of leave encashment made during the year 2016-17 revealed that total amount of EL encashment payments calculated by SAP in respect of 590 (retired) employees was ₹27.38 crore. Out of this, shortage of ₹5.75 crore in respect of 101 employees and excess calculation of ₹0.16 lakh in respect of 179 employees was observed by audit. It is pertinent to mention that actual payment of leave encashment was done on the basis of manual cross checking and calculation. Thus, despite availability of functionality, the system was not adequately customised to ensure correct calculation of leave encashment.

The Management in its reply (November 2018) stated that there was no short or excess payment of EL encashment to retired employees as the arrears / recoveries due to change of DA on later date has been manually entered by the users at the station level.

The Management reply is not acceptable as despite availability of dedicated Module of SAP ERP, leave encashment were not being calculated/ paid without manual intervention. The system was not customised sufficiently to calculate correct amount of leave encashment.

(b) Non customisation and non-utilisation of functionalities pertaining to HR Module

Audit observed that the benefits for which SAP ERP was implemented have not been completely achieved due to non-utilisation of existing facility or non-customisation of application as per the requirement as illustrated below

- Payment of gratuity to a retiring employee was not being routed through HR module and only Finance Module is used for payment of gratuity. Thus, the information and data in respect of superannuation benefits was incomplete.
- Employees cannot apply through SAP Tour Advance /Travelling Advance and other kinds of advances and loans. Application of advance was still being done manually through files. Investment declaration by employees as per requirements of Income Tax Act had not been enabled.
- The appraisal of employees' function has been implemented only for executives.

Thus, the purpose of automation is not fully achieved.

The Management in its reply (November 2018) informed that the payment of gratuity was now being paid through SAP HR Module. The module of applying different advances through SAP was not available and the development was still to be done. The development of online travel module was under process. The link of investment declaration was available in Employee Self Service (ESS) portal and would be developed. The employee appraisal for non-executive except group-D has already been deliberated and the development was under process.

The Management reply confirms the audit observation regarding non customisation of application as per requirement.

(c) Errors in Loan Report generated in SAP

Audit observed that

- ‘zloan Report’ which includes details of loans & advances (part of HR module) given to employees was not linked with Paybill Register (PBR) and General Ledger for HBA (part of Finance Module). Due to this, deductions and recoveries had been effected in PBR and GL but were not shown in zloan Report. For the period 2016-17 a recovery of ₹1.29 lakh was not reflected in zloan report whereas the same was appearing in GL and PBR. The issue persistent since 2013-14 had not been resolved.
- Effects of repayment of loan and interest as well as grant of fresh loan were not reflected in zloan Report. Upto April 2018, five cases were observed wherein, a total amount of ₹1.94 lakh was repaid towards loan by respective employees, which was also deducted from pay, however, the repayment was not reflected in zloan report. Similarly, loans amounting to ₹30 lakh were granted to six employees upto April 2018, which were not reflected in loan schedule. It was also observed that in one case, a loan of ₹5 lakh was granted however, against this loan amount of only ₹4.50 lakh was appearing in loan schedule.

SAP provides integration of functionalities/modules and all the transactions appearing in one module automatically get update in other respective modules. However, such integration was missing in HR module and Finance in respect of ‘loans/advances’.

The Management in its reply (September & November 2018) has accepted the audit observation and assured that improvements in the report are under process.

(iii) Material Management

SAP Material Management system is a part of logistics area and helps to manage the procurement activity of an organisation from procurement of material to final payment. It supports all aspects of material management such as Planning, Control, Inventory, Stock transfer, Stock valuation, Domestic & Foreign procurement, etc. Following irregularities in utilisation and customisation of Material Management (MM) Module were observed.

(a) Incomplete upload of initial inventory in MM Module and difference in value of Inventory as per FICO and MM Module

When the SAP ERP is rolled out in an organisation, the organisation uploads the physical warehouse stock figures or the book inventory from the old/legacy system into the R/3 MM module. 'Movement type 561' is used in SAP for initial entry of stock balances from legacy system to SAP. The MM module went 'Live' in AAI with rolling out of SAP/ERP in AAI from 1 April 2013. A review of 'Movement type 561' revealed that while uploading inventory from legacy system to SAP, the value of inventory was not completely uploaded. As against the book value of ₹55.36 crore (as per books of accounts for the year ending 31 March 2012), an inventory of only ₹19.65 crore was upload into the SAP. Further, AAI continued to use the 'Movement type 561' even after initial upload on 1 April 2013 although the same was required to be used only for initial upload of inventory and was thus expected to be discontinued after Go Live. After the initial upload, inventory amounting to ₹3.39 crore, ₹0.21 crore, ₹26.99 crore, ₹0.00 and ₹0.02 crore was also uploaded from FY 2013-14 to FY 2017-18 respectively.

Audit also noticed that the closing value of Inventory as on 31 March 2017 as per MM module was ₹103.13 crore whereas as per FICO module it was ₹95.05 crore, leaving a difference of ₹8.08 crore between the data as per the two modules. It is pertinent to mention that no adjustment of difference in value of stock as per MM and FICO was being done in SAP and the same was reconciled only in June 2018.

Audit observed that the MM module was permitted to go-live without ensuring complete upload of inventory into the system. Even after a lapse of almost five years, 'Movement type 561' was being used to upload further inventory into the system indicating deficient controls in utilisation of functionalities of SAP. Repeated upload of inventory and unreconciled stock balances is a serious concern as it points at the defective Management Information System (MIS) and inadequate inventory management as management has still not been able to ascertain the actual quantity and value of its inventory which was existing at the time of initial upload.

The Management in its reply (November 2018) informed that reconciliation of MM and FICO stocks balances as on 30 June 2018 had been carried out and a new "z" report had also been created in the system.

(b) Maintenance of erroneous data due to improper validation checks

AAI had customised MM module of SAP as per its requirements and had defined various types of codes for materials/stocks available/to be procured. As per the standard functionality of SAP, the unit of measurement (UoM) against each stock was also defined.

Out of sample of 10,48,575⁶⁰ records of inventory, a review of 5787 records (excluding closing inventory with value zero) with UoM as 'EA' (Each) revealed that in 07 records, quantity of closing stock was mentioned in fractions whereas 'EA (Each)' means that the quantity for these can exist only in 'whole number'. A further analysis revealed that these items were Screw Machine, Transistor, Wrench and Diode, the quantity of which can

⁶⁰ Initial entries upto Financial Year 2016-17

logically exist only in whole numbers. Audit observed that availability of such items in fractional quantity indicates deficient validation checks in the system which impact the MIS, and results in incorrect stock keeping and inadequate inventory management.

The Management vide its reply (November 2018) informed that Validation for "EA", Checks in PO (purchase orders) for EA with integers, changes in PO quantity checks, have been implemented on 16.10.2018, now system was not allowing to enter decimal value with UOM "EA".

(iv) Project Management System

In AAI, the Project System (PS) Module in SAP helps to manage project works (civil works, renovations etc) and includes stages such as creation of project, project planning, budgeting and release, project implementation and project completion. A review of functionalities available in the standard PS Module vis a vis customisation of PS module adopted in AAI revealed the following deficiencies.

(a) Non-monitoring of progress of activities

- While executing projects, one of the main objectives of the organisation is to ensure that the projects are executed within the budget and scheduled time and to ensure that resources are allocated to the project as per the requirement. However, despite availability of requisite functionality of comparing budgeted cost of the project with actual cost, AAI was not utilising the same. Due to this, cost escalation or savings, if any, on the project was not being monitored through the system.
- Similarly, despite availability of provision to compare the projected milestones with actual achievement, AAI was not utilising the same. Delay in project execution was not being compared and monitored through the system.

Audit observed that these deficiencies result in non-monitoring and scheduling of activities of the project and thus defeat the very purpose of implementation of the PS module. Further, in absence of cost comparison, the likely completion cost may also exceed the projected cost by a substantial amount which may not come to early notice of management.

The Management vide its reply (October 2018) stated that that PS module was configured for Project monitoring & control and accepted that dashboard for monitoring needs to be developed. The Management reply was not tenable as despite a considerable gap since the implementation (March 2013) of the module, the Management had failed to utilise this module for even monitoring the cost and time of the project.

(b) Manual Intervention

Important conditions of the contract such as imposition of penalty or liquidated damages etc on the contractor were not mapped in the PS module for each project. Audit noticed

that during the year 2016-17, deductions and recoveries⁶¹ such as penalty, liquidated damages, SD etc amounting to ₹71.07 crore were made from the bills of the contractors which were calculated manually and was later fed into the system. Hence, due to non-customisation, the system remained underutilised and due to manual intervention inherent risk of inaccurate calculation cannot be ruled out.

The Management vide its reply (October 2018) assured to explore customisation for liquidated damages and imposition of penalty.

1.3.9.4 Other deficiencies

(i) Under-utilisation of SAP utilities

Following other modules of SAP were although developed by AAI were not being utilised optimally.

- **Business Objectives Module:** One of the basic reason for implementation of SAP ERP in AAI was to provide top management a holistic and integrated view of the information. In order to achieve the said objective, Business Objectives module was implemented as business reporting platform to provide a standardised and streamlined reporting process for the enterprise and retirement of manual reports and legacy reports. However, audit observed that presently, this module was not being fully utilised. Reports/dashboards in respect of Material Management and Project System were not developed in this module. Further, in respect of Finance and HR module, only partial information such as total Employee Distribution, Geo distribution of Each Personnel Area / Region wise etc. was developed. Thus, the purpose of implementation of this module were not achieved.

The Management in its reply (July 2018 & November 2018) stated that Dashboards had been configured as per the requirement of user departments. The presentation of HR dashboards had been given to top Management and the development of other dashboards as per management requirements was under progress. The dashboard requirement for MM and PS module was being analysed and shall be implemented as per requirement.

The Management's reply confirms the audit observation that all the functionalities of SAP were not being utilised.

- **E-Recruitment Module–** AAI had planned to implement the SAP E-Recruiting functionality to meet their business needs by providing a more effective E-Recruiting process and in order to have a more effective recruitment process. However, despite getting these modules developed and customised by SAP, AAI was still not utilising it.

The Management in its reply (July & November 2018) stated that the AAI HR team had decided not to use the E-Recruitment module of SAP. The decision had

⁶¹ Penalties- ₹6.45 crore, Security Deposit- ₹35.85 crore, Liquidated Damages and other deductions- ₹16.58 crores, EMD- A ₹12.19 crore.

been taken due to limitation of SAP system in processing large volume of applications. The E-Recruitment process used by other PSUs had also been evaluated and it was decided to use some other system.

The Management's reply was not tenable as despite customisation of this module as per requirement and deployment of funds for the same, a decision to not utilise this module was unjustified.

- **Manpower Planning Module** - This module was envisaged to automate manpower requirement/planning based on competencies, skills, experience, qualification etc. Provision to analyse the unit-wise, cadre wise, grade wise resources available and required and do a gap analysis within specific time frame, to generate a consolidated manpower plan, to issue alerts before any position falls vacant due to retirement/ term of temporary or contractual employee getting over and to integrate with the recruitment/ promotion module for filling up of vacancies. However, this model was not in use in AAI.

The Management in its reply (July & November 2018) informed that their HR team had decided to use this module and accordingly were getting it customised and assured that the module would be used in future for resource planning and placement.

- **Promotion Module:** The requirements of this module were to implement organisation's career path for various cadres, grades and scales, to define grade advancements within a channel (seniority/Merit/time based) and to draw a competency matrix in the system. However, this module was also never used.

The Management in its reply (July & November 2018) informed that their HR team had decided to use this module and accordingly were getting it customised and further assured that the module would be used in future for resource planning and placement.

(ii) Non monitoring of compliances to the provisions of SAP Global Service and Support Agreement

As per SAP Global Support Agreement (November 2015), the Service Provider was required to provide services as per the defined terms. However, SAP did not maintain following documentation required as per the agreement. Further, non-adherence of the same were also not monitored and objected by AAI:

- **Analyse Incident:** As per point no. 2.3.2.2 of clause 2, it was the responsibility of SAP to Document all the incidents/ problems and diagnosis findings. However, no documents for root cause analysis, investigation and diagnosis, effort estimation were maintained by the service provider.
- **Functional Support:** As per point no. 2.3.2.3 of clause 2, service provider was to document all support provided to key users regarding their individual business processes, fault reports in the components and processes supported, root cause

analyses, providing solution in the System-Adjust new configuration or development objects etc. However, no documents detailing the above were maintained.

- **ABAP Module:** As per point no. 2.3.2.5.1 of clause 2, service provider was to document all the changes/modifications/activities made into various objects of ABAP module like Debug programmes, Custom tables and indexes, existing SAP scripts, Managing Z-objects, Modification to existing custom screens, Optimisation of reports. However, no documents detailing the above were maintained.
- **Project Management-Governance:** As per point no. 2.6.2.1.3 of clause 2, service provider will provide ad-hoc Customer Reports, Monthly Governance Reports, Monthly Status Reports with participation in monthly review meeting with customer service manager to review the performance and help address escalated issues, organise a Monthly Service Review and publish KPIs to internal SAP stakeholders. However, till March 2018, only three meetings were held and documented for review of performance of service provider i.e in May, June and December 2017. Thus, no reports as per the requirement of above stipulation were provided to AAI and no periodic Governance and Review meetings (except above three) were held to monitor the progress, identify and evaluate the potential risks and creating mitigating risk plan in the absence of which efficiency and effectiveness of services may not be managed economically.

The Management vide its reply (October 2018) stated that Team was always onsite and review and monitoring takes place on a daily basis, however, IT Service Management (ITSM) Tool had now been implemented and all the incidents, modifications, problem findings were being recorded through this tool.

The Management reply was not tenable as the clause mentioned in para were included in the agreement in order to ensure uninterrupted and optimum services from the service provider. However, in absence of any documentary proof, which were required to be maintained as per the given clause, neither existence of optimum services could be ensured nor was monitoring of services was ensured. The Management reply that ITSM tool has now been implemented and was in use was not tenable as the clauses mentioned in the agreement cannot be substituted with usage of ITSM which was a tool used for reporting and resolution of problems and incidents.

(iii) Inadequate development of in-house expertise resulting into undue reliance on SAP consultants even after stabilisation of SAP ERP

AAI, on nomination basis, awarded (30 November 2015) work for providing SAP support service to M/s SAP India Pvt Ltd at a cost of ₹8.18 crore for 3,630 mandays. As per the said agreement, the services were to start from 15 December 2015 and were to end on 14 December 2018. Although, the support service was spanned across 36 months, however, all the man days were consumed within a period of 21 months. Thus, for the remaining period of 15 months, it was approved to take support from SAP at further cost of ₹7.25 crore for 3010 mandays, although, the initial support agreement with SAP provided for maintenance of both ERP and SRM with total man days of 3630 days and were for a period of 3 years, whereas, the support for later part of 15 months were only for ERP, even then the man days were assessed almost at par with previous estimates and

consumption despite major customisation, stabilisation and streamlining of existing modules. Thus, AAI had not yet achieved self-dependency and in house expertise was not adequately developed even after lapse of more than 05 years since implementation of SAP ERP.

The Management vide its reply (October 2018) accepted the audit observation and stated that effort was being made to recruit and place more officials in SAP IT Core team, who would be trained and developed to take up more responsibility in near future.

1.3.10 Conclusion:

SAP ERP in AAI was implemented with the objective of integration, standardisation and streamlining of all the activities of AAI. However, there was inadequate planning in implementation of SAP ERP, modules of SAP ERP were not utilised completely and the business rules were mapped inadequately. SAP ERP did not have adequate data input controls and validation checks. The difference between the legacy data and the data uploaded in SAP was not reconciled. Moreover, monitoring of cost and scheduling of the project was not being done through SAP. Non maintenance of industry specific Data Centre requirements and non-existence of Disaster Recovery Site poses potential threat to the data in AAI. AAI is largely dependent on SAP consultants for resolution of issue and in-house expertise is lacking.

The SAP ERP implementation was an ambitiously planned project at an enormous cost. However, even after more than five years from its 'Go-live' date, the system retains a high level of manual intervention. Thus, the lack of full integration, inadequate controls and under-utilisation of SAP ERP has seriously undermined its effectiveness.

1.3.11 Recommendations:

- AAI should ensure strict compliance to IT policies including formulation of business continuity plan and maintenance of disaster recovery site.
- AAI should strengthen its existing validation checks and build in additional checks so that the deficiencies and inconsistencies pointed out in the systems are eliminated and data integrity is enhanced.
- Business processes should be customised in the application incorporating all the relevant rules and regulations so as to eliminate scope for manual intervention.
- AAI should ensure optimum utilisation of the modules of SAP ERP by exploiting all their features in order to achieve their objectives.

The matter was referred to the Ministry in December 2018; their response was awaited (May 2019).

1.4 Loss of revenue due to allotment of hangar space at lower rate of license fee

Airports Authority of India allotted Hangar space at Guwahati airport at a license fee lower than the applicable rate and suffered a loss of revenue of ₹7.08 crore.

AAI rationalised (April 2008) the license fee for space w.e.f 01 April 2008 in respect of various airports/ international airports of the country. It was specified that there would be compound escalation of license fee at the rate of 7.5 *per cent* per annum (subsequently enhanced to 10 *per cent* per annum w.e.f 01 April 2011). The above guidelines of April 2008 also specified that the license fee for hangar space at airports would be at par with the rate of license fee for space applicable in respect of non-air conditioned terminal buildings.

Expression of Interest (EOI) was invited (March 2015) for allotment of newly constructed hangar space at Lokpriya Gopinath Bordoloi International (LGBI) airport, Guwahati. In response to the EOI, M/s AAA Aviation Private Limited (AAA), Shillong submitted (March 2015) their willingness for allotment of hangar space at LGBI airport, Guwahati. Accordingly, Local Commercial Advisory Committee (LCAC) comprising officials of LGBI airport, Guwahati was constituted for verification of credentials and offering recommendations thereof. LCAC recommended (April 2015) to allot hangar space to AAA for three years at ₹1,410 per square metre (sqm) per annum (i.e. ₹117.50 per sqm per month) and forwarded the same to Regional Commercial Advisory Committee (RCAC)/ North Eastern Region (NER). RCAC/ NER forwarded the recommendations of LCAC to the Corporate Headquarters of the AAI for their approval. Corporate Headquarters of the AAI approved (May 2015) the allotment of hangar space to AAA on the terms and conditions as recommended by RCAC/ NER. Accordingly, AAI allotted (June 2015) a hangar space measuring 3,172 square meter (sqm) at LGBI, Guwahati to AAA for three years for a license fee of ₹117.50 per sqm per month with the condition of annual compound escalation from the month of April every year and an agreement was entered into (June 2015) with AAA in this regard.

However, the Corporate Headquarters of AAI noticed (March 2016) that allotment of hangar space to AAA was done by considering the land rental instead of license fee for non-air conditioned space and directed the LGBI airport authority to revise the license fee based on non-air conditioned space with 10 *per cent* escalation per annum as per the above guidelines. The applicable rate of license fee for the above hangar space should be ₹565 per sqm per month as per the above laid down guidelines of rationalisation of license fee. AAI raised invoices for license fee on AAA at the rate of ₹117.50 per sqm per month upto March 2016 and ₹126.70 per sqm per month from April 2016. Subsequently, AAI raised the revised invoices on AAA from May 2016 incorporating the applicable rate of the above laid down guidelines with retrospective effect from June 2015.

AAA, however, did not agree with the revised rate of license fee on the plea that the same was not as per the terms and conditions of allotment letter as well as agreement. AAI continued raising invoices on AAA for license fee for the above hangar space at the applicable rate with annual escalation of 10 *per cent*. AAA did not pay differential license fee⁶² and service tax thereon. AAI pursued the matter with AAA on a number of

⁶² *Difference between the applicable rate and the rate mentioned in the allotment letter*

occasions, without any fruitful results. AAA finally intimated (March 2018) AAI their intention not to continue with the allotment of hangar and surrender the same within 60 days. AAA also denied to pay the differential license fee and Service tax/ GST thereon during the three-year period up to June 2018 which worked out to ₹6.43 crore and ₹1.03 crore, respectively. The matter was referred (June 2018) to the Dispute Resolution Committee (DRC) of AAI and AAA was asked to pay the revised license fee retrospectively from May 2016 instead of June 2015. AAA, however, did not pay the same. AAI ultimately encashed (November 2018) the bank guarantee of ₹0.38 crore submitted by AAA.

Audit observed that allotment of hangar space to AAA at a lower rate of license fee in violation of the approved laid down guidelines by the Management was not justified which led to a loss of revenue of ₹7.08 crore⁶³ to the Authority. This also indicated deficient internal control of AAI at every level.

The Management stated (November 2018) that the hangar space was allotted at a lower rate of license fee due to oversight of the approved guidelines and the same was rectified in May 2016. It was further stated that the formalities to initiate recovery proceedings before Eviction Officer as per provisions of Section-28 G of the AAI Act, 1994 (as amended in 2003) has been initiated as instructed by the competent authority to realise balance amount. If not realised, the next course of legal action would be taken on the basis of outcome of the aforesaid recovery proceeding. The Ministry endorsed (March 2019) the views of the Management.

Air India Air Transport Services Limited

1.5 Undue favour to Jet Airways due to non-levy of penal interest for delayed payment and non-recovery of outstanding dues

Non-levy of penal interest by Air India Air Transport Services Limited on Jet Airways as per Ground Handling Agreement for delayed payment on ground handling services for the period June 2014 to May 2016 resulted in loss of ₹7.55 crore and an amount of ₹4.18 crore outstanding for recovery.

Air India Air Transport Services Limited (AIATSL), a wholly owned subsidiary of Air India Limited (AIL), provides ground handling services to AIL and other airline customers at different airports in India as per Ground Handling Agreements (GHA) entered into with them. AIL entered into a GHA with Jet Airways (India)/ Jetlite (India) Ltd (hereinafter Jet airways) for international and domestic flights for ground handling services at Cochin station with effect from 1 July 2011. With operationalisation of AIATSL in April 2014, these agreements were novated (June 2014) to AIATSL.

As per clause 5 of GHAs for Cochin station:

- i. Carrier shall provide bank guarantee equivalent to 45 days handling charges based on frequency of flights.
- ii. Carrier will settle the invoices on monthly basis within 30 days of its receipt.

⁶³ (₹6.43 crore + ₹1.03 crore) - ₹0.38 crore

- iii. An interest of two *per cent* per month will be applicable on the unpaid amount from the due date till the payment date.

Jet Airways terminated the GHA in May 2016. Audit scrutiny of records/details for the period June 2014 to May 2016 revealed the following:

- During June 2014 to May 2016, there were delays ranging from 26 days to 274 days (for international flights) and 35 days to 237 days (for domestic flights) in raising the invoices which indicates lack of internal control.
- In order to protect the financial interest of the company, timely realisation of dues needs to be ensured by vigorous follow up with the customer airlines. However, Audit observed that there were delays (over and above the free credit period) in receipt of ground handling charges which ranged from 577 days to 1,111 days (for international flights) and 577 days to 1,083 days (for domestic flights) and continue to be pending for recovery which indicates lack of proper monitoring.
- An amount of ₹14.24 crore towards ground handling charges was outstanding from Jet Airways as on 31 March 2017. AIATSL received an amount of ₹10.05 crore till November 2018 from Jet Airways and an amount of ₹4.18 crore was outstanding at the end of December 2018.
- Though Jet Airways delayed payments by almost two years, AIATSL did not raise any bills towards penal interest despite a clause in the agreement. The loss of interest due to delay in receipt of payments amounted to ₹7.55 crore.
- Jet Airways had furnished bank guarantees of ₹0.91 crore towards domestic and international operations which were valid up to 17 June 2014. However, AIATSL did not obtain/ renew bank guarantee thereafter despite a clause in the GHA.
- Copy of approval of competent authority for continuing ground handling services to Jet Airways in spite of above mentioned deficiencies was not found on record.

The Management stated (November 2018) that:

- There has been no intent to accord any undue favour to Jet Airways and it would be reasonable to assume that Jet airways had accepted the outstanding and interest as well.
- AIATSL has been able to recover 66 *per cent* of the outstanding invoiced amount excluding the interest for delayed payment.
- The matter is being actively pursued with M/s Jet Airways for recovery.

The Management's reply needs to be seen in the light of following:

- AIATSL continued providing ground handling services without receipt of invoiced charges for two years and without levy of interest.
- AIATSL also failed to renew/obtain bank guarantee as per provisions of the agreement, which showed that undue favour was extended to the customer.

- Jet Airways terminated the GHA and there was no bank guarantee available with the company to safeguard its interest.

Thus, AIATSL extended undue favour to Jet Airways which resulted in non-recovery of ₹4.18 crore and loss of interest amounting to ₹7.55 crore (at the rate of two *per cent*) and the chances of recovery of the outstanding amount seems remote.

The matter was referred to the Ministry in January 2019; their response was awaited (May 2019).

Air India Limited

1.6 Excess expenditure due to deviation from tender conditions and commitment given in the technical bid by lowest quoted party

The tender committee arbitrarily deviated from tender conditions and technical bid of L1 hotel while drawing up the financial evaluation report, which resulted in booking additional eight rooms per day than required for three years. This resulted in incurring excess expenditure of ₹13.13 crore to Air India. The fact that the projected financial outgo of the lowest bidder was based on 24 rooms instead of 16 was also not brought to the notice of Air India headquarters while forwarding the commercial evaluation report for approval.

AIL floated (30 January 2015) a tender for layover hotel accommodation for cockpit crew at New York. Clause 1 of notice inviting tender (NIT) stated the AIL's room requirement per day at 16 for the crew. Clause 3 mentioned that the billing will be done on actual use of rooms on "24 hours check-out" basis and no overlapping charges would be applicable for check-out exceeding 24 hours by 6 hours due to flight delays/ exigencies etc. In the event of check-out exceeding six hours but upto 12 hours, 50 *per cent* of the room rent and after 12 hours full rate will be payable. As per clause 2 of the technical bid, the hotel should have 24 hours check-in/check-out facility.

Four hotels⁶⁴ submitted their bids. The technical evaluation committee in its report (dated 25 February 2015) certified that on the basis of bids evaluation and visit to the hotels, three bids were found to be technically qualified. All the hotels had confirmed having 24 hours' check-in/check-out facilities. Financial bids of technically qualified hotels were opened on 26 February 2015 and M/s Millenium Hilton Hotel was found to be the L1 bidder. AIL entered into (01 May 2015) an agreement with the Hotel for three years commencing from May 2015.

Audit, on scrutiny of financial evaluation, observed that the committee while working out the total financial outgo for three years, considered 24 rooms per night instead of 16 rooms. This fact was not revealed in the commercial evaluation report of the Committee which was sent for approval of Air India headquarters. Financial evaluation based on 24 rooms was an infraction of the tender conditions and technical bids of the hotels confirming 24 hours check-in/ check-out facilities. The proposal was submitted through the Executive Director (Operations) and Finance wing and approved by the CMD on 17 April 2015.

⁶⁴ (i) *Conrad, New York*, (ii) *Millenium Hilton, New York*, (iii) *Hilton, New York* and (iv) *Radisson Hotel, New York*.

Subsequently, while signing the agreement, two clauses were inserted, wherein it was mentioned that the hotel agrees to provide 24 rooms on a daily basis and another clause stating 'room reservations for early arrivals (i.e. before 12 PM on day of arrival) will be charged the applicable crew rate for the night before' (Article I–Service). Insertion of these clauses was infraction of clause 3 of the NIT condition and assurance of the hotel in clause 2 of the technical bid. Thus, booking of eight extra rooms on daily basis for three years resulted in excess expenditure of USD 2.08 million (₹13.13 crore)⁶⁵ as shown below:

Table 1.9: excess expenditure due to extra booking of rooms

(in USD)				
Year	Per day room rent and breakfast charges	Total outgo at 24 rooms per day	Total outgo at 16 rooms per day (actual requirement)	Excess expenditure/commitment
1 st Year	233.00	20,41,080	13,60,720	6,80,360
2 nd Year	237.20	20,77,872	13,85,248	6,92,624
3 rd Year	241.48	21,15,365	14,10,243	7,05,122
Total excess expenditure				20,78,106

Audit also observed that the agreements between AIL and other hotels⁶⁶ providing crew accommodation across USA region where AIL operates its flights stipulated billing on 24 hours check-out facility with six hours grace as per the conditions of the NIT and technical bid requirement which is being honoured by the hotels.

Regional Manager, AIL, New York stated (September 2018) that while the hotel had checked for providing 24x7 check-in/check-out facility, they were unable to offer this facility free without additional charges. As stated by the Regional Office, this is primarily because the crew arrive early morning and to ensure that the crew do not have to wait, the rooms must be booked unsold from the previous night. It further stated that the finance and station nominees were part of the technical evaluation committee; they factored the requirement of third night during the financial evaluation. Regional Office further stated that while NIT reflects the terms and conditions that AIL expects, the evaluation needs to be carried out on the basis of bids received and thus, it is essential to seek approval for the expected financial outgo based on actual bids and not the theoretical outgo based on tender document. Thus, the committee calculated the financial outgo based on 24 nights after their technical evaluation and not 16 nights as per NIT.

The reply of the Regional Office is not tenable due to the following:

- (i) There were no documents on record to substantiate that the hotel was unable to offer this facility without additional charges. Besides, if the hotel was unable to provide the same, it should have been disqualified in the technical bid. Despite the hotel confirming to provide 24 hours check-in/check-out facility, the issue of 24 rooms in place of 16 per night was brought *de novo* by the committee while signing the agreement.

⁶⁵ Based on minimum rate of exchange of ₹63.19/USD prevalent during May 2015 to April 2018.

⁶⁶ Hotel Pennsylvania providing accommodation for cabin crew in New York, hotel Le Meridian for cockpit and cabin crew layover at San Francisco and Hotel Sofitel and Holiday Inn for cockpit and cabin crew respectively at Chicago

- (ii) The Regional Office did not bring this issue to the notice of AIL headquarters while sending the evaluation report nor the latter detected the infraction.
- (iii) The subsequent agreement executed with the same hotel effective 1 June 2018 for three years provided for charging of two room nights per crew, though the flight schedules remain the same and the hotel has also been honouring the same.

Thus, the tender committee arbitrarily deviated from tender conditions and technical bid of L1 hotel while drawing up the financial evaluation report which resulted in booking additional rooms and incurring excess expenditure of ₹13.13 crore.

The matter was referred to the headquarters of AIL in January 2018 and followed up in August 2018.

The matter was referred to the Ministry in November 2018; their response was awaited (May 2019).

1.7 Excess expenditure towards health insurance premium by Air India Limited for its employees in US Region

Air India Limited incurred excess expenditure of USD 437,847 (₹2.64 crore) towards health insurance premium for its employees in US region due to insertion of a clause in the agreement with the union limiting employees' contribution to fixed amount.

AIL executed (effective from 19 July 1974) an agreement with International Brotherhood of Teamsters Chauffeurs, Warehousemen and helpers of America (a labour Union in USA and Canada) representing the clerical and related employees. As per clause 36 (A) of the agreement, AIL agreed to continue in full force and effect its present group health insurance plan with increase in benefits and to pay 95 *per cent* of the cost of said insurance. In the subsequent agreement effective from 30 August 1977, while clause 36 (A) contained the same recital, another clause was incorporated as clause 36 (D) which stated that employees' contribution under the health insurance plan referred to in clause 36 (A) were to be limited to present employee dollar contribution.

Audit scrutiny revealed that though both clauses in the agreement are inconsistent with each other and date back to 1977, the same continues to be incorporated in all the five consecutive amendments between 1977 and 2005. Though cost to AIL on account of its contribution for health insurance has been on the rise depending upon the insurance premium, the employee contribution has stagnated at the rates fixed in 1977 despite manifold increase in salary and cost of living allowance of the employees.

Audit noticed (August 2016) that the Regional Office, AIL USA Region, New York has been deducting USD 1.11 (single coverage)/ USD 3.13 (family coverage) for health insurance and USD 1.02 (single coverage)/ USD 3.34 (family coverage) for dental insurance from its employees (both India based and local staff), taking recourse to clause 36 (D) inserted in 1977 without invoking clause 36 (A), which required deduction of five *per cent* of the cost of health insurance. The Regional Office stated (September 2016) that AIL has proposed to increase the employee contribution to 7.5 *per cent* without restriction to an amount equivalent to dollar contribution. No further report on the matter has been received (October 2018).

Further, audit observed (November 2017) that the monthly health insurance premium of an employee ranged between USD 696.69 and USD 2,126 depending upon the number of persons covered in the policy. A perusal of the payments made during the month of November 2017 revealed that USD 128,561 was paid on account of health insurance premium for 74 personnel. Against USD 128,561, an amount of USD 6,428 (five per cent) was to be deducted from the employees as per clause 36A of the agreement *ibid*. However, only USD 231.62⁶⁷ was recovered from the officials. In order to ascertain the excess financial outgo of AIL, the Regional Office was requested to provide the related records from 2005 onwards. However, the office could provide information on health insurance premium for last six years (2013–2018) only while information for the year 2007 was available on record. Based on the data available for seven years, the excess financial outgo of AIL is shown in the following table:

Table 1.10: Excess financial outgo of AIL on health insurance premium

Year	Premium paid by Air India	5 per cent deductible	No of India based and local employees	Actual amount deducted ⁶⁸	Difference	Total excess avoidable outgo
	(in USD)		(in No.)	(in USD)		
2007	13,26,564.00	66,328.20	125	4,695.00	61,633.20	437,846.96
2013	14,90,647.34	74,532.36	75	2,817.00	71,715.36	
2014	14,11,917.06	70,595.85	75	2,817.00	67,778.85	
2015	12,50,299.25	62,514.96	75	2,817.00	59,697.96	
2016	13,96,682.19	69,834.11	69	2,591.64	67,242.47	
2017	12,25,612.73	61,280.64	80	3,004.80	58,275.84	
2018*	10,77,578.95	53,878.95	69	2,375.67	51,503.28	

*(upto 11/2018)

Thus, AIL made an excess payment on account of health insurance premium amounting to USD 437,846.96 during the year 2007 and from 2013 to 2018 (upto November 2018). The excess expenditure would be much more if data for other years was made available.

In reply, the Regional Office stated (January 2018) that it is incorrect to say that AIL has omitted to strike out clause (D) inserted in 1977 as Union agreements are finalised after protracted negotiations between AIL Management and Union representatives. It further stated that any unilateral decision by AIL in this regard can be challenged in court by the Union.

The Management's reply is not tenable due to the fact that no document was produced by the Regional Office to suggest that any discussion has ever taken place on this subject and the Management continued to honour clause 36D of the agreement, to the financial detriment of AIL. In effect, AIL has been paying more than 99 per cent of the health insurance premium for its employees, both local and India based. Besides, the Regional Office neither approached its Headquarters to regularise the expenditure in question nor taken any initiative to remove one of the clauses which is not applicable. AIL is to retain/incorporate the correct clause (5 per cent or proposed 7.5 per cent) as deductible from the salary of employees in the wage agreement, which is being negotiated with the Union.

⁶⁷ Considering maximum deductions applicable to family, i.e., USD 3.13 per employee

⁶⁸ Considering maximum deductions applicable to family, i.e., USD 3.13 per employee

The matter was referred to the headquarters of AIL and Regional Office at New York in January 2018 and followed up between April- August 2018.

The matter was referred to the Ministry in November 2018; their response was awaited (May 2019).

Pawan Hans Limited

1.8 Improper management of rescue operations

Failure of Pawan Hans Limited in deploying cockpit crew as per the requirements of rescue operations in hilly terrains resulted in loss of ₹11.78 crore besides risking human life.

Pawan Hans Limited (PHL), incorporated in October 1985, is the flagship helicopter service provider of the Government of India and has the largest fleet of non-military helicopters in South Asia. Its area of expertise is in connecting inaccessible areas and conducting search and rescue operations which is in concurrence with some of its main objects mainly:

- To operate scheduled/ non-scheduled services by helicopter and such other means as may be determined by the Government in inaccessible areas and difficult terrains;
- To undertake operations that may be directed/requisitioned by the Government.

Audit observed that PHL deployed (June 2013) its Dauphin AS 365 N3 Helicopter (VT-PHZ) with State Government of Uttarakhand for carrying out rescue operations for devotees and local people affected by flash floods. While on a rescue mission, VT-PHZ met with an accident (28 June 2013) at Harshil Helipad, Uttarakhand. All the three people on board (two crew members and one passenger) sustained minor injuries but the tail portion of the VT-PHZ was substantially damaged. PHL intimated (28 June 2013) New India Assurance Co. Ltd. (the insurer) about the accident and after completion of the repair (October 2014) of VT-PHZ, filed an insurance claim of ₹10.87 crore with the insurer.

The insurer rejected (January 2017) the claim of PHL based on the findings of the Accident Investigation Board, constituted by the Ministry of Civil Aviation, which pointed out that a contributory factor in the accident was the deployment of cockpit crew to operate in hilly/mountainous terrain by PHL without requisite hill flying training/recurrent training. The insurer stated that the claim fell under General Exclusions No. 3 as there was clear breach and violation of the warranty applicable to insurance policy as per which the insured was under contractual obligation to comply with all air navigation and airworthiness orders and requirements issued by any competent authority affecting the safe operations of the aircraft.

Audit noted the following:

- PHL's Operational Manual and Civil Aviation Requirement (CAR) Section 7, Series 'B' Part XII specifically lays down training requirements for operations in

hilly region as flying in hilly region needs thorough expertise in understanding parameters like density altitude, mountain winds, conical hills etc. The training of the pilots for operating in hilly region is indispensable as flying in hilly terrain requires the knowledge of the typical characteristics of the hilly terrain, the effects of wind and rapidly changing weather conditions etc. that can restrict the operations. Height of the helipads may adversely affect the performance of helicopter especially during take-off and landing phases. Despite being aware of these requirements, PHL deputed a cockpit crew which did not have requisite hill flying training/recurrent training. This was despite the fact that PHL has regular scheduled operations in high altitude areas of Meghalaya, Mizoram, Sikkim, Himachal Pradesh, etc as also for special purpose like Mata Vaishno Devi Yatra, Shri Kedarnathji Yatra and Shri Amarnathji Yatra.

- Deputing of officers without requisite training exposed precious human life to imminent risk and is also indicative of PHL's lack of preparedness for its role in rescue operations and accomplishment, which is one of its main objects of incorporation.
- PHL had not taken any legal recourse to oppose the rejection of its insurance claim within 12 months from date of rejection which made the insurance claim inadmissible before the insurer, as per terms of insurance policy and resulted in a loss of ₹11.78 crore⁶⁹ to PHL.

PHL in its reply (October 2018) stated that it is pursuing with the insurer, at the highest level, for early settlement of insurance claim.

The reply of the Management is not tenable as it has not responded to the core issue of PHL's laxity in management of rescue operations, resulting in endangerment to human life and PHL's assets. Further, as per the terms of insurance policy, the claim of PHL is now inadmissible and thus the chances of it mitigating its financial losses on repair of helicopter are remote. Also, the revenue loss caused due to grounding of helicopter because of such accidents and loss to PHL reputation were not claimable in the insurance policy.

Thus, failure of PHL in deploying cockpit crew as per the requirements of rescue operations in hilly terrains resulted in loss of ₹11.78 crore besides risking human life.

The matter was referred to the Ministry in November 2018; their response was awaited (May 2019).

1.9 Unauthorised payment to the Executives, Pilots and Aircraft Maintenance Engineers

Flying Incentives and Improved Maintenance Incentives paid to the Executives, Pilots and Aircraft Maintenance Engineers of Pawan Hans Limited, over and above the 50 per cent ceiling limit laid under the "Cafeteria Approach" prescribed

⁶⁹ ₹10.87 crore insurance claim rejected by insurer + ₹0.04 crore of service tax paid by PHL on transit insurance taken from the insurer for shifting of damaged helicopter from Harshil to Mumbai for repair + revenue loss of ₹0.87 crore for the period 29 June 2013 to 24 August 2013 only, due to grounding of VT PHZ.

by the Office Memorandum issued by the Department of Public Enterprises, resulted in unauthorised payment of ₹11.13 crore till 31 December 2016.

Department of Public Enterprises (DPE), vide its office memorandum (OM) dated 26 November 2008, approved revision in the scales of pay of Board level and below Board level Executives and Non-Unionised Supervisors of Central Public Sector Enterprises (CPSEs) w.e.f. 1 January 2007. The OM also prescribed for allowances/perks, other than Dearness Allowance, House Rent Allowance and Leased Accommodation, within a limit of 50 per cent of the basic pay. Certain allowances, viz. North-East Allowance, Allowance for Underground Mines, Special Allowance for serving in difficult and far flung areas and Non-Practicing Allowance were outside the purview of the ceiling of 50 per cent but were subject to prescribed limits. DPE further prescribed that instead of a fixed set of allowances/ perks, the CPSEs might follow “Cafeteria Approach” whereby the executives would be allowed to choose from a set of perks and allowances within the overall limit of 50 per cent of the basic pay. DPE vide its OM dated 1 June 2011 and 29 June 2012 reiterated the fact that no allowance/benefit/perk other than those mentioned in DPE OM dated 26 November 2008 were admissible outside the 50 per cent ceiling.

Audit observed that PHL vide its circular dated 10 December 2012 revised the perks and allowances of its Executives, Pilots and Aircraft Maintenance Engineers w.e.f. 26 November 2008 within the limit of 50 per cent of the basic pay. However, in non-compliance of DPE OM dated 26 November 2008, 1 June 2011 and 29 June 2012, PHL continued with its schemes of Improved Maintenance Incentives and Flying Incentives for Executives, Pilots and Aircraft Maintenance Engineers. These schemes were introduced by PHL during the period September 2006 to June 2007 in order to boost profitability, productivity and retention of qualified and experienced personnel but were continued even after 26 November 2008 inspite of the fact that they were outside the purview of limit of 50 per cent of the basic pay. This resulted in unauthorised payment of ₹11.13 crore (based on the calculation of PHL Western Region only) towards Flying Incentives and Improved Maintenance Incentives during the period 26 November 2008 to 31 December 2016⁷⁰.

The Management stated (26 July 2016) that the continuation of Flying Incentives and Improved Maintenance Incentives schemes was justified and that they were paid in lieu of Performance Related Pay (PRP) which could not be finalised due to non-appointment of Independent Director in their Board of Directors. The Management further stated (7 December 2018) that once the PRP is introduced in PHL the Improved Maintenance Incentives paid to Executives and other categories of employees shall be adjusted and in case of Pilots, Flight Engineers and Aircraft Maintenance Engineers the issue is under active consideration of Ministry of Civil Aviation for obtaining approval of Cabinet.

The reply of the Management is not tenable as Flying Incentives and Improved Maintenance Incentives were being paid to Executives, Pilots and Aircraft Maintenance Engineers in lieu of Productivity Linked Incentive Schemes (PLI) and not in lieu of PRP, as stated. As per DPE OM dated 6 July 2011 PLI could be distributed only within the prescribed limit of 50 per cent of the basic pay. Further DPE OM dated

⁷⁰ w.e.f. 1 January 2017, DPE OM dated 3 August 2017 pertaining to pay revision of Board level and below Board level Executives and Non-Unionised Supervisors of CPSEs is in force, the compliance of which has not been commented upon in the para.

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26 November 2008, 1 June 2011 and 29 June 2012 did not contemplate any allowance/perk to be paid in lieu of PRP and the decision of Cabinet is still pending on the allowances being paid to Pilots and Engineers beyond the limit prescribed as per “Cafeteria Approach”.

Thus, Flying Incentives and Improved Maintenance Incentives paid, to the Executives, Pilots and Aircraft Maintenance Engineers of PHL, over and above the 50 *per cent* ceiling limit laid under the “Cafeteria Approach” prescribed by DPE OM resulted in unauthorised payment of ₹11.13 crore⁷¹ till 31 December 2016.

The matter was referred to the Ministry in October 2018; their response was awaited (May 2019).

⁷¹ *The excess payment related to Northern region and headquarters of PHL may be worked out by PHL similar to Western Region as indicated in the draft para.*