

**Consultation Paper No.07/2010-11**



**Airports Economic Regulatory Authority of India**

**Proposal of revision of UDF at Rajiv Gandhi  
International Airport by GMR Hyderabad  
International Airport Ltd.**

**New Delhi: 23<sup>rd</sup> September, 2010**

**AERA Building  
Administrative Complex  
Safdarjung Airport  
New Delhi – 110 003**

GMR Hyderabad International Airport Limited (HIAL) is a joint venture company promoted by the GMR Group (63%) in partnership with Government of India through Airports Authority of India (AAI-13%), Government of Andhra Pradesh (13%) and Malaysia Airports Holdings Berhad (11%). The Company was incorporated to design, finance, build, operate and maintain a world class Greenfield airport at Shamshabad, Hyderabad. The project is based on the Public Private Partnership (PPP) model and is structured on a Build, Own, Operate and Transfer (BOOT) basis. The airport was commissioned in March 2008 with initial capacity of 12 million passengers per annum (MPPA) and 100,000 tons of cargo handling capacity per annum.

2.1 A Concession Agreement (CA) for development, construction, operation and maintenance of the Hyderabad Airport, was entered into between Government of India through the Ministry of Civil Aviation and HIAL, on 20.12.2004. As per Schedule 6 of the CA :

*“HIAL will be allowed to levy UDF w.e.f. Airport opening Date, duly increased in the subsequent years with inflation index as set out hereunder from embarking domestic and international passengers, for the provision of passenger amenities, services and facilities and the UDF will be “used for the development, management, maintenance, operation and expansion of the facilities at the Airport.”*

2.2 Based on the provisions in the CA and the application made in this behalf by HIAL, the Ministry of Civil Aviation allowed a levy of UDF @ Rs.1000/- (inclusive of taxes) per international departing passenger w.e.f. 23.04.2008 and @Rs. 375/- (inclusive of taxes) per departing domestic passenger w.e.f 18.08.2008 (vide letters No.AV.20015/03/2003-AAI dated 28.02.2008 and No.AV.20036/28/2004-AAI (Vol.IV) dated 18.08.2008 respectively), on adhoc basis. **The existing rates of UDF excluding the service tax component work out to Rs.340/-per departing domestic passenger and Rs.907/- per departing international passenger.**

2.3 HIAL, vide their letter no. GHIAL/UDF/Domestic/04/2008 dated 01.09.2008, had submitted that in their original business plan furnished to the Ministry, the average UDF amount was arrived @ Rs.725/- per passenger for both international and domestic passengers and since the UDF for international passengers was approved for Rs.1000/- by the Ministry, the corresponding amount for domestic passengers should be Rs.600/- so as to be in consonance with their business plan. HIAL submitted that in the meanwhile, they had started collecting the provisionally approved domestic UDF @ Rs.375/- departing passenger, under protest. HIAL also stated that as a result of the lower UDF approved for domestic passengers, they were incurring a substantial loss of Rs.16 crores per month.

3.1 Pursuant to the enactment of the “The Airports Economic Regulatory Authority of India Act, 2008” (the ‘Act’) on 05.12.2008, the establishment of the Airports Economic Regulatory Authority (the ‘Authority’) on 12.05.2009, and the notification of the powers and functions of the Authority w.e.f 01.09.2009 the Ministry of Civil

Aviation, in October'09 transferred the subject issue for the Authority's consideration, along with copies of relevant extracts of files and correspondences.

- 3.2 The Authority is to perform the following functions in respect of major airports:
- to determine the tariff for the aeronautical services;
  - to determine the amount of the development fees in respect of major airports;
  - to determine the amount of the passengers service fee levied under rule 88 of the Aircraft Rules, 1937 made under the Aircraft Act, 1934; and
  - to monitor the set performance standards relating to quality, continuity and reliability of service as may be specified by the Central Government or any authority authorised by it in this behalf.

3.3 The actual annual passenger throughput at Hyderabad airport during 2009-10 was 65,12,913, which is in excess of 1.5 million passengers per annum (mppa). Hence, Hyderabad International Airport is a "major airport" as defined in clause (i) of Section 2 of the Act. As per 2009-10 traffic statistics, the international passengers comprised 26.35% and the domestic passengers comprised 73.65% of the total passenger throughput.

3.4 Further, in terms of Sec 13 (1) (b) of the Act, Authority shall, inter alia, determine the amount of development fees in respect of major airports. Furthermore, Rule 89 of the Aircraft Rules, 1937, provides that the licensee (of an aerodrome) may levy and collect at a major airport the User Development Fee at such rates as may be determined under clause (b) of sub-section (1) of Section 13 of the Act.

3.5 Rule 89 of the Aircraft Rules, 1937 prescribes:

*“ User Development Fee – The licensee may*

*(a) Levy and collect at a major airport the User Development Fees at such rate as may be determined under clause (b) of sub-section (1) of section 13 of the Airports Economic Regulatory Authority of India Act, 2008;*

*(b) levy and collect at any other airport the User Development Fees at such rate as the Central Government may specify.”*

However, no methodology has been prescribed in the Aircraft Rules for determining the rate of UDF.

3.6 The draft guidelines issued by the Ministry of Civil Aviation noted that levy of UDF was to be considered only in cases and years where the target revenue of a major airport was projected to fall short of the admissible expenditure. Hon'ble High Court of Kerala, in its judgment in the case of **Commissioner of Central Excise Vs. Cochin International Airport Ltd. [2009 (16) S.T.R. 401 (Ker.)]**, has noted that the purpose of UDF "is to augment revenue". Thus, UDF may be taken as a revenue enhancing measure to ensure economic viability of the airport operations. The Authority, in the Consultation Paper No03/2009-10 has noted that with respect to

airports' tariff proposals to be submitted to the Authority, the Authority will require that: *“ The User Development Fee is proposed as a revenue head to be allowed in specific case upon due consideration.”*

3.7 Keeping in view the above, the Authority has been determining the rate of UDF so as to ensure that the airport operator is able to obtain return on the regulated asset base at a fair rate, over the relevant period.

4.1 HIAL vide their letter Ref: GHIAL/F&A/UDF/2009-10/2 dated 02.08.2009 addressed to the Ministry, had requested for upward revision of UDF as under:

a) If 28.54% hike in Landing, Housing and Parking Charges is allowed:  
Domestic UDF @ Rs.450/-plus taxes and International UDF @ Rs.2840/-plus taxes.

b) If 28.54% hike in Landing, Housing and Parking Charges is not allowed:  
Domestic UDF @ Rs.450/-plus taxes and International UDF @ Rs.2918/-plus taxes.

4.2 The aforesaid request was transferred by the Ministry for the Authority's consideration in October, 2009. Upon scrutiny of the application, Authority, observed that the auditor's certificate for classification of assets was not available and the methodology of calculation of UDF was not clear. The Authority, vide its letter no.AERA/20010/ HIAL-DUF/2009-10 dated 09.12.2009, requested HIAL to furnish the above information at the earliest.

4.3 In accordance with the decision taken in the meeting held with Airport Operators on 03.12.2009, the Authority referred the UDF proposal of HIAL to the consortium led by M/s.Pricewaterhouse Coopers Pvt Ltd (PWCPL) for immediate scrutiny and advise. Additional information was also sought from HIAL.

4.4 The additional information sought for the determination of UDF was furnished by HIAL and the same was shared with PWCPL. A number of meetings were also held in January-February, 2010 in this regard where PWCPL briefed about different scenarios on the basis of assumptions made on:

- a. Till to be adopted
- b. Return of Equity
- c. Traffic forecast
- d. Treatment of additional capital investment (of Rs.442 crores undertaken by HIAL at the project implementation stage)

4.5 It was specifically observed that the Ministry of Civil Aviation earlier had approved the proposal of HIAL for additional investment to the tune of Rs.442 crores (at the project execution stage) subject to the following conditions (Ref letter No.AV.20014/003/2006-AAI dated 02.04.2008 – **Annexure-I**):

- a. *It will not require any additional contribution from stakeholders;*

- b. There will not be any additional liability to the user. No additional UDF will be considered on this account;*
- c. All the works may be taken through competitive bidding process.*

4.6 However, before the Authority could take a view in the matter through stakeholder consultation, HIAL, vide letter no nil dated 12.02.2010, requested that the case may not be processed further at that juncture.

5. In the meantime, the Ministry vide its letter No.AV.20014/003/2006-AAI dated 09.08.2010 (**Annexure-II**), has conveyed that the conditions imposed by the Ministry vide its letter of even no. dated 02.04.2008 on the investment of Rs.442 crores at Hyderabad Airport stand withdrawn.

6.1 Subsequently, HIAL vide its letter dated 18.08.2010 (**Annexure-III**), submitted an application for revision in UDF seeking approval of the Authority for revised rates of Rs.500/- per departing domestic passenger and Rs.2825/- per departing international passenger, w.e.f. 01.09.2010, excluding service tax. HIAL has stated that the UDF proposed by them has been worked out on single till basis and has been calculated for five years including last two completed years. In short, HIAL has requested that over a five year period UDF should be adequate to give them a fair rate of return on their asset base. HIAL also furnished clarifications vide emails dated 08.09.2010; 13.9.2010; 15.09.2010, 18.09.2010, 21.09.2010 and 22.09.2010 in response to the queries raised by the Authority.

6.2 HIAL has worked out the proposal on single till basis. It has been calculated based on the figures furnished for a period of 5 years (FY 2008-09 to FY 2012-13). It has stated that the revenues from Cargo, Ground handling and Fuel throughput charges have been classified under aeronautical revenue whereas the rental revenues from Cargo, Ground handling and Fuel farm have been treated as non-aeronautical. HIAL have justified their treatment considering that the rental revenue in general is non-aero revenue and rentals are derived from provision of infrastructure unrelated to nature of underlying business.

6.3 HIAL has also furnished an auditors certificate in connection with the agreed upon procedures, concepts and principles behind the bifurcation of assets and operating expenditure in to Aeronautical and Non-Aeronautical.

6.4 The proposal is based on the following further assumptions (as made by HIAL):

- (i) A 10% increase in landing and parking charges, year on year, over the regulatory period;
- (ii) Charge of Rs.4000 per landing for aircrafts with capacity of less than 80 seats;
- (iii) Reduce the discount of 15% on landing and parking charges for domestic scheduled airlines, if payment is made within credit period of 15 days, to 2%.

6.5 In the clarification dated 13.09.2010 (**Annexure-IV**), HIAL has, inter-alia, stated that:

- (i) A hotel asset existing in the books of account of HIAL has been demerged through a 100% owned subsidiary namely GMR Hotels & Resorts Ltd. The capital cost of the hotel has not been assumed in the asset base. Revenues and cost of the same have been excluded from the projections of HIAL.
- (ii) As per scheme of demerger, an amount of Rs.110 crores was treated as equity investment of HIAL in the subsidiary whereas an amount of Rs.140 crores was considered as unsecured loan extended by HIAL.
- (iii) The unsecured loan of Rs.140 crores is considered as received from the subsidiary and repaid to the existing lenders during the year 2010-11.
- (iv) There is no land cost associated with the hotel. However, HIAL will charge a lease rent of Rs. 35 per sq. mtr. per month for the land occupied by the hotel (i.e. 7.03 acres).
- (v) The total project cost of HIAL including hotel is Rs.2920 crores, which consists of Rs.2120 crores loan and Rs.800 crores equity and quasi equity. The bifurcation of equity and loans is as under :

<b>Equity and Loans</b>	<b>Rs in Crs.</b>
Equity	378
Interest Free Loan from GoAP	315
Advance Development Fund Grant	107
<b>Total Equity</b>	<b>800</b>
Term Loan 2005	960
Term Loan 2007	718
Additional Term Loan required	442
<b>Total Debt</b>	<b>2120</b>

- (vi) Concession fee (payable @ 4% after 10 years) is an expense for each financial year and the same is accounted for on accrual basis as per the accounting standards.
- (vii) The inflation figures in the original proposal dated 18.08.2010 have been changed to correct factual errors, as pointed out by the Authority. The new WPI increase comes to 5.33% pa which has been incorporated in the revised calculation.
- (viii) Dividends in general do not form part of the core activity (airport operations) of the airport operator and should not be included in tariff calculation. Telecom Disputes Settlement and Appellate Tribunal (TDSAT) has in an Order dated 30.08.2007 held that dividends do not constitute part of Adjusted Gross Receipt (AGR).
- (ix) LPH charges have been taken as per existing rates for the year 2010-11 and the 10% escalation has been considered, year on year, starting from 2011-12.
- (x) The reduced discount of 2% on domestic LPH has been considered w.e.f. 01.11.2010.

- (xi) Similarly, a landing charge of Rs.4000/- per landing for aircraft with less than 80 seats has been considered w.e.f. 01.11.2010.
- (xii) The revenue share from the Cargo has been considered as aeronautical revenue whereas Rs. 5.77 crores without any escalation has been considered as rental revenues and considered as Non Aeronautical revenue.

**Based on the above HIAL revised the proposal and requested for approval for levy of UDF at the revised rates of Rs.500/- per domestic departing domestic passenger and Rs.2987/- per departing international passenger, exclusive of service tax, w.e.f. 01.11.2010.**

7. The Authority took note of the following:

- (i) The Authority has not yet taken a final position in respect of economic regulation of airports. Therefore, the tariff determination in respect of the Hyderabad International Airport would take time. In the interim, the revenue enhancement through UDF could be considered, on an ad-hoc basis. In case this is not considered, the target revenue could be higher at the time of tariff determination.
- (ii) The assumption made by HIAL, for a year on year, 10% increase in aeronautical charges cannot be considered, at present, as it would tantamount to the Authority's approval for such revision in aeronautical charges. The Authority, in due course, would be required to prescribe aeronautical tariff for the regulatory period of five years and this may or may not translate into year on year increase of 10%.
- (iii) As regards, the levy of Rs.4000/- landing charges proposed to be charged on aircrafts with less than 80 seats, it is observed that such aircrafts are fully exempted from payment of landing charges, as per present practice, even though the landing charge is leviable according to weight based rates. Therefore, the proposal to withdraw the exemption and instead levy a charge of Rs.4000/- per landing is in effect reduction in 100% discount (or exemption) to the level proposed. As such, this is a purely commercial decision of the airport operator. Authority does not wish to be a party to this decision.
- (iv) As regards, the reduction in discount for payments made within the credit period, from 15% to 2%, it is again a purely commercial decision of HIAL.
- (v) The nature and quantum of discounts is essentially a commercial decision of HIAL. Further, in the present case, HIAL has indicated that the discounts are proposed to be reduced w.e.f. 01.11.2010. The additional revenue on account of such reduced discounts can be, accordingly, considered towards target revenue calculation.

8. In the light of the position noted in para 7 above, the submissions made by HIAL, along with the workings have been examined by the Authority.

9.1 **Regulatory Asset Based (RAB)** - HIAL has indicated that it has taken the fixed assets values from its fixed asset register. Further, it has also indicated that allocations to the Regulatory Asset Base (RAB) have been made based on avoidable cost principle. A detailed concept note certified by Statutory Auditors, has been furnished. According to HIAL, depreciation has been considered as per the rates prescribed in Companies Act, 1956. HIAL has stated that a technical assessment of the assets has been undertaken to get the useful life of assets and the same shall be submitted at time of final tariff approval.

For the present, the value of initial RAB of Rs.2173.60 crores, as submitted by HIAL has been considered. The Weighted Average SLM depreciation rate calculated from HIAL submission works out to around 4.65%.

9.2 **Weighted Average Cost of Capital (WACC)** - HIAL, has taken the cost of equity of 24% in the calculation (as per the independent assessment by M/s. Jacob Consultancy). For cost of debt, HIAL has considered the same as per actual borrowing rate for the year 2010-11 which is projected @ 11% for the year as rate is floating in nature. HIAL have not considered any return on the Interest Free Loan. Further, the Advance Development Fund Grant has been removed from the WACC calculation as well as from the RAB.

It is to be observed that in the Consultation Paper No. 03/2009-10 dated 26.02.2010, the Authority has indicated that for determining WACC :

- (i) It will consider cost of debt on actual basis; and
- (ii) Cost of equity would be determined on CAPM basis.

Since, in the present case, the actual cost of debt for 2008-09 and 2009-10 is available and it can be reasonably estimated for 2010-11, 2011-12 and 2010-13, the same has been taken for calculation of UDF. As regards cost of equity, the HIAL is not a listed company. Therefore,  $\beta$  in case of HIAL is not readily available nor can it be easily determined. In the circumstances, following approach could be considered for the present:

(i) It is observed that the Government of Andhra Pradesh has, in the State Support Agreement, assured HIAL that the Interest Free Loan shall be adjusted pro-rata if required as a result of change to the Project Cost and so as to maintain equity interval rate of return at 18.33% (clause 2.3(b) of the agreement). Hence, it could be inferred that a equity return of 18.33% has been assured to HIAL. The cost of equity, therefore, could be taken as 18.33% for ad-hoc determination.

(ii) In respect of HIAL's request for revision in UDF so as to, inter-alia, ensure fair rate of return for the previous period (i.e., 2008-09 and 2009-10), it can be argued that the same would tantamount to retrospective revision in the rate of UDF that too broadly for a period (i.e., upto 01.09.2009) when the



regulatory powers of the Authority had not been notified. On the other hand, it is to be observed that UDF is a revenue enhancing measure and the rate thereof is so determined so as to ensure a fair return to the airport operator on the RAB. Therefore, in a case where the operator has not been able to obtain a fair return on RAB and has in fact incurred loss, despite UDF, it is evident that UDF rate earlier determined was insufficient. In such a situation, it would be reasonable to so revise the rate of UDF, prospectively, so that the operator is able to obtain at least the minimum assured return for the entire period under consideration. The latter view is in consonance with one of the objectives that the Authority is minded to set for itself, i.e., ensuring viability of the airport.

Based on the above, the WACC has been calculated as under:

Year	2008-09	2009-10	2010-11	2011-12	2012-13
WACC	9.42%	9.71%	9.65%	9.89%	9.86%

**9.3 Traffic Projections** – The traffic projections made by HIAL are based on a study made by the Madras School of Economics. The base case estimate of traffic has been projected as follows:

- 5 years average CAGR of 6.40% increase in Domestic Pax Traffic
- 5 years average CAGR of 7.60% increase in International Pax Traffic
- 5 years average CAGR of 5.42% increase in Domestic ATMs
- 5 years average CAGR of 6.31% increase in International ATMs

The Authority observed that the detailed assumptions and specifically the independent variables are not available and that the forecast made for the current year 2010-11 do not match with the actual traffic witnessed till now. Hence, it is not possible to accept the forecast made by HIAL, for the present. In view of this, the forecast for 2010-11, 2011-12 and 2012-13 could be as follows:

- 13.1% based on 10 year national average for Domestic Passenger Traffic
- 11.4% based on 10 year national average for International Passenger Traffic
- 12% based on passenger and ATM growth regression analysis for Domestic ATM Traffic
- 12% based on passenger and ATM growth regression analysis for International ATM Traffic
- 8.3% based on 10 year national average for Domestic Cargo Traffic
- 8.9% based on 10 year national average for International Cargo Traffic

#### **9.4 Revenue:**

##### **9.4.1 Aeronautical Revenue:**

###### **(a) Landing & Parking Charges:**

- A 10% increase in landing and parking charges year on year has been considered by HIAL in their proposal.
- Current discount of 15% prevailing as on date for Domestic Scheduled Landing has not been considered by HIAL. Instead HIAL has proposed to reduce the discount on all landing and parking charges for all

domestic Scheduled Airlines paying within 15 days from the date of invoice to 2%. For the purpose of calculation HIAL has presumed that only 50% of customers will be availing this discount.

- Landing charges for aircrafts with less than 80 seat is currently exempted for Domestic Landing, will be charged Rs. 4,000.

As stated in para 7 (ii) above, no year on year increase in landing, parking or housing charges is being considered, presently. Further, keeping in view the position indicated in para 7 (iii), (iv) and (v), the additional revenues estimated on account of reduced discounts are being accepted.

- (b) **Passenger Service Fee (PSF):** Present charge of Rs.70 per departing passenger (towards facilitation component) remains unchanged.
- (c) **Current UDF:** The current UDF net of Service Tax @ Rs. 340/- for domestic passenger and @ Rs.907/- for international passengers has been taken by HIAL for calculations/estimates up to 31.10.2010. The revised UDF is assumed to be applicable from 1st November 2010 and upto 31st March 2013.
- (d) **Cargo:** Revenue share from the Cargo has been considered as aeronautical revenue.
- (e) **Ground Handling:** Revenue share has been considered as aeronautical revenue.
- (f) **Common Infrastructure Charges:** Rs. 70 domestic with PBB, Rs. 48 Domestic without PBB, Rs. 110 International per departing pax as aeronautical charge, remains unchanged.
- (g) **Fuel Farm:** Revenue from Fuel Throughput Charges has been considered @ Rs. 670/kl.
- (h) **Dividend** - As indicated in para 6.5 (viii) above, HIAL has stated that the dividend should not be included in tariff calculation and has submitted an extract of an Order passed by TDSAT to support the same. While giving the extract from the TDSAT Order, HIAL has not provided the citation thereof. AERA is informed that the issue of computation of gross revenue as well as adjusted gross revenue has been deliberated upon by TDSAT in more than one judgement. For example, in the judgement given on 26<sup>th</sup> August, 2008 (Petition No. 129(c) of 2007, in the case of Tata Sky Ltd. Vs Government of India and TRAI), TDSAT has dealt with the issue of income arising from activities other than those for which a particular licence was granted under Section 4 of Indian Telegraph Act. Based on the power derived by the Government of India to grant a particular licence (Telecom or DTH), TDSAT had passed the relevant Order holding that the income from activities of licensee which are not part of the licensed activities cannot be included in gross income for purposes of calculating licence fee. It is thus clear that the TDSAT has held that the income generated out of non-licensed activities should not be taken as part of the gross

revenue as Government has privilege only over the licensed activities, in view of the provisions of the Section 4 of the Indian Telegraph Act. In the case of airports, however, the legislature has specifically provided that while determining the tariff for aeronautical services, “**the revenue received from services other than aeronautical services**” has to be taken into consideration. Since the UDF is being determined so as to ensure a fair return on RAB (after taking into consideration the revenue received from aeronautical and non-aeronautical services), it would only be reasonable to include the dividend income in the revenues of HIAL.

- (i) **Land Lease Rental from Hotel subsidiary** – HIAL charges a lease rent @ Rs.35/- per square meter per month from the hotel subsidiary in respect of 7.03 acres of land. But this has not been included in the revenues by HIAL. It is observed that while hotel asset has been excluded from the RAB the Authority has not taken a final view on the treatment to be given to the exclusion from RAB of such lands. Therefore, pending a decision of the Authority regarding final status of this land, the lease rental is being considered for UDF determination purposes.

#### 9.4.2 Non Aeronautical Revenue:

- (a) **Retail**-Considered, for the present, as per HIAL’s submission which they have indicated as based on respective contracts
- (b) **Duty Free**-Concession for operating the Duty Free is managed by M/s.HDFR Limited (100% subsidiary of HIAL). Based on arrangement, the revenue share is considered by HIAL at 14% on Gross Sales for the first year (2010-11) and 15% for second year and 16% of Gross Sales thereafter. This could be accepted, for the present.
- (c) **Office Space**- Considered as per respective agreements as indicated in HIAL’s submission, for the present.
- (d) **Food & Beverage**-Considered as per respective contracts as indicated in HIAL’s submission, for the present.
- (e) **Cargo Rentals**- As indicated in HIAL’s submission, Rs. 5.77 crores without any escalation has been considered as rental revenues based on signed agreement, for the present.
- (f) **Ground Handling**: Rental income considered as per HIAL’s submission, for the present.
- (g) **Fuel Infrastructure Recovery** - has been considered as indicated in HIAL’s submission at the prevailing rate without escalation, for the present.

Considering that the current exercise is for ad-hoc determination of the UDF, the assumptions and submissions made by HIAL in respect of the non-aeronautical

revenue at (a) to (g) above, are being accepted for the present. Further, since, the UDF is being determined on single till basis, the bifurcation of revenue streams into aero and non-aero does not impact the determination.

#### 9.5 **Operating Cost:**

- (a) **Salaries:** HIAL has stated that the real increase in salaries has been taken at 6% pa and inflation @ 7.80% pa. However, as stated in para 6.5 (vii) above, the WPI increase has been subsequently corrected to 5.33%. HIAL has assumed an increase in manpower by 10% when the capacity reaches to 9 mppa.

For the present, as advised by the Consultants, a nominal escalation in salaries over WPI @ 3% and the additional manpower increase @ 10% for every 3 million increase in passengers has been assumed.

- (b) **Power Cost:** HIAL has indicated that there is likely to be increase in power cost by GoAP in year 2010-11. Thereafter, power cost has been assumed to increase by inflation of 5.33% pa, for the present.
- (c) **Security Cost:** As indicated in HIAL's submission, increase in manpower numbers by 5% has been considered for every increase in pax by 1.5 million. Real increase of 3% and inflationary increase of 5.33% as been taken for future years on manpower cost.
- (d) **Consultancy Charges:** As indicated in HIAL's submission, real increase in consultancy charges is taken as 3% pa and inflation of 5.33% pa.
- (e) **Repair and Maintenance:** As indicated in HIAL's submission, after every increase in pax by 1.5 million, an increase of 5% is taken. In addition, an yearly increase of 8.30% pa is taken in costs.
- (f) **Insurance Charges:** Insurance charges are increased by inflation of 5.33%pa.
- (g) **Rent & Rates Property Tax:** Increase is taken by 5.33%pa.

Projections in respect of operating cost could be accepted for the present (with changes indicated above) subject to detailed assessment at the final determination stage.

#### 10. To summarise:

- (i) No year on year increase in LPH charges is being considered. However, additional revenue on account of reduced discounts has been considered.
- (ii) The assumptions and submissions made by HIAL in respect of the Non-Aeronautical Revenue streams have been broadly accepted, for the present.

(iii) All interest and dividend income from subsidiaries and other investments have been considered as revenues.

(iv) Rental income from hotel land has also been considered.

11. As indicated in para 2.1 above, as per the CA, the HIAL will be allowed to levy UDF w.e.f. airport opening date, duly increased in the subsequent years with inflation index. In a communication dated 21.09.2010, HIAL have confirmed that they have made the application “for enhancement of UDF keeping in view the provisions of AERA Act and also considering clause 10.2.4 of the GHIAL concession agreement wherein we seek AERA’s approval on UDF as per framed regulations. As AERA’s final tariff regulations are not yet in place, we have sought an appropriate ad hoc determination from AERA. For the purpose of this adhoc UDF determination we have not factored an inflation index on UDF (Schedule 6 of CA).” It is observed that :

- (i) The determination of UDF is being made on the economic justification basis.
- (ii) The operating expenditure of HIAL has been duly indexed for inflation in this determination.
- (iii) A fair return is being ensured even for the previous period, i.e., for 2008-09, 2009-10 and 2010-11 (upto 31.10.2010), while determining the revised rate w.e.f 01.11.2010.

Keeping in view the above, it is clear that the impact of inflation is duly considered in the present determination and there is no case for separately indexing the UDF for inflation as contemplated under the concession agreement.

12. Keeping in view the position explained above the proposal for revision of UDF, w.e.f 01.11.2010, has been reworked and the following options emerge:

Option No.	HIAL - UDF Calculations reworked (excluding applicable taxes) (Existing UDF @ Rs.340/- departing domestic pax and Rs.907/- departing International Pax )			
	Domestic (Rs.)	Incremental Domestic (Rs.)	International (Rs.)	Incremental International (Rs.)
I	400	60	1714	807
II	420	80	1656	749
III	440	100	1598	691
IV	450	110	1569	662

The details of the workings are at **Annexures V, VI, VII and VIII** respectively.

13. UDF is considered a measure of revenue enhancement. From this perspective, the UDF rate has been worked out based on the five year details submitted (for FY

2008-09 to 2013-14) by HIAL, recognizing the fact that the UDF rate would have to be finalized at the tariff determination stage.

14. Thus, on balance, option II appears to be more acceptable as it reasonably limits the impact on domestic passengers without disproportionately burdening the international passengers.

15. In view of the above, in exercise of powers conferred under Section 13 (1) (b) of the AERA Act, 2008, read with rule 89 of the Aircraft Rules 1937, the Authority proposes to revise the levy of UDF at the GMR Rajiv Gandhi International Airport, Hyderabad from the existing rates to Rs.420/- per domestic embarking passenger and Rs.1656/- per International embarking passenger (exclusive of service tax, if any) purely on an ad-hoc basis, with effect from 1<sup>st</sup> November, 2010, based on the figures for the period 2008-09 to 2013-14. This ad-hoc determination would be reviewed at the stage of tariff determination for the first cycle and thereafter at such intervals as the Authority may decide.

16. The Authority solicits feedback, comments and suggestions from stakeholders on the proposal contained in para 15 above. Comments/submissions may please be furnished to the Authority, **latest by Thursday, 7<sup>th</sup> October, 2010**, at the following address:

**Shri Sandeep Prakash**  
**Secretary**  
**Airports Economic Regulatory Authority of India**  
**AERA Building,**  
**Administrative Complex,**  
**Safdarjung Airport, New Delhi 110003**  
**Email: sandeep.prakash@aera.gov.in, sandeep.moca@nic.in**  
**Tel: 011- 2469 5040**  
**Fax: 011- 2469 5039**

**Yashwant S. Bhave**  
**Chairperson**

-191-

**F. No. AV.20014/ 003/2006-AAI**  
Government of India  
Ministry of Civil Aviation  
(AD Section)

ANNEXURE-I

'B' Block, Rajiv Gandhi Bhavan,  
Safdarjung Airport, New Delhi.  
Dt. 02.04.2008.

To,

The Managing Director,  
Hyderabad International Airport Limited,  
6-3-866/1/G3, Greenlands,  
Begumpet, Hyderabad-500016

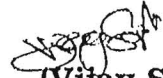
**Sub: Additional investment of Rs.442 crores at Hyderabad airport.**

Sir,

I am directed to refer to your letter No. Nil dated 19.01.2008 regarding the additional investment of Rs.442 crores and state that HIAL may undertake this investment subject to the following condition:-

- (i) It will not require any additional contribution from stakeholders.
- (ii) There will not be any additional liability to the user. No additional UDF will be considered on this account.
- (iii) All the works may be taken through competitive bidding process.

Yours faithfully,



(Vijay Singh)

**Under Secretary to the Govt. of India**

Tele-fax- 24640217

*Received  
for  
4/4/08*

1387/dec/16  
16/8/11

F. No. AV.20014/003/2006-AAI  
Government of India  
Ministry of Civil Aviation  
(AD Section)

'B' Block, Rajiv Gandhi Bhavan,  
Safdarjung Airport, New Delhi.  
Dated. 09.08.2010.

To,  
Shri Kiran Kumar Grandhi,  
Managing Director,  
Hyderabad International Airport Limited,  
Project Site Office,  
Shamshabad, Ranga Reddy District,  
Andhra Pradesh-501218.

13/16/8

DSD-II

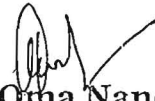
**Sub: Additional investment of Rs.442 crores incurred by HIAL towards the project cost at RGI Airport, Shamshabad.**

Sir,

I am directed to refer to your letter No. Nil dated 24.04.2010 regarding the additional investment of Rs.442 crores and state that the request of M/s Hyderabad International Airport (HIAL) in respect of issuing a suitable modification in this Ministry's letter dated 02.04.2008 has been considered and examined in the context of provisions of Concession Agreement signed between GoI and HIAL.

2. With the approval of competent authority, it has been decided that the conditions imposed by this Ministry vide letter of even no. dated 02.04.2008 on the investment of Rs.442 crores at Rajiv Gandhi International Airport, Shamshabad by M/s Hyderabad International Airport Limited towards making the additional facilities at the airport stands **withdrawn**. However, while deciding the issue of UDF, it is for the Airports Economic Regulatory Authority to undertake its own due diligence about the admissibility of the investment of Rs.442 crores towards UDF.

Yours faithfully,



(Oma Nand)

Under Secretary to the Govt. of India

Tele-fax- 24640214

Copy to:-

Shri Sandeep Prakash, Secretary, AERA, Airports Economic Authority Building, Administrative Block, Safdarjung Airport, New Delhi.





**HYDERABAD RAJIV GANDHI INTERNATIONAL AIRPORT**  
GMR Hyderabad International Airport Limited

-1-

ANNEXURE - III  
**GAR**

Regd. Office:  
GMR HIAL Airport Office,  
Rajiv Gandhi International Airport,  
Shamshabad, Hyderabad 500 409,  
Andhra Pradesh, India  
T +91 40 24008204-11  
F +91 40 24008203  
W www.hyderabad.aero

Dated: August 18th, 2010

To,  
The Secretary,  
Airport Economic Regulatory Authority of India,  
AERA Building, Administrative Complex, Safdarjung Airport,  
New Delhi 110003

Dear Sir,

Sub: Increase in User Development Fee "UDF" for GMR Hyderabad International Airport Private Limited

This is in reference to the correspondence resting with our letter dated 12<sup>th</sup> February 2010. We herewith re-submit the application for the increase in UDF in the format provided by the Authority in view of changed circumstances.

The proposed UDF has been worked on single till and has been calculated for 5 years including past 2 completed years in line with the 5 year regulatory period proposed by AERA. As part of classification, we have considered Cargo, Ground Handling revenue share and Fuel throughput charges also as aeronautical services. Rental revenues from Ground Handling, Cargo and Fuel Farm have been treated as Non-Aero considering rental revenue in general is a non-aero revenue and rentals are derived from provision of infrastructure unrelated to nature of underlying business.

As regard to non admissibility of capital expenditure of Rs. 442 Crores, we had taken up the matter with Ministry of Civil Aviation and the same was favorably considered by them for admissibility purpose. A copy of letter number : F no. AB.20014/003/2006/AAI dated 9<sup>th</sup> August 2010 from MoCA is enclosed for your reference in **Annexure "A"**.

The detailed assumptions regarding Capex, Revenues, Operating Cost and Finance Cost are enclosed separately in **Annexure "B"**. The detailed calculation is enclosed as **Annexure "C"**.

It is proposed to increase the landing and parking charges by 10% p.a. on a year on year basis for the next 3 years and the same has been considered in the workings. At present GHIAL is offering discount at 15% on Domestic Landing Charges if the payment is made within 15 days as per the existing AAI charges. This exorbitant discount is proposed to be rationalized in line with market practice. Therefore, we propose to reduce the discount on Landing and Parking charges for domestic schedule airlines if payment if made within a credit period of 15 days, to 2% and the UDF workings take into account this lower discount. Further, GHIAL is also not charging domestic landing

fee to aircraft with less than 80 seats. We propose to levy a charge of Rs. 4,000 per landing in respect of these aircrafts, which has been considered in the computations.

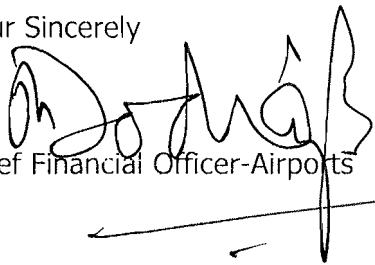
Considering the assumptions in Annexure B and also considering increase in landing and parking charges by 10% year on year, charge of Rs. 4000 per landing for aircraft less than 80 seaters and discount of 2% on 50% of the payments for domestic landing and parking charges; the entitlement of UDF net of tax works out to Rs. 500/- Per Domestic Pax and Rs.2825/- Per International Pax. The working sheets for the computations are attached.

We therefore request you to kindly approve the following w.e.f. 1<sup>st</sup> September 2010:

- Charge UDF of Rs. 500/-/Per Domestic Departing Pax and Rs.2825/-Per International Departing Pax plus applicable taxes.
- Increasing landing and parking charges by 10% year on year over the regulatory period.
- Reduce the discount of 15% on Landing and Parking charges for domestic schedule airlines if payment if made within a credit period of 15 days to 2%.
- Charge of Rs. 4,000/- per landing for aircraft's with capacity of less than 80 seats.

It may be noted that our submissions herewith may not be construed as our stated position on the broad regulatory framework and the submissions may be subject to final tariff guidelines notified by AERA.

Your Sincerely



Chief Financial Officer-Airports

## "Annexure B"

### Capex Assumption

- Fixed Assets has been taken as per Fixed asset Register.
- Allocation to RAB has been made based on avoidable cost principle. The detailed concept note certified by Statutory Auditors is enclosed in **Annexure "D"**
- Depreciation has been considered as per the rates prescribed in Companies Act, 1956. However we are getting the technical assessment of the assets to get the useful life of assets. The same may be submitted at time of final tariff approval.

### WACC

- As per independent assessment by International renowned consultancy firm M/s Jacob Consultancy, the Cost of Equity of 24% has been recommended for GHIAL. A copy of the report is enclosed in **Annexure "E"** As regards, the Cost of debt, the same is considered as per actual borrowing rate for the year 2010-11 and considered at 11% for the projected year as rate is floating in nature. No return has been assumed on Interest Free Loan. The Advance Development Fund Grant has been removed from the WACC calculation and also from the RAB.

### Traffic

- We had appointed Madras School of Economics, a renowned an independent research institution to carry out traffic pattern at GHIAL. Based on the study, the base case estimate of traffic at RGIA is as follows;
  - 5 Years average CAGR of 6.40% increase in Domestic Pax Traffic
  - 5 Years average CAGR of 7.06% increase in International Pax Traffic
  - 5 Years average CAGR of 5.42% increase in Domestic ATMs
  - 5 Years average CAGR of 6.31% increase in International ATMs

The study has been attached as **"Annexure "F"**

### Revenue

#### Aeronautical

- Landing & Parking Charges:
  - Current discount of 15% prevailing as on date for Domestic Scheduled Landing has not been considered. Instead we have proposed to reduce the discount on all landing and parking charges for all domestic Scheduled Airlines paying within 15 days from the date of invoice to 2%.

For the purpose of calculation we have presumed that only 50% of customers will be availing this discount.

- Landing charges for aircrafts with less than 80 seat is currently exempted for Domestic Landing, will be charged Rs.4,000.
- PSF: Present charge of Rs.70 per departing passenger remains unchanged.
- Current UDF-Net of Service Tax is Rs.340/- for domestic passenger and Rs.907/- for international passengers.
- Cargo: Revenue share from the Cargo has been considered as aeronautical.
- Ground Handling: Revenue share has been considered as aeronautical.
- Common Infrastructure Charges:Rs.70 domestic with PBB, Rs.48 Domestic without PBB, Rs.110 International per departing pax as aeronautical, remains unchanged.
- Fuel Farm: Revenues from Fuel Throughput Charges have been considered at Rs. 670/kl.
- As regards to treatment of Cargo, Ground handling and fuel, we shall take the final stand based on guidelines of AERA as and when finalized.

#### Non Aeronautical

- Retail-Considered as per respective contracts
- Duty Free-Concession for operating the Duty Free has now been managed by HDFR Limited (100% subsidiary of GHIAL). Based on arrangement, the revenue share is considered at 14% on Gross Sales for the first year (2010-11) and 15% for second year and 16% of Gross Sales thereafter.
- Office Space- As per respective agreements.
- Food & Beverage-Considered as per respective contracts.
- Cargo Rentals- Rs. 5.77 Crores without any escalation have been considered as rental revenues based on signed agreement and taken as Non Aero.
- Ground Handling : Rentals takes as Non Aeronautical.
- Fuel Infrastructure Recovery has been considered at the prevailing rate without escalation, as non-aero, since this amounts to rentals.

#### Operating Cost

- Salaries: Real increase in salaries is taken at 6% pa and inflation is taken at rate of 7.80% pa. The CAGR of inflation (WPI) has been 7.80% for past 5 year. The same has been as depicted in the table hereunder. An increase is assumed in manpower by 10% when the capacity reaches to 9 mppa.

				CAGR
				7.80%
Year	WPI	100.00		
2004-05	6.50%	106.50		106.50
2005-06	4.40%	111.19		111.19
2006-07	5.40%	117.19		119.86
2007-08	4.70%	122.70		129.21
2008-09	8.40%	135.00		139.29
2009-10	12.90%	150.16		150.16
Source: Central Statistical Organization, 2010				

- Power Cost: There is increase in power cost by GoAP in year 2010-11. Thereafter, power cost has been assumed to increase by inflation of 7.80% pa
- Security Cost: Increase in manpower numbers by 5% has been considered for every increase in pax by 1.5 million. Real Increase of 3 % and inflationary increase of 7.80%.as been taken for future year on manpower cost.
- Consultancy Charges: Real increase in consultancy charges is taken as 3% pa and inflation of 7.80% pa.
- Repair and Maintenance: After every increase in pax by 1.5 million, an increase of 5% is taken. In addition, year on year increase of 10.80% pa is taken in costs.
- Insurance Charges: Insurance charges are increase by inflation of 7.80% pa.
- Rent & Rates Property Tax: Increase is taken by 7.80% pa.

GMR Hyderabad International Airport Limited  
UDF Calculation

All numbers are in Million Rs		2008-09	2009-10	2010-11	2011-12	2012-13
Opening Admissible asset base		21,942	21,518	21,988	21,093	19,961
Closing Admissible asset base		21,518	21,988	21,093	19,961	18,828
Average Admissible Capital Base	C	21,730	21,753	21,540	20,527	19,395
WACC	WACC	10.26%	10.55%	10.61%	10.89%	10.92%
<b>Total Revenues</b>	TR	2,235	2,855	3,233	3,555	3,965
Non aeronautical revenues	NAR	1,533	1,618	1,445	1,576	1,701
O&M cost Aeronautical	AOE	1,698	1,439	1,805	2,003	2,249
O&M Non Aeronautical Cost	NAOE	391	389	423	472	527
Concession fees on AR	CFAR = 4% * AR	89	114	129	142	159
Concession Fees on NAR	CFNAR = 4% * NAR	61	65	58	63	68
Depreciation on Aeronautical	AD	887	907	917	917	917
Depreciation Non Aeronautical	NAD	159	186	215	215	215
Tax payable on Aero	T	0	0	0	0	0
<b>Target Revenue</b>	E = CxWACC + AOE+ NAOE+CFAR+CFNAR + AD+NAD + T	5,516	5,395	5,834	6,048	6,254
Domestic departing Pax			-	1.45	2.70	2.95
International departing Pax				0.58	1.08	1.19
<b>Projected/Actual Revenue</b>	R = AR +NAR	3,768	4,473	5,971	7,536	8,302
<b>Target Deficit</b>	TD = E - R	1,747	921	(137)	(1,487)	(2,048)
<b>Discount Factor</b>		1.22	1.11	1.00	0.90	0.81
	(2+3)					
<b>NPV of Admissible Expenditure Rs. In million (A)</b>		29,040				
<b>NPV of Target Revenue Rs. In million (B)</b>		29,040				
<b>Difference (A-B)</b>		-				
<b>Per pax Increase</b>		663				
<b>Increase in Domestic UDF</b>		160				
<b>Increase in International UDF</b>		1,918				

	Existing UDF	UDF after Increase (2+3)
Domestic UDF	340	500
International UDF	907	2,825

Projected Balance Sheet

	Actual	Actual	Projected	Projected	Projected
	March' 09	March' 10	March' 11	March' 12	March' 13
<b>I. Source of Funds</b>					
<b>1. Shareholders' Funds</b>					
a) Capital	3,780.00	3,780.00	3,780.00	3,780.00	3,780.00
b) Reserves and Surplus	1,070.00	1,070.00	1,070.00	1,070.00	1,070.00
<b>2. Share application money, pending allotment</b>	0.38		-	-	-
<b>3. Loan Funds</b>					
a) Secured Loans	18,031.25	17,564.24	20,831.25	19,899.55	18,879.45
b) Unsecured Loans	7,011.49	8,726.37	4,913.52	5,118.73	5,345.35
<b>4. Working Capital Loan</b>	297.61		265.49	265.49	265.49
	<b>30,190.73</b>	<b>31,140.61</b>	<b>30,860.25</b>	<b>30,133.76</b>	<b>29,340.29</b>
<b>II. Application of Funds</b>					
<b>1. Fixed Assets</b>					
a) Gross Block	27,786.30	28,344.49	26,078.17	26,078.17	26,078.17
b) Less: Depreciation	1,196.67	2,566.53	3,549.56	4,730.04	5,910.53
c) Net Block	26,589.63	25,777.96	22,528.61	21,348.12	20,167.64
d) Capital Work-in-Progress(Including Capital advances)	885.16	237.62	-	-	-
e) Expenditure during construction pending allocation			-	-	-
	<b>27,474.80</b>	<b>26,015.58</b>	<b>22,528.61</b>	<b>21,348.12</b>	<b>20,167.64</b>
<b>2. Investments</b>	132.89	270.22	270.22	270.22	270.22
<b>3. Current Assets, Loans and Advances</b>					
a) Inventories	119.78	95.13	88.85	88.85	88.85
b) Sundry Debtors	688.37	857.37	779.78	855.04	944.27
c) Cash and Bank Balances	920.81	762.09	(367.30)	(1,172.30)	(1,328.48)
d) Other Current Assets	1.95	2.37	2.37	2.37	2.37
e) Loans and Advances	2,277.13	4,442.71	4,423.82	4,423.82	4,423.82
	<b>4,008.05</b>	<b>6,159.67</b>	<b>4,927.53</b>	<b>4,197.79</b>	<b>4,130.84</b>
Less: Current Liabilities and Provisions					
a) Liabilities	3,229.61	4,202.64	568.91	149.70	149.70
b) Provisions	14.14	13.17	13.17	13.17	13.17
	<b>3,243.75</b>	<b>4,215.81</b>	<b>582.08</b>	<b>162.87</b>	<b>162.87</b>
Net Current Assets	764.30	1,943.86	4,345.45	4,034.92	3,967.96
<b>4. Profit &amp; Loss Account</b>	1,818.74	2,910.94	3,715.97	4,480.50	4,934.46
	<b>30,190.73</b>	<b>31,140.61</b>	<b>30,860.25</b>	<b>30,133.76</b>	<b>29,340.29</b>

\* Mar-11 balance sheet projections is after separation of hotel numbers

## G. Hyderabad International Airport Limited

PROJECTED Profit & Loss Account						
Financial Year Ending		31-Mar-09	31-Mar-10	31-Mar-11	31-Mar-12	31-Mar-13
<b>REVENUES</b>						
Revenues	Rs Mn	4,084.73	4,653.09	4,678.70	5,130.25	5,665.63
<b>TOTAL REVENUES</b>		<b>4,084.73</b>	<b>4,653.09</b>	<b>4,678.70</b>	<b>5,130.25</b>	<b>5,665.63</b>
<b>Total Expenditure</b>						
Total Expenditure	Rs Mn	2,407.42	2,077.67	2,227.92	2,443.24	2,744.48
Concession Fees	Rs Mn	163.39	179.85	187.15	205.21	226.63
<b>Total Expenditure</b>		<b>2,570.81</b>	<b>2,257.52</b>	<b>2,415.06</b>	<b>2,648.45</b>	<b>2,971.10</b>
<b>EBITDA</b>						
EBITDA	Rs Mn	1,513.92	2,395.57	2,263.64	2,481.80	2,694.53
Depreciation	Rs Mn	1,121.84	1,372.22	1,180.49	1,180.49	1,180.49
Amortization						
<b>EBIT</b>		<b>392.08</b>	<b>1,023.35</b>	<b>1,083.15</b>	<b>1,301.31</b>	<b>1,514.04</b>
Interest	Rs Mn	1,592.26	2,115.55	2,063.95	2,065.84	1,968.01
<b>PBT</b>		<b>(1,200.18)</b>	<b>(1,092.20)</b>	<b>(980.80)</b>	<b>(764.53)</b>	<b>(453.96)</b>
Taxes	Rs Mn					
<b>PAT</b>	<b>Rs Mn</b>	<b>(1,200.18)</b>	<b>(1,092.20)</b>	<b>(980.80)</b>	<b>(764.53)</b>	<b>(453.96)</b>

Financial Year 2009-10 includes hotel revenues of Rs 31 Cr and 12.3

Financial Year 2008-09 includes the revenues of Aero Express, Hotel which has not been considered in the regulatory Calculation



MR Hyderabad International Airport Limited  
Projected Cash Flow Statement

Start Date	01-Apr-10	01-Apr-11	01-Apr-12
End Date	31-Mar-11	31-Mar-12	31-Mar-13
<b>Source of Funds</b>			
Net Profit as per P&L	(980.80)	(764.53)	(453.96)
Add Depreciation	1,180.49	1,180.49	1,180.49
Changes in Current Assets	43.72	(75.26)	(89.23)
Changes in Current Liabilities	(1,083.14)	(419.21)	-
Project Loan Drawn/(repay)	(280.35)	(726.49)	(793.47)
WC Loan Drawn/(repay)			
<b>Total</b>	<b>(1,120.07)</b>	<b>(805.00)</b>	<b>(156.18)</b>
<b>Utilisation of Funds</b>			
Addition to Fixed Assets	-	-	-
Investments made	-	-	-
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>
	(1,120.07)	(805.00)	(156.18)
<b>Opening balance of Cash</b>	<b>752.78</b>	<b>(367.30)</b>	<b>(1,172.30)</b>
<b>Deficit/ Surplus</b>	<b>(1,120.07)</b>	<b>(805.00)</b>	<b>(156.18)</b>
<b>Closing Cash Balance</b>	<b>(367.30)</b>	<b>(1,172.30)</b>	<b>(1,328.48)</b>

## G Hyderabad International Airport Limited

## Projected Balance Sheet -With Increase

	Actual	Actual	Projected	Projected	Projected
	March' 09	March' 10	March' 11	March' 12	March' 13
<b>I. Source of Funds</b>					
<b>1. Shareholders' Funds</b>					
a) Capital	3,780.00	3,780.00	3,780.00	3,780.00	3,780.00
b) Reserves and Surplus	1,070.00	1,070.00	1,070.00	1,070.00	1,070.00
<b>2. Share application money, pending allotment</b>	0.38		-	-	-
<b>3. Loan Funds</b>					
a) Secured Loans	18,031.25	17,564.24	20,831.25	19,899.55	18,879.45
b) Unsecured Loans	7,011.49	8,726.37	4,967.34	5,272.78	5,609.26
<b>4. Working Capital Loan</b>	297.61		265.49	265.49	265.49
	<b>30,190.73</b>	<b>31,140.61</b>	<b>30,914.08</b>	<b>30,287.82</b>	<b>29,604.20</b>
<b>II. Application of Funds</b>					
<b>1. Fixed Assets</b>					
a) Gross Block	27,786.30	28,344.49	26,078.17	26,078.17	26,078.17
b) Less: Depreciation	1,196.67	2,566.53	3,549.56	4,730.04	5,910.53
c) Net Block	26,589.63	25,777.96	22,528.61	21,348.12	20,167.64
d) Capital Work-in-Progress(Including Capital advances)	885.16	237.62	-	-	-
e) Expenditure during construction pending allocation			-	-	-
	<b>27,474.80</b>	<b>26,015.58</b>	<b>22,528.61</b>	<b>21,348.12</b>	<b>20,167.64</b>
<b>2. Investments</b>	132.89	270.22	270.22	270.22	270.22
<b>3. Current Assets, Loans and Advances</b>					
a) Inventories	119.78	95.13	88.85	88.85	88.85
b) Sundry Debtors	688.37	857.37	1,004.06	1,272.64	1,402.00
c) Cash and Bank Balances	920.81	762.09	754.09	2,261.37	4,811.43
d) Other Current Assets	1.95	2.37	2.37	2.37	2.37
e) Loans and Advances	2,277.13	4,442.71	4,423.82	4,423.82	4,423.82
	<b>4,008.05</b>	<b>6,159.67</b>	<b>6,273.19</b>	<b>8,049.05</b>	<b>10,728.47</b>
Less: Current Liabilities and Provisions					
a) Liabilities	3,229.61	4,202.64	568.91	149.70	149.70
b) Provisions	14.14	13.17	13.17	13.17	13.17
	<b>3,243.75</b>	<b>4,215.81</b>	<b>582.08</b>	<b>162.87</b>	<b>162.87</b>
Net Current Assets	764.30	1,943.86	5,691.11	7,886.18	10,565.60
<b>4. Profit &amp; Loss Account</b>	1,818.74	2,910.94	2,424.14	783.29	(1,399.26)
	<b>30,190.73</b>	<b>31,140.61</b>	<b>30,914.08</b>	<b>30,287.82</b>	<b>29,604.20</b>

## GMR Hyderabad International Airport Limited

## PROJECTED Profit &amp; Loss Account-With Increase

Financial Year Ending		31-Mar-09	31-Mar-10	31-Mar-11	31-Mar-12	31-Mar-13
<b>REVENUES</b>						
Revenues	Rs Mn	4,084.73	4,653.09	6,024.36	7,635.85	8,412.01
<b>TOTAL REVENUES</b>		<b>4,084.73</b>	<b>4,653.09</b>	<b>6,024.36</b>	<b>7,635.85</b>	<b>8,412.01</b>
Total Expenditure	Rs Mn	2,407.42	2,077.67	2,227.92	2,443.24	2,744.48
Concession Fees	Rs Mn	163.39	179.85	240.97	305.43	336.48
<b>Total Expenditure</b>		<b>2,570.81</b>	<b>2,257.52</b>	<b>2,468.89</b>	<b>2,748.67</b>	<b>3,080.96</b>
<b>EBITDA</b>	Rs Mn	<b>1,513.92</b>	<b>2,395.57</b>	<b>3,555.47</b>	<b>4,887.18</b>	<b>5,331.05</b>
Depreciation	Rs Mn	1,121.84	1,372.22	1,180.49	1,180.49	1,180.49
Amortization						
<b>EBIT</b>		<b>392.08</b>	<b>1,023.35</b>	<b>2,374.99</b>	<b>3,706.69</b>	<b>4,150.56</b>
Interest	Rs Mn	1,592.26	2,115.55	2,063.95	2,065.84	1,968.01
<b>PBT</b>		<b>(1,200.18)</b>	<b>(1,092.20)</b>	<b>311.04</b>	<b>1,640.85</b>	<b>2,182.56</b>
Income Tax	Rs Mn					
<b>PAT</b>	Rs Mn	<b>(1,200.18)</b>	<b>(1,092.20)</b>	<b>311.04</b>	<b>1,640.85</b>	<b>2,182.56</b>

Financial Year 2009-10 includes hotel revenues of Rs. 31 Cr and 12.3

Financial Year 2008-09 includes the revenues of Aero Express, Hotel which has not been considered in the regulatory Calculation

GMR Hyderabad International Airport Limited  
 Projected Cash Flow Statement-With Increase

Start Date	01-Apr-10	01-Apr-11	01-Apr-12
End Date	31-Mar-11	31-Mar-12	31-Mar-13
<b>Source of Funds</b>			
Net Profit as per P&L	311.04	1,640.85	2,182.56
Add Depreciation	1,180.49	1,180.49	1,180.49
Changes in Current Assets	(180.55)	(268.58)	(129.36)
Changes in Current Liabilities	(1,083.14)	(419.21)	-
Project Loan Drawn/(repay)	(226.53)	(626.27)	(683.62)
WC Loan Drawn/(repay)			
<b>Total</b>	<b>1.31</b>	<b>1,507.28</b>	<b>2,550.06</b>
<b>Utilisation of Funds</b>			
Addition to Fixed Assets	-	-	-
Investments made	-	-	-
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>
	1.31	1,507.28	2,550.06
<b>Opening balance of Cash</b>	752.78	754.09	2,261.37
<b>Deficit/ Surplus</b>	1.31	1,507.28	2,550.06
<b>Closing Cash Balance</b>	<b>754.09</b>	<b>2,261.37</b>	<b>4,811.43</b>

S.N.	Revenue Name	2008-09	2009-10	2010-2011	2011-2012	2012-2013
1	Revenues from PSF	213.01	225.89	243.47	264.44	289.85
	Revenues from PSF Charge Domestic			174.11	188.80	206.63
	Revenues from PSF Charge International			69.36	75.65	83.22
	<b>Also provide details of break-up in Facilitation Component and Security Component</b>					
2	Revenues from UDF (as currently applicable)	1,021.28	1,572.03	1,744.34	1,897.16	2,081.93
	Domestic	413.97	801.28	845.67	917.01	1,003.65
	International	607.31	770.75	898.68	980.15	1,078.29
3	Revenues from Parking, Housing & Landing Charges	493.36	523.67	662.13	759.19	898.82
3.1	Parking	12.96	10.94	5.74	6.75	8.01
	Domestic - Scheduled	12.84	4.93	4.93	5.79	6.86
	International - Scheduled	0.12		0.81	0.96	1.15
3.2	Housing					
	Domestic - Scheduled					
	International - Scheduled					
3.3	Landing	480.40	512.73	656.39	752.43	890.81
	Domestic - Scheduled	259.57	266.13	377.65	440.22	517.44
	International - Scheduled	220.83	246.61	278.73	312.21	373.37
4	Revenues from Public Admission Fee	6.36	30.95	36.21	39.49	43.45
5	Revenues from Fuel Related Charges	623.43	614.35	636.10	680.09	733.99
	Throughput	192.53	189.68	196.40	209.98	226.62
	Capital	430.90	424.67	439.70	470.11	507.36
6	Revenues from Ground Handling	101.25	98.02	103.72	110.43	118.15
	Concession Fees	53.70	51.60	54.98	59.25	64.42
	Rentals	47.54	46.42	48.74	51.18	53.73
12	Revenues from Common Infrastructure Charges	196.48	228.79	261.21	283.93	311.43
	Domestic	114.99	143.65	152.22	165.06	180.66
	International	81.49	85.15	108.99	118.87	130.77
13	Revenues from Flight Catering Concession Fees	47.77	43.75	46.67	50.40	54.85
14	Revenues from Cargo Handling Charges	122.67	121.30	128.70	138.33	149.44
	License Fees (Rentals)	57.76	57.76	57.76	57.76	57.76
	Concession Fees (Revenue Share)	64.91	63.54	70.94	80.56	91.67
15	Revenues from Car Rental Services (Radio taxi)	19.44	24.80	26.48	28.77	31.53
17	Revenues from Trading Concessions - Include all services as mentioned in concession agreement	673.00	685.18	605.69	681.23	739.88
	Commercial Activities					
	Duty Free	107.26	108.64	41.44	79.96	101.34
	Food & Beverages	55.10	50.56	50.83	54.80	59.48
	Retail	51.22	61.23	65.51	70.98	76.97
	Advertisement	151.79	153.37	96.00	103.68	114.05
	Rentals					
	Money exchange counter	32.78	44.49	41.95	44.04	46.25
	ATMs /	5.22	6.28	6.84	7.11	7.40
	Hotel Counters	5.93	1.18	6.24	6.49	6.75
	Tourist counter	3.64	0.94	2.50	2.60	2.70
	Lounges	50.77	49.49	43.17	46.89	47.94
	Medical	2.67	3.65	3.79	3.94	4.10
	Car Rentals Counters	16.90	13.91	16.85	17.52	18.22
	Telecommunication	5.25	20.77	25.13	26.13	27.18
	PTC			1.50	1.56	1.62
	MRO (NACIL)	7.58	7.96	8.36	8.78	9.22
	CAM	34.72	34.24	35.61	37.04	38.52
	Office Spaces					
	Airline and other office rentals	142.16	128.48	159.97	169.70	178.14
19	Revenues from Car Parking	85.30	94.40	100.81	109.50	120.02
20	Revenues from Real Estate Development Revenues	-	-	-	-	-
	Hotels					
21	Revenues from Interest & dividend Income	102.60	140.34	10.00	10.00	10.00
22	Revenue from Any Other Sources (Please Specify)	62.23	70.02	73.17	77.30	82.29
	Security	26.22	25.25	26.90	28.99	31.51
	IT	23.87	21.56	21.56	21.56	21.56
	Paid porter	9.20	17.07	18.23	19.80	21.70
	Permits	1.35	1.09	1.09	1.09	1.09
	Miscellaneous	1.59	5.05	5.40	5.86	6.42
	<b>Total Revenues - Should match the sum total of all the above mentioned segregations</b>	<b>3,768.19</b>	<b>4,473.49</b>	<b>4,678.70</b>	<b>5,130.25</b>	<b>5,665.63</b>

The revenues of 08-09 will not match with financials as the effect of Rs. 12.4 Cr service tax has been adjusted in 08-09

The Hotel revenues for the year 2008-09 and FY 2009-10 has not been considered

The Aero Express revenues and cost in the year 2008-09 has not been considered

Operating Costs

(All figures in Million Rupees)

Salary increase										13.80%	13.80%		13.80%	13.80%
Power Costs & Water Costs Escalation										7.80%	7.80%		7.80%	7.80%
Security Expenses Increase										13.80%	13.80%		13.80%	13.80%
Consultancy & general Admin increase										10.80%	10.80%		10.80%	10.80%
Property Tax and Insurance increase										7.80%	7.80%		7.80%	7.80%
Repair and Maintenance Cost Increase										10.80%	10.80%		10.80%	15.80%
Fuel Farm and Car Parking Increase										10.80%	10.80%		10.80%	10.80%

S.N.	Cost Name	2008-09			2009-10			2010-2011			2011-2012			2012-2013		
		Aero	Non Aero	Total	Aero	Non Aero	Total	Aero	Non Aero	Total	Aero	Non Aero	Total	Aero	Non Aero	Total
1.00	Total Payroll Costs -	392.18	73.37	465.55	355.34	104.63	459.97	413.48	125.18	538.66	470.54	142.45	613.00	535.48	162.11	697.59
	Salary	285.18	52.97	338.15	289.27	89.74	379.01	324.72	104.41	429.13	369.54	118.81	488.35	420.53	135.21	555.74
	PF Contribution	25.73	4.96	30.68	17.21	5.30	22.51	20.97	6.21	27.17	23.86	7.06	30.92	27.15	8.04	35.19
	Staff Welfare Fund	81.27	15.45	96.72	48.86	9.59	58.45	67.79	14.57	82.36	77.15	16.58	93.73	87.79	18.87	106.66
2.00	Total Utilities Costs	163.96	0.01	163.97	150.76	0.02	150.77	171.89	0.08	171.97	185.30	0.08	185.38	199.76	0.09	199.84
	Power Costs & Water Costs	163.96	0.01	163.97	150.76	0.02	150.77	171.89	0.08	171.97	185.30	0.08	185.38	199.76	0.09	199.84
3.00	Total Security Expenses	3.53	0.72	4.25	5.32	1.03	6.35	54.10	12.65	66.75	61.57	14.39	75.96	73.14	17.10	90.24
	Security Expenses	3.53	0.72	4.25	5.32	1.03	6.35	54.10	12.65	66.75	61.57	14.39	75.96	73.14	17.10	90.24
4.00	Consultancy/ Advisory Expenses	191.01	42.24	233.24	86.27	49.44	135.72	28.19	30.68	58.87	31.23	33.99	65.23	34.61	37.67	72.27
5.00	Total General Admin/ Corporate Costs	401.09	112.91	514.00	256.98	76.52	333.51	386.74	77.00	463.75	426.26	84.99	511.25	469.87	93.80	563.67
	Auditor's Fees	1.24	0.26	1.50	1.67	0.32	1.99	2.35	0.55	2.90	2.60	0.61	3.21	2.89	0.67	3.56
	Director's Sitting Fees	0.56	0.11	0.67	0.65	0.13	0.78	1.34	0.31	1.65	1.48	0.35	1.83	1.64	0.38	2.03
	Communication expenses	31.23	5.13	36.35	25.14	1.31	26.45	34.05	2.31	36.36	37.73	2.56	40.29	41.80	2.83	44.64
	Travelling and Conveyance	143.91	34.24	178.16	47.38	15.48	62.86	56.38	14.63	71.01	62.47	16.21	78.68	69.22	17.96	87.18
	Rates & Taxes (incl property tax)	62.44	6.59	69.03	60.26	15.56	75.82	75.08	11.14	86.21	80.93	12.00	92.94	87.25	12.94	100.19
	Advertisement	23.08	7.52	30.61	5.46	4.65	10.12	10.51	2.81	13.32	11.65	3.11	14.76	12.91	3.44	16.35
	Office Maintenance	35.84	7.35	43.19	31.44	6.08	37.52	26.84	6.27	33.11	29.74	6.95	36.69	32.95	7.70	40.65
	Printing and Stationery	7.72	3.08	10.80	7.14	0.49	7.63	12.96	1.37	14.34	14.36	1.52	15.88	15.92	1.68	17.60
	Event Management / inauguration Expenses	7.04	15.52	22.56	0.77	0.39	1.16	8.17	0.61	8.79	9.06	0.69	9.73	10.04	0.75	10.79
	Recruitment and Training Charges	6.61	1.44	8.05	14.55	1.80	16.35	30.90	6.83	37.73	34.23	7.57	41.80	37.93	8.39	46.32
	Miscellaneous Expenses	81.42	31.67	113.08	62.53	30.29	92.83	128.16	30.17	158.33	142.00	33.43	175.43	157.34	37.04	194.38
	Wealth Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.00	RM Costs - Provide RM costs for all the assets -	299.44	18.62	318.06	272.54	19.65	292.19	388.58	12.57	401.14	430.54	13.93	444.47	498.57	16.13	514.69
	Minor Maintenance															
	Buildings	37.08	6.82	43.89	50.11	8.70	58.81	43.93	9.27	53.20	48.68	10.17	58.94	56.37	11.89	68.26
	Plant and Machinery	117.95	8.41	126.36	90.95	2.40	93.35	123.79	0.50	124.28	137.16	0.35	137.71	158.83	0.64	159.46
	IT Systems	99.98	-	99.98	87.00	0.71	87.71	142.11	0.25	142.36	157.46	0.28	157.74	182.34	0.32	182.66
	Others	7.96	1.39	9.35	15.16	3.19	18.36	18.30	0.45	18.75	20.28	0.49	20.77	23.48	0.57	24.05
	Diminution in the value of Inventory	32.33	-	32.33	-	-	-	-	-	-	-	-	-	-	-	-
	Stores and Spares	4.15	2.01	6.15	29.32	4.65	33.97	60.44	2.11	62.55	66.97	2.33	69.31	77.55	2.70	80.26
7.00	Insurance Costs	21.12	2.23	23.35	17.94	4.63	22.57	26.14	3.88	30.02	28.18	4.18	32.36	30.38	4.51	34.88
	During Operation period	21.12	2.23	23.35	17.94	4.63	22.57	26.14	3.88	30.02	28.18	4.18	32.36	30.38	4.51	34.88
10.00	Rents/ Property Related Expenses	24.37	6.07	30.44	43.31	8.37	51.68	44.64	10.34	54.98	49.46	11.45	60.91	54.80	12.69	67.49
12.00	Manpower Outsourcing Expenses	112.46	10.73	123.19	146.95	2.29	149.24	160.69	4.58	165.27	178.04	5.07	183.12	197.27	5.62	202.90
13.00	Any other operating costs. Please provide head-wise details	87.06	123.22	210.27	81.15	118.06	187.23	105.80	139.29	245.09	117.23	154.33	271.56	129.89	171.00	300.89
	Other O&M expenses	7.21	1.48	8.68	0.94	11.04	11.98	-	-	-	-	-	-	-	-	-
	Fuel Farm Expenses	-	72.16	72.16	-	70.64	70.64	-	81.50	81.50	-	99.30	90.30	-	100.05	100.05
	Car Parking expenses	-	28.49	28.49	-	23.13	23.13	-	36.10	36.10	-	40.00	40.00	-	44.32	44.32
	Passenger bus hire charges	-	-	-	11.68	-	11.68	13.06	-	13.06	14.47	-	14.47	16.03	-	16.03
	House keeping Expenses	79.85	21.09	100.94	68.53	13.26	81.79	92.75	21.68	114.43	102.76	24.03	126.79	113.86	26.62	140.48
14	Bank & other finance charges	2.26	0.46	2.72	22.79	4.41	27.20	24.97	6.45	31.42	24.97	6.74	31.71	24.97	6.74	31.71
	Grand Total	1,698.47	390.58	2,089.05	1,439.36	389.06	1,816.44	1,805.23	422.69	2,227.92	2,003.33	471.62	2,443.24	2,248.73	527.46	2,744.48
			2008-09		2009-10		2010-2011		2011-2012		2012-2013					
1	Concession Fees	89.41	61.32	150.73	114.21	64.73	178.94	129.34	57.81	187.15	142.18	53.03	205.21	158.59	68.04	226.63
	Total Operating Costs	1,787.89	451.90	2,239.78	1,553.57	453.79	1,995.38	1,934.57	480.50	2,415.06	2,145.51	534.65	2,648.45	2,407.32	595.50	2,971.10

The Hotel revenues and Expenditure has not been considered with effect from April 2009. The GHIAL board has approved the demerger of hotel from GHIAL with effect from 1st April 2009

GMR Hyderabad International Airport Limited

Assets

Figure in Rs. Millions

Traffic Scenario

3

	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total
Buildings	6,354.39	2,066.98	8,421.37	1.21	284.50	285.71	374.13	576.96	951.09	-	237.62	237.62	-	-	-
Electrical Installations	1,729.91	136.58	1,866.49	3.57	0.16	3.73	38.49	60.25	98.74	-	-	-	-	-	-
Furniture and Fixtures	283.20	79.10	362.31	18.14	35.88	54.02	25.34	31.28	56.61	-	-	-	-	-	-
Improvements to Leasehold Land	1,065.56	40.07	1,105.63	-	2.14	2.14	-	-	-	-	-	-	-	-	-
IT Systems	1,409.51	44.15	1,453.67	44.89	13.48	58.37	44.74	38.09	82.83	-	-	-	-	-	-
Office Equipment	73.01	43.04	116.05	29.70	42.30	72.00	12.96	6.13	19.10	-	-	-	-	-	-
Other Roads	792.66	455.30	1,247.96	-	-	-	13.60	33.28	66.88	-	-	-	-	-	-
Plant and Machinery	3,586.70	888.39	4,475.09	61.07	25.99	87.06	55.19	220.87	276.06	-	-	-	-	-	-
Runways	3,769.00	-	3,769.00	-	-	-	-	-	-	-	-	-	-	-	-
Software	153.67	7.87	161.54	-	-	-	4.87	-	4.87	-	-	-	-	-	-
Vehicles	28.28	4.83	33.12	45.18	13.33	58.52	6.29	0.36	6.65	-	-	-	-	-	-
<b>Total</b>	<b>19,245.91</b>	<b>3,766.31</b>	<b>23,012.22</b>	<b>203.77</b>	<b>417.79</b>	<b>621.56</b>	<b>575.61</b>	<b>987.21</b>	<b>1,562.82</b>	<b>-</b>	<b>237.62</b>	<b>237.62</b>	<b>-</b>	<b>-</b>	<b>-</b>

	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total
Buildings	6,354.39	2,066.98	8,421.37	6,355.60	2,351.48	8,707.08	6,729.73	2,928.44	9,658.17	6,729.73	3,166.06	9,895.79	6,729.73	3,166.06	9,895.79
Electrical Installations	1,729.91	136.58	1,866.49	1,733.49	136.73	1,870.22	1,771.98	196.98	1,968.96	1,771.98	196.98	1,968.96	1,771.98	196.98	1,968.96
Furniture and Fixtures	283.20	79.10	362.31	301.34	114.98	416.32	326.68	146.26	472.94	326.68	146.26	472.94	326.68	146.26	472.94
Improvements to Leasehold Land	1,065.56	40.07	1,105.63	1,065.56	42.21	1,107.77	1,065.56	42.21	1,107.77	1,065.56	42.21	1,107.77	1,065.56	42.21	1,107.77
IT Systems	1,409.51	44.15	1,453.67	1,454.40	57.64	1,512.04	1,499.14	95.73	1,594.87	1,499.14	95.73	1,594.87	1,499.14	95.73	1,594.87
Office Equipment	73.01	43.04	116.05	102.71	85.34	188.05	115.67	91.48	207.15	115.67	91.48	207.15	115.67	91.48	207.15
Other Roads	792.66	455.30	1,247.96	792.66	455.30	1,247.96	806.25	508.58	1,314.83	806.25	508.58	1,314.83	806.25	508.58	1,314.83
Plant and Machinery	3,586.70	888.39	4,475.09	3,647.77	914.38	4,562.15	3,702.96	1,135.25	4,838.21	3,702.96	1,135.25	4,838.21	3,702.96	1,135.25	4,838.21
Runways	3,769.00	-	3,769.00	3,769.00	-	3,769.00	3,769.00	-	3,769.00	3,769.00	-	3,769.00	3,769.00	-	3,769.00
Software	153.67	7.87	161.54	153.67	7.87	161.54	158.55	7.87	166.41	158.55	7.87	166.41	158.55	7.87	166.41
Vehicles	28.28	4.83	33.12	73.47	18.17	91.64	79.76	18.52	98.28	79.76	18.52	98.28	79.76	18.52	98.28
<b>Total</b>	<b>19,245.91</b>	<b>3,766.31</b>	<b>23,012.22</b>	<b>19,449.67</b>	<b>4,184.10</b>	<b>23,633.78</b>	<b>20,025.28</b>	<b>5,171.31</b>	<b>25,196.60</b>	<b>20,025.28</b>	<b>5,408.93</b>	<b>25,434.22</b>	<b>20,025.28</b>	<b>5,408.93</b>	<b>25,434.22</b>

	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total	Aero	Non-Aero	Total
Buildings	5.23	1.70	6.94	212.24	74.84	287.08	218.32	83.36	301.68	223.63	105.41	329.04	223.63	105.41	329.04
Electrical Installations	2.03	0.16	2.19	82.20	6.49	88.69	83.61	7.22	90.83	84.17	9.36	93.53	84.17	9.36	93.53
Furniture and Fixtures	17.00	4.75	21.74	24.83	7.54	32.36	24.50	8.30	32.80	24.76	9.11	33.87	24.76	9.11	33.87
Improvements to Leasehold Land	0.44	0.02	0.46	17.79	0.70	18.49	17.79	0.70	18.50	17.79	0.70	18.50	17.79	0.70	18.50
IT Systems	26.12	0.82	26.94	233.47	8.66	242.13	240.46	10.85	251.31	242.97	15.51	258.48	242.97	15.51	258.48
Office Equipment	4.17	2.46	6.62	4.79	3.85	8.65	5.44	4.24	9.68	5.40	4.32	9.72	5.40	4.32	9.72
Other Roads	0.32	0.18	0.50	12.92	7.42	20.34	13.14	8.92	22.06	13.14	8.92	22.06	13.14	8.92	22.06
Plant and Machinery	4.67	1.16	5.82	191.07	47.29	238.36	193.49	59.74	253.23	194.95	59.19	254.14	194.95	59.19	254.14
Runways	3.10	-	3.10	125.88	-	125.88	125.88	-	125.88	125.88	-	125.88	125.88	-	125.88
Software	0.61	0.03	0.65	24.91	1.27	26.19	25.17	1.27	26.45	25.17	1.27	26.45	25.17	1.27	26.45
Vehicles	2.85	0.49	3.34	4.68	1.11	5.80	7.03	1.69	8.71	7.13	1.69	8.82	7.13	1.69	8.82
<b>Total</b>	<b>66.53</b>	<b>11.76</b>	<b>78.29</b>	<b>934.79</b>	<b>155.17</b>	<b>1,093.97</b>	<b>954.84</b>	<b>186.29</b>	<b>1,141.14</b>	<b>965.01</b>	<b>215.48</b>	<b>1,180.49</b>	<b>965.01</b>	<b>215.48</b>	<b>1,180.49</b>

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	2008-09	2009-10	2010-2011	2011-2012	2012-2013
Equity	3,780	3,780	3,780	3,780	3,780
ADFG	-	-	-	-	-
IFL	3,150	3,150	3,150	3,150	3,150
Outstanding Loan	18,031	21,299	21,065	20,365	19,390
Cost of Equity	24%	24%	24%	24%	24%
Cost of ADFG	0%	0%	0%	0%	0%
Cost of IFL	0%	0%	0%	0%	0%
Cost of Debt existing	9.18%	9.72%	9.80%	10.14%	10.15%
WACC	10.26%	10.55%	10.61%	10.89%	10.92%

details of debt	2008-09		2009-10	
	Bank Name	Outstanding Loan	Outstanding Loan	Outstanding Loan
Allahabad Bank (INR Mn)		1,200.00		1,200.00
Bank of Baroda (INR Mn)		1,100.00		1,100.00
Canara Bank (INR Mn)		1,000.00		1,000.00
IDBI (INR Mn)		1,000.00		1,000.00
IDFC (INR Mn)		2,000.00		2,000.00
Oriental Bank of Commerce (INR Mn)		1,100.00		1,100.00
State Bank of Hyderabad (INR Mn)		1,200.00		1,200.00
Vijaya Bank (INR Mn)		1,000.00		1,000.00
Andhra Bank (INR Mn)		1,200.00		1,200.00
Vijaya Bank (INR Mn)		800.00		800.00
IDBI Short Term Loan		300.00		2,000.00
Andhra Bank Short Term Loan		2,000.00		2,000.00
Additional Term Loan		-		-
Abu Dhabi Commercial Bank (INR Mn)		6,431.25		5,698.75

Exchange rate as on March 2010                      45.59  
Exchange Rate at time of loan drawdown        40.56



2010-11	2011-12	2012-13
Outstanding Loan	Outstanding Loan	Outstandin g Loan
1,140.00	1,080.00	1,020.00
1,040.00	980.00	920.00
940.00	880.00	820.00
940.00	880.00	820.00
1,940.00	1,880.00	1,820.00
1,040.00	980.00	920.00
1,140.00	1,080.00	1,020.00
940.00	880.00	820.00
1,140.00	1,080.00	1,020.00
740.00	680.00	620.00
	-	
	-	
4,420.00	4,375.80	4,243.20
5,411.25	5,123.75	4,836.25

WPI for last 5 years	7.80%
Nominal Increase in Salaries and security over WPI	6.00%
Additional Manpower increase	10% after every 3 million pax
Nominal increase Administration and Consultancy Cost over WPI	3%
Additional Security Manpower increase	5.0% every 1.5 million pax
Nominal increase in Repair and Maintenance over WPI	3%
Additional Repair and Maintenance increase	5% every 1.5 million pax
Nominal increase for car park, Fuel Farm over WPI	3%

	2009-10	2010-11	2011-12	2012-13	2013-14
Base	6.51	6.96	7.56	8.28	8.93
Year on Year Difference Base		0.44	0.60	0.73	0.65
<b>Cummulative base</b>		<b>0.44</b>	<b>1.04</b>	<b>1.77</b>	<b>2.42</b>

Base	2011-2012		2012-2013	
Salary increase	13.80%	13.80%	13.80%	13.80%
Power Costs & Water Costs Escalation	7.80%	7.80%	7.80%	7.80%
Security Expenses Increase	13.80%	13.80%	18.80%	18.80%
Consultancy & general Admin Increase	10.80%	10.80%	10.80%	10.80%
Property Tax and Insurance increase	7.80%	7.80%	7.80%	7.80%
Repair and Maintenance Cost Increase	10.80%	10.80%	15.80%	15.80%
Fuel Farm and Car Parking Increase	10.80%	10.80%	10.80%	10.80%

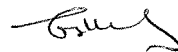
**Auditor's Certificate in connection with**  
**the agreed - upon procedures assignment related to concepts and principles**  
**behind the bifurcation of assets and operating expenditure into Aeronautical and**  
**Non -Aeronautical**

We have examined the attached document explaining the concept behind classification of assets and operating expenditure into Aeronautical and Non Aeronautical Produced to us by M/s. GMR Hyderabad International Airport Limited ('The Company'/ GHIAL). Procedures were performed solely to examine the conformity of the said concept document with the definition of "Regulated Charges" as mentioned in clause 10.2 and defined in Schedule - 6 of the Concession Agreement dated December 20, 2004 between Government of India(Gol), Ministry of Civil Aviation (MoCA) and GHIAL.

Based on our examination, we have found the basis of allocation of assets and operating expenditure into Aeronautical and Non Aeronautical to be reasonable, except operating expenditure relating to Fuel Farm has been classified under Non Aeronautical expenditure.

This certificate is not to be used, circulated, quoted, or otherwise referred to for any other purpose or any other document, except that reference may be made to it in any documents to be submitted to Airports Economic Regulatory Authority of India.

**For Brahmayya & Co.,**  
Chartered Accountants



**G.Srinivas**  
Partner  
Membership No.086761

Place: Bangalore  
Date : 16<sup>th</sup> August, 2010

## Concept Document

### **1. Definitions as per the Company's Policy:**

This document explains the concept of categorization of Airport assets and Operating expenditure into aeronautical and non aeronautical division followed by list of assets and operating expenditure based on the concept.

#### **Definitions:**

The following words and expressions used in this Concept Note shall have the meanings respectively assigned below:

**"Aeronautical Assets"** shall mean the assets which are necessary or required for the performance of Aeronautical Services at the Airport and required for generating Aeronautical Revenues and considered for reasonable rate of return and all other assets that the Company may procure in accordance with the written direction of GoI for or in relation to provision of any of the Reserved Activities.

**"Aeronautical Operating Expenditure"** shall mean all the operating expenditure which is necessary or required for the performance of Aeronautical Services at the Airport and required for generating Aeronautical Revenues and all other expenditure that the Company may incur in accordance with the written direction of GoI for or in relation to provision of any of the Reserved Activities.

**"Aeronautical Revenues"** shall include the Regulated Charges like Landing, Housing and Parking charges, Passenger Service Fee (PSF), User Development Fee (UDF) and other revenues like Common Infrastructure Charges (CIC), Fuel Farm throughput charges, revenue Share from ground handling and cargo levied by the Company.

**"Common Assets"** shall mean the assets that are not identifiable/categorized either into Aeronautical Asset or Non Aeronautical Assets.

**"Common Operating Expenditure"** shall mean all the operating expenditure that is used commonly for providing both Aeronautical and Non Aeronautical Services.

**"Company"** shall mean 'GMR Hyderabad International Airport Limited' or 'GHIAL' having its registered office at GMR HIAL Airport Office, Rajiv Gandhi International Airport, Shamshabad – 500 034 and incorporated on December 17, 2002.

**"Concession Agreement"** shall mean the Concession Agreement executed between the Government of India and GHIAL dated December 20, 2004, pursuant to which



GHIAL has been awarded an exclusive concession by the Government of India to design, finance, build, operate and maintain a world class, state of the art international airport at Shamshabad, Hyderabad, Andhra Pradesh, India.

**"Non Aeronautical Assets"** shall mean the assets required or necessary for the performance of Non Aeronautical Services at the airport.

**"Non Aeronautical Expenditure"** shall mean all the operating expenditure required or necessary for the performance of Non Aeronautical Services at the airport.

**"Non Aeronautical Revenues"** shall mean all the revenues generated other than the Aeronautical revenues.

**"Reserved Activities"** shall have the meaning ascribed to it under the Concession Agreement.

**"Regulated Charges"** shall mean Regulated Charges as defined in the Concession Agreement dated December 20, 2004 and listed in the Schedule 6 of the Concession Agreement.

**2. "Aeronautical Services"** shall means the provision of facilities and services, indicative list of which are as follows

- Aerodrome Control Services
- Airfield
- Airfield lighting and associated works
- Runways
- Taxiways
- Apron and aircraft parking area
- Remote parking stands
- Air traffic Control Building and associated assets
- Special Handling Terminal - HAJ
- Airport Seating
- Airside access roads
- Lifts, escalators and elevators
- Flight information and public address system
- Compound wall
- Traffic forecourts
- Rescue and Fire fighting Service
- Air field crash fire Service
- Bird Scaring system
- Ground Power unit Service
- Ground handling workshops & Engineering Building\*
- Fuel Farm & Fuel Hydrant System\*
- Cargo terminal Building and associated facilities\*
- Passenger Boarding Bridges
- Baggage Handling system and Hold baggage In line x-ray screening



- Visual docking and Guidance System
- CUTE including gate control
- Operational vehicle like rubber removal machine, runway Sweepers, Golf carts, trolley pulling scooters
- Airport Operation and control Center
- Airport Operational database
- Airport Community Network
- Airport Management Administrative Network
- Other IT system for airport operation
- Surface Drainage
- Plumbing and Sewerage system
- Water and Sewerage Treatment Facilities
- Signage
- Waste disposal
- Information desks
- Emergency Services
- General maintenance and upkeep of the Airport
- Customs and Immigration halls
- VVIP and VIP lounges
- Public Transport Centre
- Facilities for the disabled and other special needs people
- Any other service and facility deemed to be necessary for the safe and efficient operation of the Airport

**\* The services related to Fuel farm, ground handling and Cargo has been classified under the Aeronautical services and the revenue Share received from Ground handling & Cargo and throughput charge for Fuel Farm has been considered under Aeronautical revenues. However the rentals for Ground Handling workshops & Cargo building and capital recovery on fuel farm has been treated as Non aeronautical revenues and due to this the assets related to Fuel Farm, Fuel Hydrant System, Cargo building and Ground Handling Workshops has been considered as Non Aeronautical Assets.**

**3. "Non Aeronautical Services"** shall mean facilities and services, indicative list of which is as follows:

- Car park equipment
- Airline Lounges and other commercial lounges
- General retail facilities
- Vehicle Fueling services
- Kirby Sheds – Temporary office Spaces
- Site Office Building
- Cargo Agents Building
- Any other service or facility other than Aeronautical Services



#### 4. Common Assets

The indicative list of Common Assets is as follows:

- Passenger Terminal Building
- Heating Ventilation and Air Conditioning system for PTB
- New Office Building (including Furniture & Fixtures) and associated works
- Quarters for outside Security Personnel
- Common Hardware, software and Communication System
- Central Stores Building

**5. Apportionment of Common Assets into Aero and Non Aero:** The Common Assets have been apportioned into Aeronautical and Non Aeronautical Assets on the following basis:

S.No.	Description of the Asset	Basis of Apportionment
1.	Passenger Terminal Building (PTB)- Area allotted for Airline Lounges and other commercial lounges, General retail facilities, Office spaces etc is treated as Non Aero asset and remaining area as Aero Asset.	PTB Area (Sq. Mts.)
2.	Heating Ventilation and Air Conditioning system for Passenger Terminal Building. In the Ratio of the PTB area classified in to Aero and Non Aero.	PTB Area (Sq. Mts.)
3.	New Office Building (including Furniture & Fixtures) and associated works. Common area is allocated in the ratio of total Aero and Non Aero assets.	Office Area (Sq. Mts.)
4.	Quarters for outside Security Personnel	Aero & Non Aero Assets Ratio
5.	Common Hardware, software and Communication System	Aero & Non Aero Assets Ratio
6.	Central Stores Building	Aero & Non Aero Assets Ratio



6. Operating Expenditure: The entire operating expenditure has been classified by using the key explained as under.

Head Count	Number of employee engaged in providing aeronautical services- <b>Aeronautical Operating Expenditure</b> Number of employee engaged in providing non aeronautical services- <b>Non Aeronautical Operating Expenditure</b> Number of employee engaged in providing aeronautical and non aeronautical services(Shared resources like HR , finance etc)- <b>Common Operating Expenditure</b>
Cost center	Cost center providing only aeronautical services- <b>Aeronautical Operating Expenditure</b> Cost center providing only non aeronautical services- <b>Non Aeronautical Operating Expenditure</b> Cost center aeronautical and non aeronautical services(Shared resources like HR , finance etc)- <b>Common Operating Expenditure</b>
Asset ratio	Proportion of aeronautical and non aeronautical asset ratio
Common	All common costs have been apportioned in the ratio of directly identifiable aeronautical and non aeronautical expenditure for the respective years

The list of main cost and basis of its bifurcation is given in below table:

<b>Expenditure Name</b>	<b>Key used</b>
Personnel Costs	Head count
Power Costs & Water Costs	Based on cost center
Security Expenses	Common Cost
Consultancy/ Advisory Expenses	Based on cost center
Auditor's Fees	Common Cost
Director's Sitting Fees	Common Cost
General and Administration Cost	Based on cost center
Travelling and Conveyance	Head count





Rates & Taxes(incl property tax)	Aero & Non Aero Assets Ratio
Recruitment and Training Charges	Head count
Repair and Maintenance cost	Based on cost center
Insurance	Aero & Non Aero Assets Ratio
Rents/ Property Related Expenses	Common Cost
Manpower Outsourcing Expenses	Based on cost center
Fuel Farm Expenses	Non Aeronautical cost
Car Parking expenses	Non Aeronautical Cost
Passenger Bus Hire charges	Aeronautical Cost
Housekeeping Expenses	Based on cost center
Bank & other finance charges	Common Cost

Note: Common costs are allocated between Aero and Non Area in the ratio of actual expenditure incurred.

For **GMR Hyderabad International Airport Limited**

**K. Venkata Ramana**  
**General Manager**  
**Finance & Accounts**

Place: Hyderabad

Date : August 16, 2010



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A Division of Jacobs Engineering India Private Limited



**White Paper**

**Cost of Equity, Rajiv Gandhi International Airport  
Shamshabad, Hyderabad, Andhra Pradesh, INDIA**

*Prepared for*

**Hyderabad International Airport Limited**



**January 2010**

**STRICTLY CONFIDENTIAL**

## White Paper

# Cost of Equity, Rajiv Gandhi International Airport Shamshabad, Hyderabad, Andhra Pradesh, INDIA

Prepared for  
**Hyderabad International Airport Limited**

January 2010

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## Section 1

### COST OF EQUITY FOR RGIA, HYDERABAD

#### 1.1 INTRODUCTION

Although there are, in principle, a number of methods for estimating the cost of capital including the dividend growth model, and Fama French and other capital arbitrage based methodologies, by far the dominant approach to setting the cost of capital is the Capital Asset pricing Model (or CAPM). This assesses the cost of systematic or non-diversifiable risk associated with equity by a simple formula:-

$$r_e = r_{fr} + (1 + \beta) \times MRP$$

where

- $r_e$  is the cost of equity
- $r_{fr}$  is a notional rate of interest for a 'risk free' asset - conventionally taken as the interest rate on Government debt
- $\beta$  is a measure of systematic risk – the covariance between the movements of a quoted share equivalent to the company concerned and the stock market
- $MRP$  is the market risk premium – the average difference between returns on the (risky) market as a whole and the risk free rate.

It should be noted that this considers only market risk - on the grounds that any specific risk should be capable of being diversified away through portfolio management. In principle this means that any cash flows should be a weighted average of a range of scenarios which encompass the risks faced by the company as a whole – including disaster scenarios. If a single forecast is used then there is a strong argument for making risk adjustments either through the cash flows or – as would be done commercially - through the cost of capital (or both) to reflect the specific risks that would otherwise not be dealt with.

Regulators in the UK, for example, tend to adopt ad hoc approaches, based on using cash flows which are relatively conservative and using costs of capital towards the top of the range to allow for this problem.

## 1.1 Components of CAPM

### 1.1.1 Risk Free Rate

This CAPM formula assumes that there is an underlying long term risk free rate of debt – normally regarded as that of Government gilt edged securities - which reflects the real long term preferences of savers. The nominal risk free debt rate incorporates the effects of inflation which will vary over time. The equivalent real rate can be calculated through the Fisher formula as:

$$rfr_{real} = (1 + rfr_{nominal}) / (1 + i) - 1$$

### 1.1.2 Market Risk Premium (MRP)

Although straightforward in principle, this has been subject to significant debate and a wide range of figures is potentially possible in any given estimation.

The MRP is defined above as the average difference between returns on the (risky) market as a whole and the risk free rate. For forward looking cost of capital determinations, this should reflect the reasonable expectations of shareholders – i.e. the anticipations that have led them to accept the higher risk of investing in equity - rather than necessarily the out-turn in the immediate past.

In practice equity returns are, of course volatile, meaning that these reasonable expectations should be based on average performance over a substantial period. In the case of India this should at least at least cover the period of financial liberalisation in 1991. In other countries averages over substantially longer periods have been taken into account.

There has been a substantial academic debate over whether arithmetic or geometric averages should be used. If returns in each year are regarded as entirely independent, and certain other conditions are met, it can be shown that an arithmetic average is appropriate. If other assumptions are met estimates closer to geometric assumptions may be preferred. It should be noted that Mr Doug Andrew the former Director of Economic Regulation for UK CAA in a recent conference in India strongly supported an arithmetic average approach.

Whatever methodology is used to determine the MRP, it should, of course be consistent with any estimates made of the rfr.



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### 1.1.3 Debt / Equity Ratio

Although only the cost of equity is estimated in this paper, the Debt/Equity ratio plays an important role in determining the equity beta.

In principle the debt and equity in CAPM calculations (and cost of capital calculations in general) should be based on market value. However in many applications the accounting values are used, either in the interests of simplicity and stability, or because there are no direct ways of ascertaining the values of the debt or equity concerned – especially for forward looking estimates. For a company such as Hyderabad International Airport Limited, which is not quoted, and for which valuations are inevitably contentious, it is these accounting values which will need to be applied.

### 1.1.4 Beta

For a quoted airport, the beta is the covariance of movements of the company share price with movements in a suitable market index over a substantial period. Put more simply, it is the average ratio between in the market over a period and movements of the stock involved. In current circumstances there may well be some problems in estimating this, since any figures during the credit crunch and the following financial disturbances are likely to be unstable and not representative of the likely position going forward. Averages over a significant period, are likely to be better estimators.

Although it is possible to use betas determined daily these are likely to be unstable and distorted for shares which are not heavily traded, and regulators have tended to make use of weekly or monthly betas over a substantial (five year) period.

Where a company is not traded, regulators have typically used comparable traded companies as a benchmark, making adjustments where necessary for known differences. Experience elsewhere has suggested that the best indicator for airports is other traded airports internationally. While some parties have suggested use of utilities, in practice their risk characteristics tend to be far lower than those of airports, and as a result the betas of quoted airport companies tend to be far higher than those of utilities in the same countries when like for like comparisons are made. Amongst the differences which have been noted are:-

- The less strong relationship with the economy as a whole – utilities, such as water, tend to be regarded as essentials, while air travel is primarily discretionary and therefore tends to be far more vulnerable to economic changes
- The lack of dependence, by utilities on income from areas such as retail, which clearly have higher underlying betas than utilities;

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- The lower vulnerability of utilities to collapse or inability (or simply refusal) to pay by key customers responsible for a very large proportion of their overall output.

Any comparison between airports will be made more complicated by the different financial structures of the companies concerned. As a result benchmarking exercises normally attempt to put betas onto a standardised footing where the company is assumed to be all equity financed. These standardised betas are known as asset betas and are taken to represent the underlying risk of the asset itself prior to any financing structures. Once an appropriate asset beta for the operation concerned has been established, this is then converted back to an estimated company beta by re-adjusting for the effects of financial gearing.

The process concerned is known as de-levering and re-levering the beta. There are a number of formulae for this depending on assumptions made about the forward looking financial structure. A standard approach is to use the Miller formula, which is applicable in conditions where the debt remains constant.

$$\beta_e = \beta_a \times (1 + D/E)$$

where

- $\beta_e$  is the equity beta; and
- $\beta_a$  is the asset beta

It should be noted that this formula follows the standard approach of assuming the underlying beta of debt is insignificant. It is possible to extend the formula to include specific debt betas though these are very difficult (if not impossible) to measure under normal circumstances and have relatively little impact on the final result in most applications (though it will affect interim calculations of asset betas).

Where betas are estimated from comparable airport shares, the resulting beta will strictly speaking apply to the whole airport company - rather than to aeronautical activities in isolation. In some applications, attempts have been made to isolate the aeronautical components by treating the overall beta as a weighted average of activities comprising the aeronautical activities themselves together with a basket of companies which together represent non-aeronautical activities including retail companies (which typically have a high beta) and property investment companies (which have lower betas than airports). The results of these approaches have, in our experience, proved inconclusive and contentious, and for present purposes we have assumed that the airport company betas are broadly representative of the airport's aeronautical activities.

### 1.2 Values of Cost of Equity Parameters

#### 1.2.1 Risk Free Rate

Calculating the risk free rate over a significant period in India is complicated by the fact that up to the early 1990's interest rates on India were repressed by strict government controls over the economy. Varma and Barua in their paper 'A First Cut Estimate of the Equity Risk Premium in India' have, however estimated an underlying risk free rate for India over the 25 years from 1980 to 2005. They split this period into the period up to the onset of major economic reforms in 1991, and the period subsequent to those reforms from 1991 – 2005. Up to 1991 the estimate incorporates substantial adjustments to the one year bank deposit rate to allow for, what they describe as 'interest rate repression' : beyond 1991 the estimates is based primarily on direct evidence from 364 day treasury bills (allowance is made for a transition period leading up to 1995). Since Varma and Barua's prime intention s to deal with the risk premium (see later) they are content to show the risk free rate figures in nominal terms.

Exhibit 1 below shows their results together with inflation over the same period, and the implications for the real risk free rate. All series are shown in arithmetic and geometric terms.

**EXHIBIT 1**  
RISK FREE RATE ACROSS INDIA SINCE 1981

	Arithmetic			Geometric		
	Risk Free Rate	Inflation	Real Risk Free	Risk Free Rate	Inflation	Real Risk Free
1981-1991	12.0%	9.0%	2.8%	12.0%	8.9%	2.8%
1991-2005	9.5%	6.9%	2.4%	9.5%	6.8%	2.5%
<b>Whole Period</b>	<b>10.6%</b>	<b>7.8%</b>	<b>2.6%</b>	<b>10.5%</b>	<b>7.7%</b>	<b>2.6%</b>

The figure of 2.6% is numerically consistent with the 2.5% recommended for UK regulators in a major study by Smithers & Co and also used by the Irish regulator for the Dublin determination. We would have expected a higher rate to apply in the Indian context, and it is likely that the use of 1 year bills in India rather than 10 year bonds (which is standard in the UK) has depressed the risk free rate for this purpose (long bonds typically have a higher inflation and other risks leading to a premium which amounts to 0.5 to 1% for UK and US bonds). We have, however, left the real risk free rate unchanged so that it is consistent with the estimate used later for the equity risk premium, derived from the same source.

**1.2.2 Debt / Equity Ratio**

The airport financing structure for Hyderabad is made more complex by the presence of Government grants and an interest free loan from the state Government (which is to be paid off between 15 and 20 years after the opening of the airport). The grant is non refundable and is in the nature of equity. The interest free loan is subordinated to term debt and is in the nature of quasi-equity.

The long term lenders of Hyderabad Airport have treated both of these as quasi-equity and this treatment has been followed here, resulting in a debt equity ratio of 2.65 as shown in Exhibit 2 below.

**EXHIBIT 2**  
**HIAL DEBT / EQUITY RATIO**

	<b>INR Crs</b>
Equity	378
Interest Free Loan from GoAP Advanced Development Fund Grant	315
Total Equity	107
	800
Term Loan 2005	960
Term Loan 2007	718
Additional Term Loan required	442
Total Debt	2120
Debt/Equity	2.65

Infrastructure projects are typically financed with high gearing and debt:equity exceeding 70:30. Such debt heavy structures will inevitably tend to have high costs of equity (as the debt level rises, the costs of both debt and equity rise commensurately). For comparison purposes, therefore, we have also derived a cost of equity with a more typical long term gearing for a mature airport.

In this case we have taken a financial structure of 50% debt 50% equity throughout the period, which we have assumed will be consistent with investment grade debt over the long term.

**1.2.3 Beta**

Beta has been estimated for airports in a range in a range of regulatory and other applications. Beta evidence has been used in three major determinations at Dublin, Copenhagen, and Stansted. Evidence on quoted airport betas derived from submissions to the Dublin process is shown below in Exhibit 3.

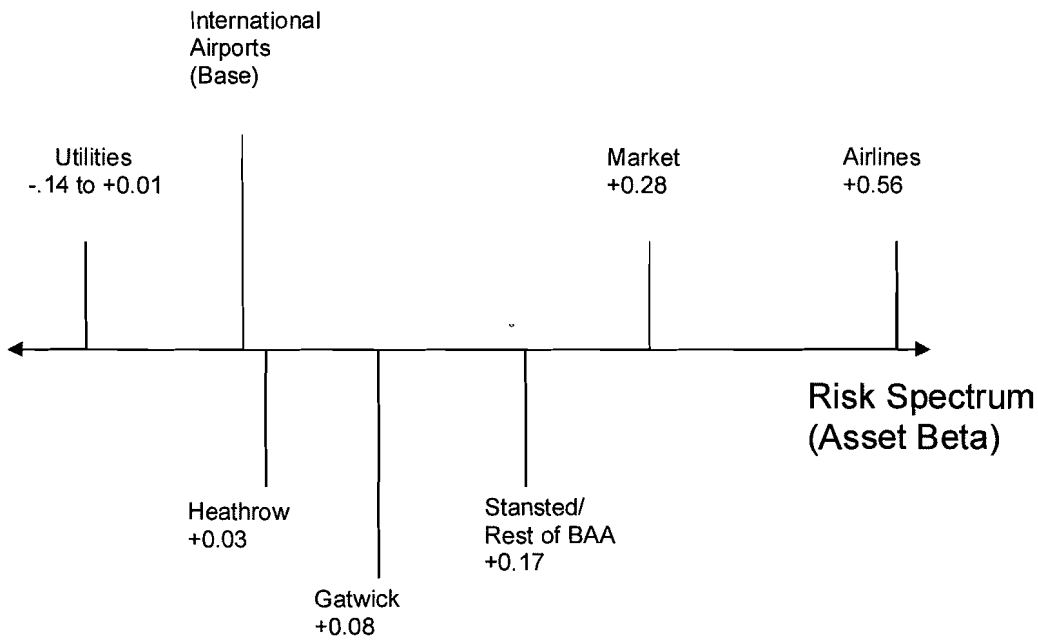
**EXHIBIT 3**  
BETA VALUES AT AIRPORTS ACROSS THE WORLD

	Daily				Monthly		
	Last 6 months	Last year	Last 2 Years	Last 5 Years	Last Year	Last 2 Years	Last 5 years
Vienna	0.52	0.57	0.58	0.64	0.58	0.6	0.69
Frankfurt	0.52	0.57	0.63	0.67	0.66	0.69	0.72
Copenhagen	0.35	0.38	0.41	0.4	0.49	0.46	0.43
Paris	0.75	0.76	0.76	0.72	0.74	0.76	0.73
Venice	0.41	0.45	0.35	0.48	0.54	0.53	0.56
Florence Airport	0.43	0.42	0.42	0.46	0.44	0.45	0.48
Auckland	0.76	0.77	0.87	0.86	0.83	0.86	0.85
Ljubljana	1.16	1.16	1.09	1.07	1.17	1.11	1.07
Zurich	0.36	0.38	0.4	0.32	0.44	0.44	0.36
Mexico (Aeropuerto del Pacifico)	0.67	0.7	0.73	0.72	0.75	0.79	0.81
Mexico (Aeropuerto del Sureste)	0.68	0.69	0.67	0.65	0.56	0.61	0.63
Average	0.60	0.62	0.63	0.64	0.65	0.66	0.67

Taken together this gives a range for 'typical' airport betas of between 0.60 and 0.67. Even if Ljubljana is excluded (as an outlier) the range would be 0.55 to 0.63. These figures are consistent with the Copenhagen regulator's estimate of 0.63 as an average beta for airports aeronautical activities in isolation derived from a sample of 7 comparator airports (including Thailand and Malaysia) and the Dublin Airports decision to use 0.61.

BAA's regulator has gone beyond this to establish a representative range for airports though this uses a different methodology applying a debt beta as well as an equity beta with the result that asset beta numbers are not directly comparable. The resulting diagram, therefore, is shown below in differential form in Exhibit 4 (to avoid confusion arising from incompatible estimation methodologies).

**EXHIBIT 4**  
UK COMPETITION COMMISSION RELATIVE BENCHMARKS FOR AIRPORT BETAS  
(FROM LONDON STANSTED AIRPORT PRICING REVIEW)



**Source:** UK Competition Commission and Civil Aviation Authority

Exhibit 5 outlines the relative systematic risk (relevant to beta) of Hyderabad compared with major airports in general.

Between them, these factors would suggest a beta at the upper end of the scale. The regulators in the UK applied a premium of 0.17 for Stansted, where growth has now begun to mature. We would believe that Hyderabad, at this stage in its development is significantly more risky than Stansted. However for present purposes we have used a relatively modest premium to the airport range of 0.60-0.67 to arrive at an initial beta of 0.75.

**EXHIBIT 5**  
**RELATIVE SYSTEMIC RISK (TO BETA) OF HIAL COMPARED TO OTHER MAJOR AIRPORTS**

Source of Risk	Relative Risk Faced by Hyderabad compared to Typical Airport	Comment
Traffic Risk	High	Traffic growth crucially dependent on rapid recovery and subsequent growth of the Indian economy
Domestic Exposure	High	Hyderabad has a high proportion of domestic traffic which is fully exposed to the national economy
Low Cost Airlines	Medium	Hyderabad will have a limited proportion of low cost traffic. Although leisure traffic is sensitive to the economy, low cost airlines have shown themselves better able to deal with cyclical risk than full fare operators
Non-aeronautical business	Low/Medium	Low level of aeronautical business means that growth risks are not diversified
Capital Cycle Risk	High	Major capital expenditure in anticipation of traffic growth. No opportunities for lower risk incremental growth.
Proportion of Fixed Costs	High	Partly as a result of the capital cycle, and the limited activities undertaken, very large elements of Hyderabad's costs are fixed further leveraging exposure to economic growth
Political Risk	High	The current issue of split of the state, if it materialises, may potentially impact traffic and the growth of revenues.

**1.2.4 Equity Risk Premium**

Consistent with our use of a relatively low risk free rate of 2.6% derived from Varma and Barua, we have adopted the equity risk premium figures from the same source shown in Exhibit 6. This gives an estimate of the risk premium of between 8.75 and 12.51%.

These estimates are high compared with typical risk premia from other sources covering developed countries. However the results are supported by, for example Mehra, who reports a risk premium between 1991 and 2004 of 9.7%. Mehra also gives figures for developed countries shown in Exhibit 7.

**EXHIBIT 6**  
MARKET RISK PREMIUMS FOR EQUITY

	Arithmetic			Geometric		
	Equity returns	Risk Free Rate	Market Risk Premium	Equity returns	Risk Free Rate	Market Risk Premium
1981-1991	23.2%	12.0%	11.2%	21.00%	12.0%	9.0%
1991-2005	23.0%	9.5%	13.5%	18.10%	9.5%	8.6%
Whole Period	23.1%	10.6%	12.5%	19.30%	10.5%	8.8%

**EXHIBIT 7**  
EQUITY RISK PREMIA FOR DEVELOPED COUNTRIES

Country	Period	Risk Premium
United Kingdom	1947-1999	4.60%
Japan	1970-1999	3.30%
Germany	1978-1997	6.60%
France	1973-1998	6.30%
Sweden	1919-2003	5.50%
US	1889-2004	6.50%
Australia	1900-2000	8.70%

Amongst the reasons for a high equity risk premium than is some other regulatory determinations are:-

- Use of bills rather than bonds
- Under-estimate of forward looking risk free rate expected by investors having taken into appropriate Indian Government credit ratings
- Intrinsic risks of investing in a high growth developing country rather than a relatively low growth and mature developed country.
- The relatively high and continuing level of inflation

Whilst the risk premiums estimates for India given are relatively high we have accepted them for current purposes as being consistent with the relatively low risk free rate applied.

As noted before academic research has generally supported the use of the arithmetic risk premium as the best unbiased estimate of the risk premium going forward, though



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there is also evidence suggesting that in certain circumstances this could be an overestimate. We have assumed an estimate of 11% which is significantly below the upper end of the scale.

### 1.2.5 Resulting Cost of Equity

The final cost of equity derived from these calculations is shown in Exhibit 8.

**EXHIBIT 8**  
HIAL COST OF EQUITY

Component		Current D/E Value	Standardised D/E Value
Inflation	I	5%	5%
Real risk free rate		2.60%	2.60%
Nominal Risk Free	RFr	7.7%	7.7%
D/E		265%	100%
Asset beta	Ba	0.75	0.75
Equity beta	Be	2.74	1.5
Market risk premium	Mrp	11%	11%
Post tax cost of equity		37.8%	24.2%

As can be seen, the choice of debt equity ratio has a major effect on the cost of equity. In a WACC calculation this would be largely counteracted by the level of debt in the final calculation, with the final overall costs of capital being very close.

We have also considered the sensitivity of the outcome to different estimates of individual components. The results are shown in Exhibit 9.

**EXHIBIT 9**  
FINAL COST OF EQUITY FOR HIAL

Element	New Value	Impact on Development D/E	Impact on Standardised D/E	Comment
Lower market risk premium	9%	-5.4%	-3.0%	Lower end of Varma and Barua range
Lower equity beta	0.6	-6.0%	-3.3%	Airport average
Lower risk free rate	2%	-0.6%	-0.6%	Lower level used in some UK regulation
Lower market premium, higher risk free rate	9% Mrp, 4.6% real risk free rate	-3.3%	-0.9%	Lower risk premium with compensating higher risk free rate

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Overall we would recommend the use of a base cost of equity 38% with the development capital structure and 24% if a standardised debt: equity structure is applied.

The actual cost of equity appropriate individual project (as distinct from the 'airport as a whole' rate relevant to regulation) may however depend on the specific application being considered, with higher rates applicable for projects with higher risk than the airport as a whole, and lower rates being applicable for projects where the cash flows are more stable.



# MADRAS SCHOOL OF ECONOMICS

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Saumitra Bhaduri  
Professor

August 16, 2010

To,

GMR HIAL Airport Office  
Rajiv Gandhi International Airport  
Shamshabad, Hyderabad 500 409  
Andhra Pradesh

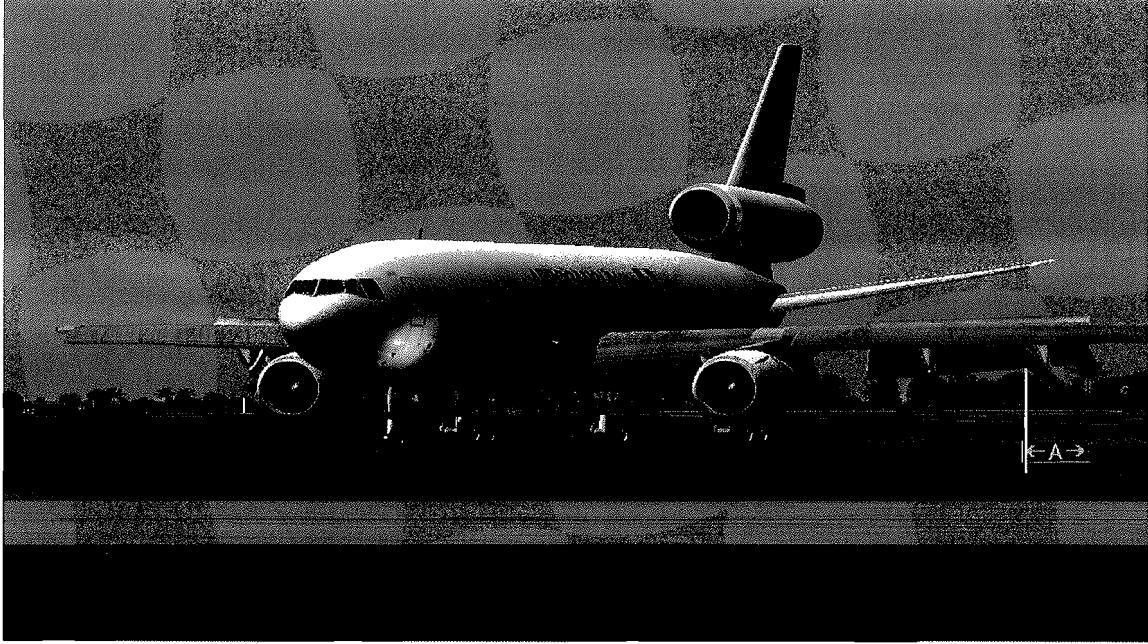
Dear Sir,

We are pleased to present the report on "**Long Term forecast for Rajiv Gandhi International Airport Hyderabad**". We thank GMR Hyderabad International Airport Limited for giving us the opportunity to carry out the study and present the report.

Thanking you,

For Madras school Of Economics

Authorized Signatory



# LONG TERM FORECAST FOR RAJIV GANDHI INTERNATIONAL AIRPORT HYDERABAD (RGIA)

Dr. Saumitra N Bhaduri  
Dr. S. Raja Sethu Durai  
Madras School of Economics

August 2010

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## 1. INTRODUCTION

Effective forecasting is the key for the success of planning and design process at airports. These forecasts help in different ways as forecasts of passenger volumes are translated to space requirements for the terminal building facilities, while forecasts of aircraft movements are translated to the runway, taxiway, and apron needs, as well as to the need for air traffic control systems. Eventually as with any projection of future activity, air traffic forecasts are subject to a degree of risk and uncertainty. The forecasts are based on underlying assumptions regarding economic growth, traffic development, fuel prices, aviation technology, etc. which are developed from the best available data and analysis. However, it is not possible to determine how these factors might vary over time and when certain events may occur; .e.g., the timing of recessions, fuel shortages, etc.

The traditional approach in air traffic forecasting to augment this uncertainty part is to develop a base or medium case forecasts along with high and low case forecasts. This conveys that there is uncertainty in the forecast, but provides a rough range for possible outcomes. In practice there are two major approaches in the development of forecasting models: *Simple Time Series* (STS) and *Causal Modeling*.

STS methods are the most widely used methods for predicting charter air-travel demand, and assume that “history repeats itself,” in that the underlying stochastic structure of the data does not change with time. This method technically called the Box-Jenkins methodology suffers by a weakness of ignoring the determinants of demand such as fares, income, GNP, and does not attempt to explain the causes of change in demand. Rather the *Causal Modeling* attempts to rectify this major drawback in analyzing the relationship between the air-travel demand and its determinants. Over the period and with the advent of very sophisticated newer forecasting methodologies the literature on air-travel demand forecasting has widely used various methodologies for different requirements.

The scope of the study is as follows.

## **2. SCOPE AND BACKGROUND OF THE STUDY**

The study proposes to develop a forecast model using advanced time series techniques developed recently. The study will examine the short run as well long run relationship between air-travel demand and other economic factors. One of the important objectives would also be to compare the results across various benchmark studies already existing for India.

The Bangalore-headquartered GMR had invested nearly Rs 2,920 crore in building the airport that has a capacity to handle approximately 12 million passengers per annum. Hyderabad airport opened in February-March 2008 had touched annual passenger traffic of 7 million with growth hovering in the range of 20% to 30% per annum. However the global meltdown dragged traffic down to 6.2 million by the end of 2008-09. On the back of recent economic recovery the traffic grew marginally to 6.5 million in fiscal 2009-10.

### ***Risks to the Forecast***

Users of the forecast are strongly advised to consider all scenarios as a means to estimate risk and the forecast should be used only as a part of informed decision making process. There are a number of other important risks, which this forecast has not included. In particular, changes to the routing of traffic and the possibility of external random events, such as outbreak of contagious diseases, political turmoil, terror attacks, wars and other natural disasters should be considered while using the forecast.

The main sources of uncertainty in the forecast are:

The forecast for traffic through RGIA airspace is based on the simple assumption that the en route network remains stable over time, as do the routes that aircraft follow on that network.

All the long term relationship established in the forecasting model remains stable over time. The cyclical nature of tourism and economic growth might not be adequately captured by the model. External events, such as bird flu, terrorist attacks, wars and natural disasters can all affect air traffic briefly, or for the long-term. The last 5 years have not been quiet ones for Hyderabad

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aviation sector. There is no reason to believe the next 10 years will be uneventful. The forecast scenarios aim to capture some of these risks, but exact prediction of these events is nearly impossible.

Change in government policies, de-regulation and technological break through are not included in the model, but could be a significant factor in the future.

Many local changes that are significant to particular airports like the decision of a carrier to open a new base, development of new airports in neighboring locality, are not included in the model and can have significant impact on the future growth.

### **World Aviation Outlook: 2008 & 2009**

The ACI preliminary report from over 900 airports outlines that the global passenger traffic declined to 2.7 percent, reflecting a steep decline which started during the second half of 2008 till the third quarter of 2009 in most regions but a return to growth activity by the year-end. Total cargo volumes retracted by 8.2 percent, while aircraft movements were 5.5 percent below the 2008 level. Rebounds in domestic traffic helped mitigate the impact of global recession. Strong performance in the Asia-Pacific and Latin America-Caribbean regions during the second half of 2009 was driven primarily by domestic traffic in China, India and Brazil.

The Middle East maintained a more stable overall performance curve throughout the year, whereas airports in the North America and European regions only timidly exited negative growth territory toward the end of the year, which helped boost fourth quarter global traffic growth to 3.5 percent after a flat third quarter. The first three quarters of 2009 represented the peak of the crisis for global air traffic with passenger volumes down by 8 percent and 5 percent respectively. Cargo declines were even more dramatic for the first two quarters, down by 20 percent and 17 percent, respectively, as compared to the same periods in 2008. Traffic in the second half of 2009 reflected the growing confidence of businesses and consumers in economic recovery, particularly visible in those countries that reported positive year-on-year GDP growth such as China, India and Brazil while other major economies including US, Japan, Germany and UK were still facing year-on-year GDP declines.



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**Indian Airports Traffic Growth: Impact of Global Economic Recession 2008 & 2009**

In 2008-09<sup>1</sup>, the total traffic handled at Indian airports was 108.87 million with a negative growth of 6.85%. International traffic had grown moderately to 5.89%, whereas, the total domestic traffic dropped to 11.20% and Aircraft and Freighter movements also had a negative growth of 0.13% and 1.03% during the same period. The overall domestic traffic carried by National Carriers and Private Carriers were decreased to 22.9% and 8.4%. The domestic Passenger Load Factor (PLF) also fell significantly to 63.7% from 68.9% in 2007-08<sup>2</sup>.

The major reasons for this decline are due to global economic crisis, hike in ATF and Inflation in the consumer commodities. This impacted the airline industry and caused to cut excess capacity operated by various domestic airlines. Some of the airlines deregister the aircraft and also leased the aircraft to foreign airlines. The following table highlights the traffic growth during the last 14 years from 1996-97 to 2009-10.

**Indian Airports Traffic: (1996-97 to 2009-10)**

Year	Pax Traffic in Million			Pax Traffic Growth in %			Domestic Pax Load Factor
	International	Domestic	Total	International	Domestic	Total	
1996-97	12.22	24.28	36.50	6.76%	-5.04%	-1.39%	-
1997-98	12.78	23.85	36.63	4.57%	-1.76%	0.36%	-
1998-99	12.92	24.07	36.99	1.05%	0.94%	0.98%	58.50%
1999-00	13.29	25.74	39.03	2.91%	6.93%	5.53%	59.80%
2000-01	14.01	28.02	42.03	5.39%	8.84%	7.67%	63.70%
2001-02	13.62	26.35	39.97	-2.74%	-5.95%	-4.88%	55.50%
2002-03	14.83	28.89	43.72	8.82%	9.64%	9.36%	56.30%
2003-04	16.64	32.13	48.77	12.25%	11.21%	11.56%	58.40%
2004-05	19.42	39.85	59.27	16.72%	24.03%	21.54%	64.90%
2005-06	22.37	50.98	73.35	15.15%	27.94%	23.75%	67.60%
2006-07	25.87	70.62	96.49	15.66%	38.52%	31.55%	68.80%
2007-08	29.81	87.06	116.87	15.23%	23.28%	21.12%	68.90%
2008-09	31.57	77.29	108.86	5.90%	-11.22%	-6.85%	63.70%
2009-10	34.40	89.30	123.70	8.96%	15.54%	13.63%	67.8%* Projected

Source: Airports Authority of India, 2010 & DGCA 2008-09 & 2009-10

<sup>1</sup> Review of Traffic at AAI Airports 2008-09, Airports Authority of India

<sup>2</sup> Annual Air Traffic Report 2008-09, DGCA

### 3. DATA AND METHODOLOGY

This traffic forecast has been prepared for RGIA to provide an estimate of future demand for air transport at Hyderabad Airport from 2010-11 to 2019-20. The forecasts have been produced on the basis of our current understanding of demand drivers and likely future changes. However as in all forecasting study the accuracy of the forecast can not be guaranteed. The data used in this study have been provided by the RGIA.

The purpose of our time series modeling of air passenger demand is to quantify the relationship between demand and the variables which cause it to change. The strong upward trend in air passenger demand means that simply estimating the relationship between these variables could suffer from the problem of 'spurious regression', where the statistical significance of the estimated relationship appears stronger than it really is. However, if there is a relationship to which the variables tend to revert in the long run, the variables are 'co-integrated' and this problem can be overcome.

For most of our models we have therefore applied the single-step approach to testing for, and estimating a co-integrated relationship, and estimated regressions of the form:

$$\ln Q_t = \alpha + \beta \ln Z_t + \varepsilon_t$$

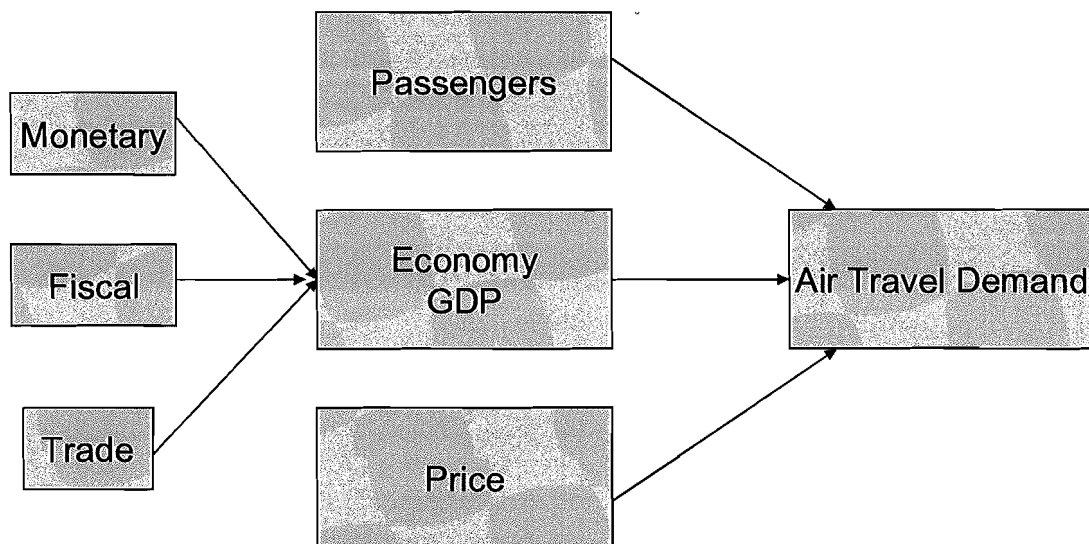
$Q_t$  is Passenger demand at time  $t$ ,  $Z_t$  is other explanatory variables at time  $t$ ,  $\varepsilon_t$  = error in prediction at time  $t$ .  $\alpha$  and  $\beta$  are the parameters to be estimated and  $\beta$  captures the elasticities. The models were estimated over different time periods, depending on the availability of data. The earliest sample period began in 1994-95, but all models used data up to 2009-10.

The care has been taken to ensure that our models reflect recent trends in market structure, such as the rise of the 'low cost' airline model, and other structural breaks in the data. The final models have been selected based on good fit to the data with statistically significant parameters of the expected sign and magnitude. The  $R^2$  values for most of the models are high. This indicates that the models are successful in explaining past movements in demand, and gives us confidence in using them to project future demand.

The stationarity test of error in all models confirms the non spurious relationships and indicates a stable long run relationship suitable for projection of future demand.

### 3.1. Framework

The forecasting framework is designed as follows. The air travel demand has been projected from three different blocks namely passengers, price and Gross Domestic Product. The GDP forecast is derived from monetary, fiscal and trade policy changes.



#### Key Factors to Influence Air Traffic Growth

1. **Economic Growth:** The GDP growth during the first quarter of 2009-10 stood at 6.1%, a drop of 1.7% point over the previous year. Further, the agriculture and manufacturing sector expanded at a slower rate of 2.4% and 3.4% respectively. The other sectors like Trade, Transports, Hotels & communication was also lower at 8.1% as against 13.1% over 2008-09. Therefore, the overall growth in Indian economy for 2009-10 grown at slower pace as compared to 2007-08 & 2008-09. Performance of Indian economy during the first Half of 2009-10 is highlighted below, since these are all important key drivers to stimulate air traffic demand.

**Indian Economic Performance: April – September 2009**

<b>Growth</b>	<b>2009-10</b>	<b>2008-09</b>	<b>VARIATION</b>
GDP	6.1%	7.8%	- 1.7%
Agriculture	2.4%	2.3%	+0.1%
Industry	8.6%	8.7%	+0.1%
Manufacturing	3.4%	3.6%	+0.2%
Trade, Hotels, Transport & Communications	8.1%	13.1%	- 5.0%

Source: RBI, CII, MOC, FCCI, CSO Reports 2009

- Aviation Turbine Fuel:** One of the main factors in determining air service is ATF price. The highly volatile ATF prices in recent years may have an impact on the air travel. Recently the international oil price rose to an extraordinary peak of around US\$ 145 a barrel, which caused a major impact on the operations of airline services in the country. Recent reports on Indian aviation sector reveals that a direct loss of multi billion dollars to airport and airline business and indirect effect caused a high loss in the transport and trade related business. Recently the Hyderabad has been adversely impacted due to high VAT and ATF sale Tax which was 4% till recently has been hiked to 16%.
- Cut in Excess Capacity:** During the last 12 months (May 2008 to June 2009) most of the domestic airlines (Full Service & LC Carriers) cut their capacity varying 10.0% to 15.0%. So to recover back to normal as on 2007-08 traffic, would take time and experience a slower pace of growth.
- Airline Yield:** The domestic airline yield per passenger dropped significantly due to hike in various operational costs and this may lead to more consolidation and merger of airlines. This in effect results in rationalization of the seat availability and route structure, which may causes slower growth in the industry. The table below demonstrates the PLF & Yield per passenger in RPK from 1998-2009.

**Airline PLF & Yield per Passenger: 1998-99 to 2008-09**

Year	PLF IN %	Operating Revenue Per RPK in Rs	Operating Expenditure Per RPK in RS
1998-99	58.5	4.20	4.06
1999-00	59.8	4.44	4.34
2000-01	63.7	4.66	4.68
2001-02	55.5	4.82	4.97
2002-03	56.3	4.78	4.93
2003-04	58.4	3.95	3.84
2004-05	64.9	4.80	4.67
2005-06	67.6	4.95	5.06
2006-07	68.8	4.68	5.42
2007-08	68.9	4.43	5.23
2008-09*	63.7	4.00	5.75

Source: ICAO Financial Report 2008, \* Projected Figure

5. **Aircraft De-Registration:** Number of domestic airlines (Jet Airways, Kingfisher & Go Airways) have de-registered their aircraft and wet leased to international airlines. As a result, the domestic seats availability has reduced and may cause a decline to the domestic air travel.
6. **Terrorism/Political Factors:** The persistent terror threat that India faces for example the Mumbai terror attack in late 2008 may cause an adverse impact on the air travel demand. In Hyderabad the recent Telangana agitation and Communal Violence affected the traffic significantly.
7. **Travel Substitution:** The Ministry of Railways has proposed to introduce high speed rail to the major metro capitals in the country, which would become a competitor to air travel demand. The regional routes may face a larger impact from this competition.
8. **Pandemic Influenza (SARS, Bird Flu & H1N1):** In the recent past the pandemic influenza caused a major impact on the country's economic growth, employment, trade and travel. In 2005, the Oxford Economic Forecasting Group assessed and found that the major countries impacted are China, Hong Kong, Taiwan, Singapore, Vietnam, Korea and Thailand endured

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a huge economic loss worth of US \$ 20 billion dollars during this period<sup>3</sup>. From the past experience we conclude that any such contagious spread of disease will have an impact on the international and domestic air travel growth.

9. **Business & Leisure Travel Demand:** The business and leisure travel has declined due to the recent economic recession worldwide. This segment of the market has witnessed a sustained recovery from 2005, but contracted to 5.0%<sup>4</sup> in recent years. Financial crisis has reduced the business travel due to immense pressure to reduce cost.

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<sup>3</sup> Vanessa Rossi & John Walker, 'Assessing the Economic Impact and Costs of Flu Pandemics Originating in Asia', Oxford Economic Forecasting Group, May 2005, Oxford

<sup>4</sup> European Travel Monitor, IPK International, ITB, German, March 2009

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**3.1.1. Domestic Passenger Model**

The study developed two different models to extract income and price elasticities. The long run model provides the income elasticity and the short run model provides with the price elasticity of air travel demand. The variables used in this model are logarithmic of AP's GSDP at market prices (LNGDPMKT), logarithmic of air travel price (LNPRICE) and structural dummies.

**Table 3.1: Estimation Results for Domestic Passenger**

Variable	Coefficient	Prob.
LNGSDPMKT	0.959829	0.0001
DUMMY1	-0.16526	0.0021
DUMMY2*LNGSDPMKT	0.017862	0.0053
LNPRICE	-0.35845	0.0001
C	5.911082	0.0025

R <sup>2</sup>	0.99
F-Stat (p-value)	1021.39 (0.000)
DW Stat	2.338

In the parentheses are standard errors and \*\* denotes significance at 1% level

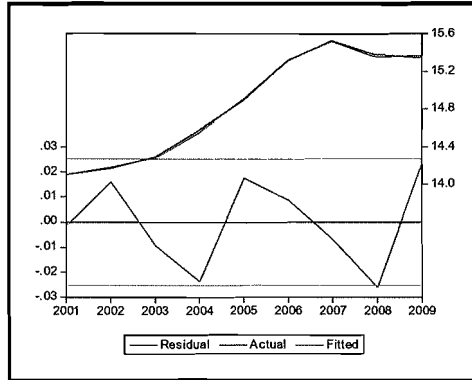
From the model depicted in Table 3.1, the income elasticity of air travel demand for Hyderabad International Airport stands at 0.9598. The robustness of the model can be checked from the stationarity of the residuals generated by the model. Table 3.2 gives us the stationarity test for the residuals and Figure 3.1 give a plot of actual and fitted data. The Augmented Dickey Fuller test suggests that the residual generated from the long run model is stationary.

**Table 3.2: Stationarity Test for Residuals**

ADF Statistics	Probability
-4.99**	0.0005

\*\* denotes significance at 1% level

**Figure 3.1: Actual and Fitted Data**



### 3.1.2. Domestic Passenger Forecast

The forecast is done using the above model. The forecast has three different scenarios namely High Case Scenario, Base Case Scenario and Low Case Scenario. Lists of assumptions are due to these scenarios. In general, the forecast is done using the following strategy.

The forecast for the GDP at market price comes from a bigger macroeconomic model which is being developed by MSE. Further a relationship has been established between the growth of Indian GDP and AP GSDP, which has been used to forecast the AP GSDP. Since no forecast for price variable is available the study uses the forecast for oil prices as a proxy because both the average price of air travel and oil price has very high correlation in the estimated time period. Table 3.3 gives us with the forecast for oil price growth and the GDP at market price growth. The oil price forecast is from the Energy Information Administration of United States.

Since the airport is relatively new, so we expect the growth would be unstable and hence we have forecasted only till 2014-15 using the models and the projection for the next five years till 2019-20 is a linear projection.



**Table 3.3: Growth Forecast for Oil Price and GDP**

Year	Oil Price Growth			Growth of GDP at Market Price
	Base	High	Low	
2010-11	0.73%	1.39%	-0.50%	13.05
2011-12	0.73%	1.50%	-0.51%	13.64
2012-13	0.76%	1.61%	-0.53%	15.10
2013-14	0.78%	1.79%	-0.52%	12.75
2014-15	0.84%	1.95%	-0.48%	12.12
2015-16	0.88%	2.18%	-0.49%	9.47
2016-17	0.93%	2.44%	-0.44%	15.67
2017-18	-0.05%	0.03%	-0.62%	13.68
2018-19	-0.29%	0.04%	-0.31%	16.53
2019-20	-0.30%	-0.17%	-0.46%	15.01

***High Case Assumptions:***

The projected traffic under the high case scenario is due to lower oil price scenario. The other factors influencing Base and High Case include: Deregulation of market, First generation flyers, Strong competition and a vibrant LCC market, increased capacity in the market, increased propensity to travel, rise in per capita income, Bandwagon effect.

***Low Case Assumptions:***

The projected traffic under the low case scenario is due to higher oil price scenario. These other factors include: Cut in Excess Capacity, fall in Airline Yield & PLF, Aircraft De-registered, Drop in consumer confidence, Contract in Business & Leisure Travel, Rail – Road Competition, Terror Attack, Pandemic Influenza: SARS, Bird Flu & H1N1, Airport Charges, Government Policies, Political Factors such as Telangana issue and withdrawal of economic stimulus & high taxation which have impacted the business environment in Hyderabad. Further Development of Visakhapatnam Airport in the future might impact the growth of Hyderabad airport adversely. Table 3.4 gives us the projected domestic passenger volume and Table 3.5 lists the CAGR and AAGR of projected volume.

**Table 3.4: Projected Domestic Passenger volume for 2010-11 to 2019-20**

Year	Base	Low	High
2010-11	4974506	4875015	5162789
2011-12	5394176	5161925	5813914
2012-13	5903821	5498596	6617403
2013-14	6350206	5723017	7405085
2014-15	6783808	5893434	8239656
2015-16	7253693	6209777	8971241
2016-17	7711157	6469570	9745731
2017-18	8168620	6729363	10520221
2018-19	8626084	6989156	11294712
2019-20	9083547	7248949	12069202

**Table 3.5: Compounded Annual Growth Rate and Annual Average Growth Rate**

	Year	Base	Low	High
<b>CAGR</b>	<b>2010-2014</b>	6.4%	3.9%	9.8%
<b>CAGR</b>	<b>2015-2019</b>	4.6%	3.1%	6.1%
<b>AAGR</b>	<b>2010-2014</b>	6.9%	4.1%	10.8%
<b>AAGR</b>	<b>2015-2019</b>	5.8%	4.1%	7.6%

\*The base year for CAGR projections is 2010-11

Base Case Scenario: The domestic travel grows at a CAGR of 6.4% and AAGR of 7.2% in 2010-2014 (6.78 million) and CAGR of 7.2% and AAGR of 5.8% in 2015-2019 (9.08 million).

Low Case Scenario: The domestic travel grows at a CAGR of 3.9% and AAGR of 4.4% in 2010-2014 (5.89 million) and CAGR of 3.1% and AAGR of 4.1% in 2015-2019 (7.24 million).

High Case Scenario: The domestic travel grows at a CAGR of 9.8% and AAGR of 11.1% in 2010-2014 (8.23 million) and CAGR of 6.1% and AAGR of 7.6% in 2015-2019 (12.06 million).

### 3.1.3. Domestic ATM Forecast

Technically, the Air Traffic Movement (ATM) is a derivative from the projected passenger volume forecast and the load factor. The load factor is assumed to grow from 63 in 2010-11 to 71 in 2019-20. A linear model has been fitted to forecast the domestic load factor growth.

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The ATM can be calculated as follows:

$$\text{Forecasted ATM} = [(\text{Departure Passenger/Load Factor}) * \text{Average Seat}] * 2$$

The average seat per aircraft is assumed to be 110. The projected ATM is given in Table 3.6 and the CAGR and AAGR is given in Table 3.7.

**Table 3.6: Projected ATM for 2010-11 to 2019-20**

Year	Base	Low	High
2010-11	71782	70347	74499
2011-12	76622	73323	82584
2012-13	82571	76903	92551
2013-14	87468	78829	101998
2014-15	93441	81177	113494
2015-16	98422	84257	121726
2016-17	103090	86492	130291
2017-18	107623	88661	138606
2018-19	112027	90768	146685
2019-20	116307	92816	154535

**Table 3.7: Compounded Annual Growth Rate and Annual Average Growth Rate**

	Year	Base	Low	High
<b>CAGR</b>	<b>2010-2014</b>	5.4%	2.9%	8.8%
<b>CAGR</b>	<b>2015-2019</b>	3.4%	2.0%	4.9%
<b>AAGR</b>	<b>2010-2014</b>	6.7%	3.9%	10.6%
<b>AAGR</b>	<b>2015-2019</b>	4.4%	2.7%	6.2%

\*The base year for CAGR projections is 2010-11

**3.1.4. Domestic Cargo Model**

In any country domestic cargo is prevalently driven by the GSDP as an important variable in determining the growth of the domestic cargo. Table 3.8 present the estimated model for the domestic cargo. Figure 3.2 plots the actual and fitted data.

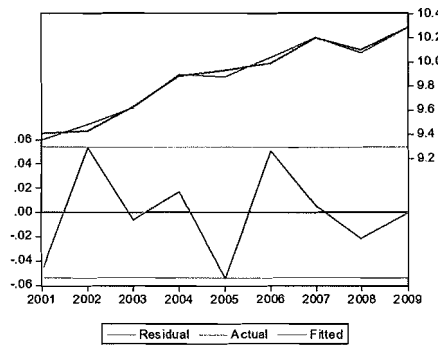
**Table 3.8: Estimation Results for Domestic Cargo**

Variable	Coefficient	Prob.
LNGSDPMKT	0.36992	0.0406
DUMMY1	0.36963	0.0082
DUMMY2	0.15245	0.0371
DUMMY3	0.15124	0.1289
C.	4.98382	0.0046

R<sup>2</sup> 0.9860  
 F-Stat (p-value) 70.54 (0.000)  
 DW Stat 2.92

In the parentheses are standard errors and \*\* and \*denotes significance at 1% and 5% levels respectively

**Figure 3.2: Actual and Fitted Data for Domestic Cargo**



**3.1.5. Domestic Cargo Forecast**

The forecast for domestic cargo is derived from the model depicted in Table 3.8. The growth forecast of India’s GDP at market price is used and a relationship has been established between the growth of Indian GDP and AP GSDP, which has been used to forecast the AP GSDP. Further to that the study also assume that the low growth scenario has the forecasted Industry GDP growth lesser than 2 % of the base and the high growth scenario has 2% higher that of base growth. Table 3.9 presents the projected domestic cargo for 2010-11 to 2019-20 and Table 3.10 gives the CAGR and AAGR for the same.

**Table 3.9: Projected Domestic Cargo for 2010-11 to 2019-20**

Year	Base	Low	High
2010-11	29961	29798	30122
2011-12	31152	30816	31486
2012-13	32516	31994	33038
2013-14	33727	33005	34453
2014-15	34925	33990	35868
2015-16	36207	35092	37331
2016-17	37457	36149	38777
2017-18	38707	37206	40223
2018-19	39958	38263	41669
2019-20	41208	39320	43115

**Table 3.10: Compounded Annual Growth Rate and Annual Average Growth Rate**

	Year	Base	Low	High
<b>CAGR</b>	<b>2010-2014</b>	3.11%	2.67%	3.55%
<b>CAGR</b>	<b>2015-2019</b>	2.62%	2.30%	2.92%
<b>AAGR</b>	<b>2010-2014</b>	3.47%	2.93%	4.00%
<b>AAGR</b>	<b>2015-2019</b>	3.31%	2.91%	3.68%

### 3.1.6. International Passenger Model

The study tried to build a similar model like domestic passenger model to estimate the income and price elasticity. The estimation results clearly suggest no big roll for price in international passenger movement, this study only uses income elasticity to forecast the international passenger volume for Hyderabad International Airport. Table 3.11 lists the estimation results and Figure 3.3 displays the actual and fitted data.

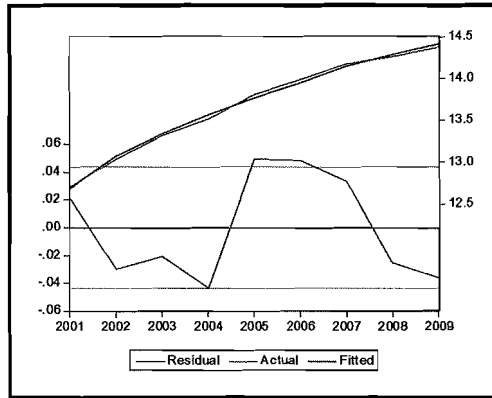
**Table 3.11: Estimation Results for International Passenger**

Variable	Coefficient	Prob.
LOG(T)	0.480519	0.0002
LNGDPMKT	0.678625	0.0013
C	2.750594	0.165

R <sup>2</sup>	0.9958
F-Stat (p-value)	711.54 (0.000)
DW Stat	1.35

In the parentheses are standard errors and \*\* and \*denotes significance at 1% and 5% levels respectively

**Figure 3.3: Actual and Fitted Data for International Passenger**



The robustness of the model can be checked from the stationarity of the residuals generated by the model. Table 3.12 gives us the stationarity test for the residuals. The Augmented Dickey Fuller test suggests that the residual generated from the model is stationary.

**Table 3.12: Stationarity Test for Residuals**

ADF Statistics	Probability
-1.917**	0.05

\*\* denotes significance at 1% level

### 3.1.7. International Passenger Forecast

#### *Low Case Assumptions:*

The projected traffic under the low case scenario is from the estimated model with 2 percent less growth of GDP from the Base case growth rate. The factor that might influence the low case are : Cut in Excess Capacity, Fall in Airline Yield & PLF, Aircraft De-registered, Drop in consumer confidence, Contract in Business & Leisure Travel, Rail – Road Competition, Terror Attack, Pandemic Influenza: SARS, Bird Flu & H1N1, Volcanic activity, Airport Charges, Government Policies, Political Factors.

#### *High Case Assumptions:*

The projected traffic under the low case scenario is from the estimated model with 2 percent higher growth of GDP from the Base case growth rate. The other economic factors include:

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private carriers allowed to fly international destination, increase in FDI, increased capacity, opportunities with bilateral agreements, LCC in international routes etc.

The projected international passenger is given in Table 3.13 as numbers. Table 3.14 provides the CAGR and AAGR of the projected volume.

**Table 3.13: Projected International Passenger for 2010-11 to 2019-20**

Year	Base	Low	High
2010-11	1981646	1969733	1993525
2011-12	2161309	2135470	2187231
2012-13	2377696	2335398	2420380
2013-14	2579390	2518234	2641477
2014-15	2787685	2705093	2872039
2015-16	2986593	2888831	3086313
2016-17	3189609	3074179	3307440
2017-18	3392625	3259528	3528567
2018-19	3595641	3444876	3749695
2019-20	3798657	3630225	3970822

**Table 3.14: Compounded Annual Growth Rate and Annual Average Growth Rate**

	Year	Base	Low	High
CAGR	2010-2014	7.1%	6.6%	7.6%
CAGR	2015-2019	4.9%	4.7%	5.2%
AAGR	2010-2014	10.0%	9.4%	10.6%
AAGR	2015-2019	6.2%	5.9%	6.5%

Base Case Scenario: The international travel grows at a CAGR of 7.1% and AAGR of 9.2% in 2010-2014 (2.78 million) and CAGR of 4.9% and AAGR of 6.2% in 2015-2019 (3.79 million).

Low Case Scenario: The international travel grows at a CAGR of 6.6% and AAGR of 8.6% in 2010-2014 (2.70 million) and CAGR of 4.7% and AAGR of 5.9% in 2015-2019 (3.63 million).

High Case Scenario: The international travel grows at a CAGR of 7.6% and AAGR of 9.8% in 2010-2014 (2.87 million) and CAGR of 5.2% and AAGR of 6.5% in 2015-2019 (3.97 million). The projected departures, arrivals and transit are given in Table 3.18.

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### 3.1.8. International ATM Forecast

Technically, the Air Traffic Movement (ATM) is a derivative from the projected passenger volume forecast and the load factor. The load factor is assumed to grow from 83 in 2010-11 to 91 in 2019-20 using a liner model.

The ATM can be calculated as follows:

$$\text{Forecasted ATM} = [(\text{Departure Passenger}/\text{Load Factor}) * \text{Average Seat}] * 2$$

The average seat per aircraft is assumed to be 165. The projected ATM is given in Table 3.15 and the CAGR and AAGR is given in Table 3.16.

**Table 3.15: Projected International ATM for 2010-11 to 2019-20**

Year	Base	Low	High
2010-11	14470	14383	14557
2011-12	15594	15407	15781
2012-13	16953	16652	17258
2013-14	18178	17747	18615
2014-15	19645	19063	20240
2015-16	20805	20124	21500
2016-17	21967	21172	22779
2017-18	23103	22196	24028
2018-19	24213	23198	25250
2019-20	25299	24177	26446

**Table 3.16: Compounded Annual Growth Rate and Annual Average Growth Rate**

	Year	Base	Low	High
CAGR	2010-2014	6.3%	5.8%	6.8%
CAGR	2015-2019	4.0%	3.7%	4.2%
AAGR	2010-2014	7.4%	6.8%	8.0%
AAGR	2015-2019	5.1%	4.8%	5.3%

\*The base year for CAGR projections is 2010-11

### 3.1.9. International Cargo Model



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International cargo is modeled same as that of domestic cargo model but instead of State GSDP we used India GDP to model it. Table 3.17 present the results

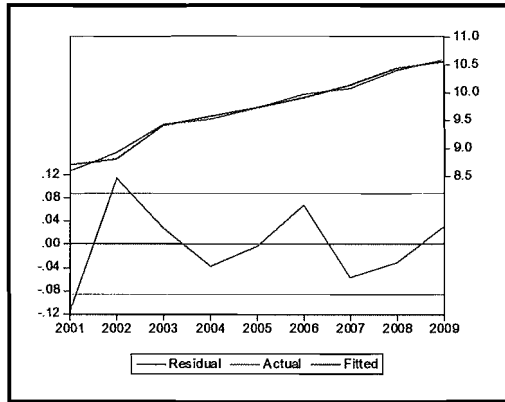
Table 3.17: Estimation Results for International Cargo

Variable	Coefficient	Prob.
LNGDPMKT	1.254491	0.0011
DUMMY1	0.60101	0.0252
DUMMY2	0.451311	0.0088
C	-9.64384	0.0169

R <sup>2</sup>	0.9890
F-Stat (p-value)	150.08 (0.000)
DW Stat	2.36

In the parentheses are standard errors and \*\* and \*denotes significance at 1% and 5% levels respectively

Figure 3.4: Actual and Fitted Data for International Cargo



The robustness of the model can be checked from the stationarity of the residuals generated by the model. Table 3.18 gives us the stationarity test for the residuals. The Augmented Dickey Fuller test suggests that the residual generated from the export model is stationary.

Table 3.18: Stationarity Test for Residuals

ADF Statistics	Probability
-5.175**	0.0004

\*\* denotes significance at 1% level

3.1.10. International Cargo Forecast

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The low growth scenario has the forecasted GDP growth lesser than 2 % of the base and the high growth scenario has 2% higher than that of base growth. Table 3.19 gives the projected international cargo for 2010-11 to 2019-20 while 3.20 gives the CAGR and AAGR of the same.

**Table 3.19: Projected International Cargo Exports for 2010-11 to 2019-20**

Year	Base	Low	High
2010-11	45437	44431	46447
2011-12	53344	51013	55737
2012-13	63634	59530	67941
2013-14	73970	67663	80738
2014-15	85389	76365	95292
2015-16	94513	83956	106038
2016-17	104566	92008	118307
2017-18	114619	100060	130576
2018-19	124672	108111	142845
2019-20	134725	116163	155114

**Table 3.20: Compounded Annual Growth Rate and Annual Average Growth Rate**

	Year	Base	Low	High
<b>CAGR</b>	<b>2010-2014</b>	14.0%	12.5%	16.5%
<b>CAGR</b>	<b>2015-2019</b>	7.3%	6.7%	7.9%
<b>AAGR</b>	<b>2010-2014</b>	16.7%	14.4%	18.9%
<b>AAGR</b>	<b>2015-2019</b>	9.1%	8.4%	9.7%

\*The base year for CAGR projections is 2010-11

#### **4. CONCLUSION**

This study has been prepared for Hyderabad International Airport Ltd (RGIA) and effort has been taken to estimate of future demand for air transport at Hyderabad Airport from 2010-11 to 2019-20. The study focused on three classifications namely passenger, cargo and aircraft traffic movement and built models for both domestic and international sectors separately. The forecast has been done with some assumptions and it should be considered while using the forecast. Also changes to the routing of traffic and the possibility of external random events, such as outbreak of contagious diseases, political turmoil, terror attacks, wars and other natural disasters can drastically change the scenarios noted in the study.

Dated: September 13<sup>th</sup> 2010.

**To,  
Mr. C V Deepak,  
OSD II  
Airport Economic Regulatory Authority of India,  
AERA Building, Administrative Complex, Safdarjung Airport,  
New Delhi 110003**

Dear Sir,

**Sub: Increase in User Development Fee "UDF" for GMR Hyderabad International Airport Private Limited**

Please refer to your queries dated 9<sup>th</sup> September 2010 on the above subject.

In this respect we submit the point wise reply as under:

1. Copies of audited accounts for FY 2008-09 and FY 2009-10.

***Audited accounts of the Financial Year 2008-09 and 2009-10 are submitted herewith.***

2. According to the Balance Sheet submitted by GHIAL, Rs. 4442.71 million has been shown as amount under Loans and Advances for FY 2009-10. Please provide an explanation and complete details for the said amount and reasons for projecting the same in future years.
  - ***While preparing the Balance Sheet for 2009-10 in UDF calculation the transfer value of HOTEL ASSETS of Rs.2500.00 million was shown as due from GMR HOTELS & RESORTS LTD under Loans and advances.***
  - ***However as per Scheme of Demerger Rs.1100 million was treated as Equity and the balance Rs.1400 million was considered as unsecured loan extended by GHIAL. Hence in the Balance Sheet Rs.1100 million should have been shown as***

*part of Investment and Rs.1400 million as part of Loans and Advances. This has been rectified in the attached UDF working.*

- *In the enclosed revised workings this matter s rectified and Rs. 1100 million is shown as investment and the balance Rs.1400 million is considered as received from GMR HOTELS AND RESORTS LTD and repaid to the existing lenders during the year 2010-11*

*Detailed breakup of the above amount is as under:*

<b>Particulars</b>	<b>Amount in Rs. Mn</b>
<i>Advances recoverable in cash or in kind or for value to be received</i>	<i>313.79</i>
<i>Advances recoverable from Passenger Security Fees (Security Component) Fund</i>	<i>945.32</i>
<i>Advances to joint venture</i>	<i>170.52</i>
<i>Deposits – Others</i>	<i>129.08</i>
<i>Balances with Customs, Excise, etc</i>	<i>120.22</i>
<i>Advance Taxes (net of provisions)</i>	<i>130.47</i>
<i>Advances to Subsidiaries</i>	<i>111.20</i>
<i>Loans to Employees</i>	<i>12.95</i>
<i>Dividend receivable from subsidiary</i>	<i>5.21</i>
<b>Total</b>	<b>1,938.77</b>

3. According to the Balance Sheet submitted by GHIAL, Rs. 18,031.25 million has been shown as amount under Secured Loans and Rs. 7,011.49 million has been shown as amount under Unsecured Loans for FY 2008-09, giving a total of Rs. 25,042 million. However, the Exhibit 2 of white paper on Cost of Equity for Hyderabad airport by Jacobs Consultancy, submitted as an annexure, shows a total figure of Rs 2120 crores as the Total Debt of the airport. Please provide an explanation and complete details for the above difference and a reconciliation of the same.

- *The difference between the two figures is on account of treatment being meted to*
  - *Capital Grant*
  - *Interest Free Loan (IFL)*
  - *Concession Fee Accruals (payable after 10 Years). And*
  - *The amount received as deposit from concessionaires.*

- **The total project cost of GHIAL including Hotel is Rs.2920 Million which consists of Rs.2120 Million loan and Rs.800 Million Equity and quasi equity. The bifurcation of Rs.800 Million is Rs. 378 Million Equity, Rs.107 Million Capital Grant and Rs.315 Million of interest free loan obtained from Govt of AP. Hence Jacob has considered Rs.2120 Million as the debt of the company.**
- **While preparing the financials, the amount of IFL of Rs.315 Million, the concession fee payable to Govt of India of Rs.16.758 Million, and the advances received from concessioners of Rs.57.443 Million are grouped under unsecured loan.**
- **Further due to exchange fluctuations the US\$ 125 Mn was revalued as at 31<sup>st</sup> March 2010 by Rs.1361.25 Million. This has been shown under secured loans.**
- **The breakup of the Total loans as such is as under:**

<b>S.No</b>	<b>Particulars</b>	<b>Amount in Rs. Mn</b>
1	Secured Loan	16,670.00
2	Exchange Fluctuation for ECB loan	1,361.25
3	Unsecured Loan	2,300.00
4	Interest Free Loan	3,150.00
5	Security deposits from Concessionaires	574.43
6	Concession fees payable	167.59
7	Loans Repayable to Subsidiary of CISF quarters	818.97
	<b>Total</b>	<b>25,042.24</b>

**Reconciliation statement between the book figures and the figures taken by Jacobs.**

Head	Figure as per Jacobs (Rs. Mn.)	Figures as per books (Rs. Mn.)	Explanation
First tranche of Loan (Rupee Loan).	9600	9600	
Second tranche of Loan (ECB)	5180	5070	When the ECB loan was tied up, it was expected that we shall be availing in INR Rs 5180 million. However due to exchange fluctuation we could avail only Rs. 5070 million

Second Tranche of loan (Rupee Loan)	2000	2000	
Third Tranche –portion availed till march 2009	2300	2300	
Third Tranche of rupee loan availed post 2009	2120		This loan has since been availed post 2009
Interest Free Loan		3150	Not included in debt for Cost of equity calculation
Security deposit from Concessionaries		574.43	Not included in debt for Cost of equity calculation
Concession Fees Payable		167.59	Not included in debt for Cost of equity calculation
CISF loans		818.97	Not included in debt for Cost of equity calculation
Exchange Fluctuation		1361.25	Not included in debt for Cost of equity calculation
<b>Total</b>	<b>21200</b>	<b>25042.24</b>	

4. Concession Fees have been shown as part of Operating Expenditure in the UDF Proposal. Please clarify whether concession fees are provided for in the actual audited accounts also and under which head, because concession fees becomes payable only after 10 years.

- ***Concession fee; although payable after 10 years is an expense for each financial year and the same is accounted for on accrual basis as per the Accounting standards.***
- ***The concession fees have been considered as part of operating expenditure based on above rationale and has been provided in the audited accounts on Accrual basis.***
- ***In the audited Profit and Loss Account the concession fees is shown as a reduction from gross revenue.***

5. Provide complete details of loans repayable over the next 3 years.

***The year on year loan repayment of loans during the next 3 years is as under:***

<b>Year</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
<b>Repayment Installment (Rs. million)</b>	<b>884.9</b>	<b>929.10</b>	<b>1017.50</b>

***It may also be noted that the existing lenders would also be repaid to the extent of Rs.1400 million on account of hotel separation from amount received from the GMR HOTELS AND RESORTS LTD.***

6. Source of Inflation data provided in the proposal is given as CSO. However, CSO index data is based on 1993-94 as a base year rather than 2003-04, which is the case in proposal. So, was the index figures re-calibrated for 2003-04 as the base? Also the change in WPI index for FY 2009-10 is shown as 12.9% whereas according to CSI data the change comes to around 3.8% only. Please explain this difference.

- ***Index figures have been recalibrated for 2003-04 as base.***
- ***The figure for 2009-10 has been changed to 3.8%.***
- ***Based on above the new WPI increase comes to 5.33% which has been incorporated in therevised calculation.***

7. Are there any actual/ projected revenues of the airport which have not been shown in the proposal, irrespective of them being aeronautical or non-aeronautical revenues? If yes, please provide the details of such revenues for the five years beginning FY 2008-09.

***We have considered all the possible revenues based on the agreement and arrangement while calculating the UDF. However revenues from the following business activities that were forming part of revenues of GHIAL in have not been considered in the proposal:***

- ***The revenues and operating expenditure of Aero express for the year 2008-09 have been considered. In this connection it may kindly be noted that GHIAL as part of providing connectivity to the passengers had run Aero Express buses taken on lease from TVS LOGISTICS LTD for FY 2008-09. In the process of running the buses GHIAL had generated revenues of Rs.94.4 mn by way of tickets sales and incurred Rs.179.10 mn expenditure which includes lease rentals***



*payable, effectively incurring losses of Rs.84.70 mn. The business of running AERO EXPRESS was transferred to a joint venture company from 2009-10 and hence the revenues and costs for this activity has not been considered from FY 2009-10.*

- *The Hotel has been separated into a separate wholly owned subsidiary w.e.f. April 1, 2009. Therefore we have not considered the revenues and operating expenditure from Hotel from FY 2009-10. Further given the real estate nature of Hotel business the revenues and costs for 2008-09 have not been considered in the UDF workings.*
- *We have not taken any divided income in the UDF proposal. Similarly the equity investment in various ventures also has not been considered as part of RAB. This is based on the principle that Investment made by the Airport Operator is a business outside the Airport Business with different types of risk and reward. In line with this principle the dividend income from Cargo joint venture has not been considered from 2008-09 onwards (Rs. 104.2 million in 2008-09 and Rs. 104.3 million in 2009-10) in the UDF workings.*
- *Dividends in general do not form part of the core activity(airport operations) of the airport operator and as such should not be included in tariff calculation. Our this stand is also based on the TDSAT (TELECOM DISPUTES SETTLEMENT & APPELLATE TRIBUNAL) order dated 30th august 2007 wherein it was held that dividend do not constitute part of AGR ( adjusted Gross Receipt).Extract of the order is reproduced herewith:*

**Income from dividend.**

The Authority recommended that income from dividend even though part of the revenue, cannot be said to represent revenue from licensed activity and, therefore, should not be included in AGR. The recommendation of the Authority has been accepted by the petitioners. However, Union of India does not accept this recommendation of the Authority. According to it, the income generated from telecom activity may be invested in other businesses/mutual funds etc. The interest or dividend which this income yields should be part of the revenue of the company because this income is generated out of the income from the licensed activity. In our view the contention raised on behalf of Union of India cannot be accepted. The part of income which is invested by the licensee and which earns dividend, has already been subjected to deduction on account of share of the Government out of the gross revenue. In the income/revenue accrued in the first instance, the Union of India has already taken its share as per the revenue sharing regime. Thereafter, if the licensee is able to save some amount and invest it in some securities or mutual funds that cannot be said to be income from licensed activity. That is an income generated from money saved after meeting all the liabilities including payment to Government, its share of the AGR. The stand of Union of India in this behalf is, therefore, untenable. We affirm the recommendation of the TRAI.

8. *The operating costs have been linked to the inflation. Please explain with data whether the same has been the trend historically.*

- Hyderabad airport has just completed two years of operations and the operations are in the midst of being stabilized.
- In the first year of operations there were significant onetime expenses incurred to ensure smooth and glitch free operations of the new airport.
- In the second year of operations, stress was on stabilize the operations and to bring the costs of operations to minimum possible.
- Also during the first two years all the major assets were covered under defect liability period leading to lower operating costs. However the defect liability period is now over. Most of the equipment is outside defect liability period and is resulting in higher operating expenses.
- Additionally as per the revised PSF guidelines w.e.f. 2010-11 all expenses on security manpower other than CISF are not to be charged to PSF. This will also result in increase in operating Expenditure of GHIAL.
- Given the short period of two years of operation and also points made above, it may not be appropriate and so relevant to trend past expenses. However with stabilization of operations, an inflationary trend is expected.

9. Provide detailed assumptions and workings (and not just the final figures) for arriving at revenues under **every head as mentioned in the proposal** including:

(a) LPH Charges including detailed impact of 15% discount and less than 80 seats aircrafts's landing charge

- **The Landing Parking and Housing (LPH) charges have been taken as per the existing AAI rates for the year 2010-11.**
- **We have considered a 10% escalation, year on year, on LPH starting from 2011-12.**
- **In the projections we have considered a discount of 2% (and not 15%) for the domestic LPH if the payment is made within 15 days based on the proposal made to AERA. This reduced discount has been considered w.e.f. 1<sup>st</sup> November 2010.**

- **In the calculation of LPH discount we have assumed that 50% of domestic ATM will avail of this discount. This is based on the historical data.**
- **The cumulative discount taken into the projections as per the above assumption is Rs. 13.7 Mn for three years.**
- **In addition to this, w.e.f. 1<sup>st</sup> November 2010 we have also considered Rs. 4000 per landing for aircrafts with less than 80 seats aircrafts (with 10% escalation year on year.) The total revenue out of landing charges levied on these aircrafts for 3 years is Rs. 137.08 Mn.**
- **The discount proposed by company shall be available to all the domestic airlines including the ATM with less than 80 seater aircrafts.**
- **However in case the proposed discounts are not allowed or the charging mechanism for aircrafts with less than 80 seats is not approved, the UDF eligibility shall increase.**

(b) **Public Admission Fee**

**GHIAL is collecting a sum of Rs. 100 per person as admission fees for Visitors entering the airport. During the year 2009-10, Rs. 30.95 Mn was collected as Public Admission revenues and the same has been escalated as per the forecasted increase in the international passenger. This is considering the fact that major portion of public admission fees comes from the meters/greeters of international passengers.**

(c) **Trading Concessions such as duty free etc.**

**Duty Free:**

**W.e.f from 9<sup>th</sup> July 2010 the concession for the Duty Free shall now be managed by HDFR Limited (100% subsidiary of GHIAL). The revenue share is considered at 14% on Gross Sales for the first year (2010-11) and 15% for second year and 16% of Gross Sales thereafter. The Spend Per passenger (SPP) assumed for 3 years is as under.**

	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
<b>Spend per Passenger (SPP) USD</b>	<b>3.50</b>	<b>4.50</b>	<b>5.00</b>

**The basis of spend per Pax is the historical spend achieved by the earlier company. During the last 2 years of duty free operation the average spend per passenger achieved by the concessionaire was approx USD 2.50.**

Lease rentals from Blue Dart were included in the previous UDF proposal submission to the Authority which appears to have not been considered now. Please explain and provide details workings of cargo related revenues (both rentals and concession fees)

- **The Blue Dart Revenues have been clubbed under the head "Airline and Other office rentals"**
- **The Blue dart revenues have been considered in the present filling also with all the assumptions as per the agreement signed with them**
- **There is no revenue share arrangement with Blue dart.**

**Details of the arrangement are as follows:**

<b>Escalation for lease rentals</b>	<b>10%</b>
<b>Covered Area (Sq mts)</b>	<b>1,600</b>
<b>Rentals for covered area (Rs/sq mts)</b>	<b>750</b>
<b>Uncovered area (sq mts)</b>	<b>1000</b>

<b>Rentals for covered area (Rs/sq mts)</b>	<b>335</b>
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**Cargo revenue:**

**As per the agreement there are two sources of revenues from cargo**

- 1. Revenue Share – 15% revenue share. The actual revenue share for the year 2009-10 has been escalated as per the growth in cargo forecast.**
- 2. Rentals: As per agreement a sum of Rs. 57.7 Mn per annum has been fixed for cargo which has been considered in the proposal.**

(d) Basis for revenues from Interest and Dividend Income and reasons for projecting sharp reduction in revenues from Rs. 140 million to 10 million.

- The company had earned dividend and interest income from the investments into Mutual fund and fixed deposit.**
- The investments made during the last 2 years are out of the project funds which remained idle for intermittent periods and was deployed in short term investments .**
- Going forward company does not expect material idle project funds.**

(e) Passenger Bus Hire Charges have been shown under the operating costs but no corresponding revenues have been shown. Please explain and provide the revenue details for the five years starting FY 2008-09.

**The Bus hire charges is the cost incurred for providing the shuttle transport service to the passenger from Public Transport centre to Passenger Terminal Building and vice versa. This is a free passenger Amenity and there are no revenues realized for providing these services.**

10. Hotel – Hotel revenues and costs have been excluded from the proposal.
- (a) Please explain the nature of arrangement between GHIAL and the demerged entity and if there is any revenue accruing to GHIAL from the arrangement.
  - (b) Please clarify whether the hotel capital cost has been included in the asset base.

Please provide the cost of land associated with the hotel taken out.

**(a) Nature of Arrangement**

- **The hotel has been hived off in a separate company which is a wholly owned subsidiary of GHIAL.**
- **Revenues and cost of the same has been excluded from the projections of GHIAL.**
- **The Scheme of Hotel Separation has been approved by Hon'ble High Court order and the entire hotel assets has been transferred to a wholly owned subsidiary - GMR Hotel & Resorts Limited (GHRL).**
- **The land area of 7.03 acres currently occupied by Hotel is being given on lease to GHRL at land lease of Rs. 35 per sq meters. per month (with 5% annual escalation) with effect from 1<sup>st</sup> April 2009.**
- **The scheme of Hotel separation has been approved w.e.f. 1<sup>st</sup> April 2009**
- **Since the Court Order has announced last month, the hotel land lease revenues of last year will be accounted in the FY 2010-11 along with this year land lease revenues.**

**The land lease revenues from land provided to GHRL have not been considered in the UDF proposal as these revenues are realized from real estate which is a business distinct from Airport Business and as such outside the regulatory preview as conferred from various engagement /consultation papers floated by AERA.**

- (b) The Hotel capital Cost has not been assumed in the Asset base.**

**(c) There is no land cost associated with hotel. However GHIAL will charges a lease of Rs. 35 per sq metre per month for the land occupied by the Hotel**

11. Provide the actual traffic numbers, available till now, for Passengers, ATMs and Cargo for the current financial year.

**The actual monthly traffic numbers for last 2 years and 5 months of current financial year is enclosed as Annexure I**

12. Real increase in Security Manpower cost has been given as 3% in the Annexure B. However, in the detailed working, it has been taken as 6% along with salaries. Please explain the inconsistent assumptions and the basis for such 3% or 6% real increase .

- **In the working, the 3% increase has been considered as additional cost for additional manpower which is required for every increase of 1.5 million passengers.**
- **The 6% escalation is real increase year on year for the salaries of the security personal over and above the WPI index.**

13. Provide an MS Excel based soft copy of the UDF proposal.

**Soft Copy of the excel working is being sent to you separately. The major changes incorporated in the new working include:**

- 1. WPI increase has been revised to 5.33%**
- 2. Pre payment of a sum of Rs. 140 Million loans has been considered (to be received from the Hotel).**
- 3. Charge of Rs. 4,000/- per landing for aircrafts' with capacity of less than 80 seats has been taken w.e.f from 1<sup>st</sup> November 2010 (instead of 1<sup>st</sup> September 2010).**
- 4. In the last filling the UDF increase was taken from 1<sup>st</sup> September 2010 however in revised file, the increase has been considered from 1<sup>st</sup> November 2010.**

We now therefore request you to kindly approve the following w.e.f. 1<sup>st</sup> November 2010:



- Charge UDF of Rs. 500/-/Per Domestic Departing Pax and Rs.2987/- Per International Departing Pax plus applicable taxes.
- Increasing landing and parking charges by 10% year on year over the regulatory period w.e.f 1<sup>st</sup> November 2010.
- Reduce the discount of 15% on Landing and Parking charges for domestic schedule airlines if payment if made within a Credit period of 15 days to 2%
- Charge of Rs. 4,000/- per landing for aircraft's with capacity of less than 80 seats.
- However in case the proposed discounts are not allowed or the charging mechanism for aircrafts with less than 80 seats is not approved, the UDF eligibility shall increase accordingly.

It may be noted that our submissions herewith may not be construed as our stated position on the broad regulatory framework and the submissions may be subject to final tariff guidelines notified by AERA

GMR Hyderabad International Airport Limited

Annexure -V

UDF Calculation per departing passenger - Domestic @ Rs.400/-, International @ Rs.1714/-

All numbers are in Million Rs							
			2008-09	2009-10	2010-11	2011-12	2012-13
Aeronautical Revenue	AR		2,777	3,491	4,368	5,523	6,180
Non Aeronautical Revenues for subsidy	NAR		1,007	1,252	1,096	1,075	1,192
Admissible Regulatory Asset Base	C		21,736	21,769	21,563	20,552	19,420
O&M cost Aeronautical	OMA		1,810	1,579	1,735	1,913	2,099
O&M cost Non Aeronautical	OMNA		431	439	467	504	550
Depreciation on Aeronautical	D		1,034	1,085	1,127	1,132	1,132
Tax payable on Aero	T		-	-	-	-	-

WACC			9.42%	9.71%	9.65%	9.89%	9.86%
Discount Factor			1.20	1.10	1.00	0.91	0.83
WACC x RAB			2,048	2,114	2,082	2,032	1,914
Aggregate Revenue Requirement ARR = WACC x RAB + OMA + OMNA + D + T			5,323	5,217	5,410	5,581	5,695
Target Revenue R = AR+NAR			3,784	4,743	5,463	6,598	7,371
Target Deficit TD = ARR - R			1,538	474	(53)	(1,017)	(1,676)
NPV of target deficit		0	1,847	520	(53)	(926)	(1,388)
Domestic departing Pax					1.13	3.07	3.47
International departing Pax					0.40	1.06	1.19
UDF Incremental Revenue - Domestic					68	184	208
UDF Incremental Revenue - International					321	859	957
Net Incremental revenue - UDF					389	1,044	1,166

GMR Hyderabad International Airport Limited

Annexure -VI

UDF Calculation per departing passenger - Domestic @ Rs.420/-, International @ Rs.1656/-

All numbers are in Million Rs							
			2008-09	2009-10	2010-11	2011-12	2012-13
Aeronautical Revenue	AR		2,777	3,491	4,367	5,523	6,180
Non Aeronautical Revenues for subsidy	NAR		1,007	1,252	1,096	1,075	1,192
Admissible Regulatory Asset Base	C		21,736	21,769	21,563	20,552	19,420
O&M cost Aeronautical	OMA		1,810	1,579	1,735	1,913	2,099
O&M cost Non Aeronautical	OMNA		431	439	467	504	550
Depreciation on Aeronautical	D		1,034	1,085	1,127	1,132	1,132
Tax payable on Aero	T		-	-	-	-	-

WACC			9.42%	9.71%	9.65%	9.89%	9.86%
Discount Factor			1.20	1.10	1.00	0.91	0.83
WACC x RAB			2,048	2,114	2,082	2,032	1,914
Aggregate Revenue Requirement ARR = WACC x RAB + OMA + OMNA + D + T			5,323	5,217	5,410	5,581	5,695
Target Revenue R = AR+NAR			3,784	4,743	5,463	6,598	7,372
Target Deficit TD = ARR - R			1,538	474	(53)	(1,017)	(1,677)
NPV of target deficit		0	1,847	520	(53)	(925)	(1,389)
Domestic departing Pax					1.13	3.07	3.47
International departing Pax					0.40	1.06	1.19
UDF Incremental Revenue - Domestic					90	245	278
UDF Incremental Revenue - International					298	798	889
Net Incremental revenue - UDF					389	1,043	1,166

GMR Hyderabad International Airport Limited

Annexure -VII

UDF Calculation per departing passenger - Domestic @ Rs.440/-, International @ Rs.1598/-

All numbers are in Million Rs							
			2008-09	2009-10	2010-11	2011-12	2012-13
Aeronautical Revenue	AR		2,777	3,491	4,367	5,523	6,181
Non Aeronautical Revenues for subsidy	NAR		1,007	1,252	1,096	1,075	1,192
Admissible Regulatory Asset Base	C		21,736	21,769	21,563	20,552	19,420
O&M cost Aeronautical	OMA		1,810	1,579	1,735	1,913	2,099
O&M cost Non Aeronautical	OMNA		431	439	467	504	550
Depreciation on Aeronautical	D		1,034	1,085	1,127	1,132	1,132
Tax payable on Aero	T		-	-	-	-	-

WACC			9.42%	9.71%	9.65%	9.89%	9.86%
Discount Factor			1.20	1.10	1.00	0.91	0.83
WACC x RAB			2,048	2,114	2,082	2,032	1,914
Aggregate Revenue Requirement ARR = WACC x RAB + OMA + OMNA + D + T			5,323	5,217	5,410	5,581	5,695
Target Revenue R = AR+NAR			3,784	4,743	5,462	6,598	7,373
Target Deficit TD = ARR - R			1,538	474	(52)	(1,017)	(1,678)
NPV of target deficit		0	1,847	520	(52)	(925)	(1,390)
Domestic departing Pax					1.13	3.07	3.47
International departing Pax					0.40	1.06	1.19
UDF Incremental Revenue - Domestic					113	307	347
UDF Incremental Revenue - International					275	736	820
Net Incremental revenue - UDF					388	1,043	1,167

GMR Hyderabad International Airport Limited

Annexure -VIII

UDF Calculation per departing passenger - Domestic @ Rs.450/-, International @ Rs.1569/-

All numbers are in Million Rs							
			2008-09	2009-10	2010-11	2011-12	2012-13
Aeronautical Revenue	AR		2,777	3,491	4,367	5,522	6,181
Non Aeronautical Revenues for subsidy	NAR		1,007	1,252	1,096	1,075	1,192
Admissible Regulatory Asset Base	C		21,736	21,769	21,563	20,552	19,420
O&M cost Aeronautical	OMA		1,810	1,579	1,735	1,913	2,099
O&M cost Non Aeronautical	OMNA		431	439	467	504	550
Depreciation on Aeronautical	D		1,034	1,085	1,127	1,132	1,132
Tax payable on Aero	T		-	-	-	-	-

WACC			9.42%	9.71%	9.65%	9.89%	9.86%
Discount Factor			1.20	1.10	1.00	0.91	0.83
WACC x RAB			2,048	2,114	2,082	2,032	1,914
Aggregate Revenue Requirement ARR = WACC x RAB + OMA + OMNA + D + T			5,323	5,217	5,410	5,581	5,695
Target Revenue R = AR+NAR			3,784	4,743	5,462	6,598	7,373
Target Deficit TD = ARR - R			1,538	474	(52)	(1,017)	(1,678)
NPV of target deficit		0	1,847	520	(52)	(925)	(1,390)
Domestic departing Pax					1.13	3.07	3.47
International departing Pax					0.40	1.06	1.19
UDF Incremental Revenue - Domestic					124	337	382
UDF Incremental Revenue - International					264	705	786
Net Incremental revenue - UDF					388	1,043	1,168