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**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

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**DESCRIPTIVE MEMORANDUM ON AIR INDIA JET PROJECT**

February 19, 1957

Department of Technical Operations

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## CURRENCY EQUIVALENTS

- 1) Air India finances - Rupees 4.80 = U.S. \$1.00
- 2) Sterling project cost - 1 £ sterling = U.S. \$2.82

### Fiscal Year

Air India's fiscal year runs from April 1, e.g. 1957, through March 31, e.g. 1958. All dates shown in this report as e.g., 1957/58 or 1960/61 express the fiscal year in the above sense.

### DEFINITIONS

Capacity Ton Miles:	Product obtained by multiplying the capacity in tons available for passengers, mail and cargo by the distance in miles flown by the aircraft.
Revenue Ton Miles:	Revenue earning load of passengers, mail and cargo in tons multiplied by the distance flown in miles.
Load Factor	Ratio of revenue ton miles to capacity ton miles usually expressed as a percentage.
Break-Even Load Factor	Minimum percentage of load factor necessary to earn revenue sufficient to meet the cost.
Revenue Passenger Miles	Product obtained by multiplying the number of fare paying passengers by the distance in miles flown by them.

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## DESCRIPTIVE MEMORANDUM ON AIR INDIA JET PROJECT

### I. INTRODUCTION

1. Air India the Indian-flag carrier on world routes, is enlarging and modernizing its fleet by the purchase of long-range jets. The company is arranging dollar loans to help finance the foreign exchange costs of the project. The Bank has been asked to participate in this financing.

### II. AIR INDIA INTERNATIONAL

#### History

2. Air India International Corp. (Air India) is the successor by nationalization, effective August 1, 1953, to Air India International, Ltd., which started operations in June 1948. Operations have grown from a single weekly frequency between Bombay and London to 11 services a week along routes from India to the UK and Continental Europe via the Middle East and Near East, to Southeast Asia and Japan, to British East Africa, and to Australia.

3. Tata and other private interests owned 51% of the predecessor's share capital and the Government of India owned 49%. In 1952, the Government decided to nationalize the Indian air line industry. The Air Corporations Act, 1953, established two separate corporations: (a) Air India, responsible for all long-range international services under the Indian flag; and (b) Indian Airlines, responsible for all domestic services and some short-range services to nearby countries.

4. The shareholders of the predecessor received compensation of \$5.9 million equivalent, of which 10% was paid in cash and 90% in Air India bonds. This compensation was shared between the Government and the private holders, pro rata to their portions of the equity.

#### Ownership and Management

5. Air India is a government corporation with no formal equity capital. Instead, the government capital consists of advances made to finance purchase of additional equipment since August 1953. In form, these advances are loans repayable on demand without specified interest. In fact, no interest has yet been paid on the Government capital, nor any of it repaid.

6. Management is exercised through a Board of Directors, appointed by the Government for indefinite terms of office, who report to the Ministry of Communications. The Chairman is a leading industrialist (J.R.D. Tata) who has held this post since the inception of the predecessor. The Vice-Chairman is Air India's General Manager, while the other members include Government officials, an Air Marshal, and businessmen.

7. The General Manager, appointed by the Board, is in charge of day-to-day operations. The executive, field, flight, shop and clerical personnel under his control are organized on the staff lines of normal airline practice. Terms and conditions of employment are set by the corporation, outside civil service rules.

8. In compliance with the Act, the carrier is set up as a business enterprise. The Act expressly establishes Air India as a "body corporate" . . . . . empowered "to acquire and hold property" which may "by its name sue and be sued". Its specific functions are "to provide safe, efficient, adequate, economical and properly coordinated air transport services". It must provide them "so far as may be on business principles".

9. Air India has all the normal powers of a business enterprise. It can acquire and dispose of property, enter into and perform contracts, incur debt, and spend such sums as it thinks fit for purposes authorized by the Act. The corporation holds and manages its own funds, keeps commercial accounts which are audited by chartered accountants as well as by the Auditor-General of India, insures all aircraft and flight risks with outside companies, works up its own programs and budgets, and prepares detailed annual reports which the Government lays before Parliament.

10. However, ultimate control is vested in the Government which has broad powers to direct Air India in "the exercise and performance" of the carrier's functions. Air India may not, without the Government's prior consent, undertake capital expenditure beyond certain limits. Government consent is required before Air India can borrow money, or secure debt through the issue of bonds, debentures, mortgages, or other charges. In addition, the Government can compel Air India (a) to undertake or discontinue particular air transport services subject to certain indemnification if losses result, (b) to permit the transfer of any of its routes or properties to Indian Airlines, and (c) to accept the transfer of any of the latter's routes or properties.

#### Routes, Services and Equipment

11. By law, Air India and Indian Airlines have a monopoly of scheduled air transport services "from, to, in or across India" except so far as the Government may, by agreement with other governments, permit foreign airlines to serve the country. Air India's only competition into and out of India is thus from foreign carriers. Such competition is governed by bilateral agreements which regulate, e.g. flight frequencies, seating capacity, terminal airfields and traffic rights en route.

12. Air India carries about two-thirds of the passenger traffic between India and overseas. The flight network totals 22,100 route miles. It connects Bombay, Calcutta, Delhi and Madras with (a) London via Cairo, Rome, Geneva and Paris; (b) London via Karachi, Beirut/Damascus, Zurich and Dusseldorf/Prague; (c) Tokyo via Bangkok and Hong Kong; (d) Sydney via Singapore and Darwin; (e) Nairobi via Aden/Karachi. By arrangement with Indian Airlines, Air India also flies some connecting flights along internal routes.

13. The fleet in service consists of 8 Super-Constellations, bought new since mid-1954, plus 3 Constellations taken over from the predecessor company. The only aircraft on firm order are 3 Boeing 707 jets, for early 1960 delivery, which will be powered by Rolls-Royce engines. In addition, Air India has placed a contingent order for the prompt delivery of 2 new Super-Constellations, conditional on Lockheed's finding a prompt buyer at a satisfactory price for the 3 Constellations. The fleet in sight is thus 3 Boeing jets plus 10 Super-Constellations.

#### Operations and Traffic

14. The 8 Super-Constellations presently provide 6 return flights weekly to London, two return flights weekly to Nairobi, and once-a-week service to Sydney. The 3 Constellations operate twice a week between Bombay and Tokyo.

15. Operations and traffic have been growing much faster than industry averages. In the current fiscal year as compared with three years ago, Air India had double the route mileage, flew twice as many aircraft hours, operated  $2\frac{1}{2}$  times as many capacity ton-miles, and carried  $2\frac{1}{2}$  times as much revenue traffic (Annex I). This demonstrated ability to find added work for added equipment is exceptional even in a growth industry like air transport.

16. The average Air India passenger flies about 2,720 miles. This is a comparatively short haul for a long-range international carrier. It reflects the fact that much of the traffic en route to London, Tokyo or Sydney starts or ends at intermediate points such as Karachi, Aden, Bangkok and Singapore.

17. Operating revenues have multiplied from \$6.6 million a year in 1953-54 to \$18.9 million a year in 1956/57 (Annex 2). Passenger traffic contributes about 70% of revenue, air mail 15% and air freight most of the remainder (Annex 3). Passengers and freight are carried at International Air Transport Association tariffs and mail at Universal Postal Union rates.

18. Three-fourths of revenue comes from intermediate and terminal traffic on the Bombay-London route (Annex 3). This is largely due to the route's good load factor, some 65% (Annex 4). Load factors on the other routes are substantially lower.

19. Air India utilizes its fleet with reasonable intensity considering that capacity has quadrupled in  $3\frac{1}{2}$  years and that payload normally lags behind capacity in the course of airline growth. The overall load factor has averaged about 60% since mid-1953, with some fluctuations, but the passenger load factor on each main route has been increasing. The Super-Constellations are in active use about 7 hours, 10 minutes daily, the Constellations, 7 hours, 38 minutes.

20. Operational efficiency is good. Air India's management and servicing of Super-Constellations, judged by the incidence of flight delays, compares well with that of other airlines using the same equipment (Annex 5). Only two aircraft have been lost from June 1948 to date; the first in 1950 by a crash in the Alps, the second in 1955 by the explosion of a time bomb en route from Hong Kong to the Bandung Conference. Although operating margins are narrower than average, this is mainly due to ultra-rapid growth of capacity.

Earnings and Finances

21. Air India earns small profits on a thin operating margin. Earnings after taxes have increased from the annual equivalent of \$195,000 in 1953/54 to the annual equivalent of \$585,000 in 1956/57 (Annex 2). Throughout the period, working expenses plus depreciation charges absorbed well over 90% of revenue. Investment return was nominal through 1955/56 but Air India is presently earning about 5% before taxes on its properties and 3% after taxes on the pro forma equity (Annex 6).

22. However, these are reported earnings after depreciation of flight equipment on a service life expectancy which is longer than the common practice of the industry. Most airlines assume 5-7 years service life down to 10% residual value. In contrast, Air India charges depreciation as follows:

	<u>Down to 20% residual value in each case</u>	
	<u>Super Constellation</u>	<u>Constellation</u>
Airframes	10 years	7 years
Engines	7 "	4 "
Spare parts	7 "	7 "

23. Air India is subject to income tax at the same rate, 43.75%, which applies to private Indian corporation. However, the tax laws of India provide incentive depreciation allowances during the early life of new equipment. Any unused balance can be carried over to later years so that taxes tend to be indefinitely deferred in the case of companies which continue adding to their equipment on a large scale.

24. Due to these allowances, Air India has never yet paid income tax and should be tax-free for at least 5 years after the jets enter service. However, provision for deferred taxes is accrued as a charge against income in the amount of 43.75% of earnings after interest. This practice will continue.

25. Air India's operations have generated a cash inflow of roughly \$8 million equivalent through March 1957 (Annex 7). The entire amount has been applied to renewals, works now in progress, cash compensation of the predecessor's shareholders, and working capital. It compares with \$22 - \$23 million equivalent paid since August 1953 for added flight equipment and ground facilities from Government capital advances.

26. Air India has adequate working capital at present, a moderate debt load for the value of its flight equipment, and a high ratio of pro forma equity to debt (Annex 8). The carrier's financial structure is therefore sound.

\$ million equivalent - March 31

	<u>1956<sup>a/</sup></u>	<u>1957<sup>b/</sup></u>
Working capital	1.8	3.1
Flight equipment	19.0	23.9
Ground facilities	1.6	2.9
Other assets	<u>0.4</u>	<u>0.5</u>
Properties	<u>22.8</u>	<u>30.5</u>
Long term debt	6.1	6.0
<u>Pro forma equity</u>	16.3	23.6
Deferred income taxes	<u>0.4</u>	<u>0.8</u>
Claims	<u>22.8</u>	<u>30.5</u>

- a/ Per audited balance sheet.  
b/ Per Bank staff estimate.

27. The long-term debt includes 3½% purchase money bonds due 1958, a 4-3/4% Government loan for staff housing due 1957-1971, and 4% assumed debentures due 1959. The purchase money bonds (\$5.3 million, of which the Government holds half) were issued as compensation to the predecessor's shareholders. They are corporation debt (Government guaranteed) but will be repaid in full at maturity out of funds which the Government has undertaken to provide. The staff housing loan (\$0.5 million) was raised to finance the construction of living quarters for Bombay personnel, is unsecured, and is being amortized in 15 annual installments. The assumed debentures (\$0.2 million) were taken over from the predecessor, are a floating first charge, and will be redeemed in the next few months out of corporate funds.

28. Of the pro forma equity, \$22.2 million represents Government capital advances for additional flight equipment and ground facilities. The remainder, \$1.4 million, includes a capital gain from insurance on the Constellation destroyed by sabotage, accumulated net earnings to date, and a voluntary reserve against minor uninsured risks.

Earnings and Savings of Foreign Exchange

29. Air India earns and saves foreign exchange for the Indian economy, predominantly in sterling and other soft currencies. The amount is indeterminate, but the carrier may have brought in or saved \$3 million equivalent in 1955/56 estimated as follows:



	<u>\$ million equivalent</u>
Operating revenue in all currencies	14.1
Fuel, lubricants, stores and spares, disbursements abroad and clearing payments via I.A.T.A.	<u>7.4</u>
Balance from operations	6.7
Less: payments for new equipment	<u>3.6</u>
Earned and saved	3.1

### III. DESCRIPTION OF JET PROJECT

#### Equipment, Costs and Contracts

30. Air India needs more aircraft to cope with growing traffic, and might fail to hold its share of the business unless, like its competitors, it acquires jets. For these reasons, Air India has just ordered for early 1960 delivery, three Boeing 707 jets of the 420 model which will be powered by four Rolls-Royce Conway engines each. These three planes have the same service potential, roughly 60 million capacity ton miles a year, as ten Super-Constellations; Air India will thus have sufficient equipment by 1960/61 for flying 120 million capacity ton miles a year compared with 42 million actually flown in 1956/57.

31. The project includes the purchase of: (a) three jets powered by 12 original engines: (b) radio, galley, and other aircraft auxiliaries: (c) 9 spare engines: (d) other initial spares and stores: (e) some overhaul facilities, a test cell and other special equipment and (f) a flight simulator (Annex 9). It will cost an estimated \$23.0 million equivalent including \$22.1 million in foreign exchange to pay the full purchase price of the equipment. Of this, \$16.8 million will be payable to US suppliers, mainly for airframes and the remainder \$1.9 million, will be payable to U.K. suppliers, mainly for engines.

32. Only the jets and their original engines have so far been ordered under a contract with Boeing, signed January 31, 1957. The contract specifies a purchase price of \$15.5 million subject to various additional charges which may or may not materialize. Of the face amount, \$12.7 million is payable to Boeing directly and \$ 1.0 million to Rolls-Royce for Boeing's account.

33. Actual expenditures for equipment could run considerably above the present estimate of \$10.1 million. Large additional charges might arise under the jet contract (a) if Boeing becomes liable for labor cost escalation

(12½ maximum) or for redesign expense on the engines it has ordered from Rolls-Royce; and also (b) if Boeing becomes subject to sales tax on the jets or forfeits, due to prolonged delay in delivering them, its right to drawback of duty on imported components. The estimated costs of equipment not yet ordered reflect quoted prices which could increase because of market conditions before actual orders are placed.

33A. Apart from the above contingencies, the project could eventually require more dollar and less sterling expenditure than the cost estimates now indicate. The Boeing contract gives Air India the right, in certain conditions, to substitute Pratt and Whitney engines, a U.S. make, for Rolls-Royce Conway engines. Air India can exercise their option, if 12 months before delivery of the jets, fewer than 100 Conways are on order or installed, as engines or spares, by the carriers operating in Air India's service area.

#### Suitability of Equipment

34. Like the other jets which airlines are now ordering, the Boeing 707-420 is a new type of aircraft which has not yet proved itself in civilian service or been granted an airworthiness certificate. Similarly, the Rolls-Royce Conway is a new power plant, not yet proved or certificated. However, both Boeing and Rolls-Royce are experienced, reputable manufacturers; each has warranted the airworthiness of its equipment; and several other airlines, e.g. BOAC and Lufthansa, have ordered the same jets with the same engines as Air India is buying.

35. From past experience with new types of aircraft, there is every reason to expect operational and maintenance difficulties as civilian jets first come into service. Such break-in difficulties, including possible grounding for modification of design, could be costly. Air India will be facing the same risks, in this respect, as other airlines introducing jets.

36. There is also some question whether three jets are a sufficient number for their planned flight program: i.e. 5 return flights weekly to London and twice-a-week service to Tokyo. The planned frequencies are technically feasible. However, they will necessitate tight-scheduling which could be disrupted from time to time, e.g. by weather delays or engine trouble.

37. Neither Santa Cruz airfield at Bombay nor Palam airfield at Delhi is capable right now of taking big jets. By early 1960, however, the runways at both fields will have been lengthened, widened, and strengthened, approaches will have been cleared, taxiways and aprons will have been enlarged. The Government is undertaking these works, estimated to cost \$8.4 million equivalent, in order to facilitate jet service by all airlines.

38. Outside India, the main airfields of the Middle and Near East, Continental Europe, and the UK are now or will shortly be fit as regards runways and approaches, for jets of the size, weight, and speed of Boeing 707's. En route to the Far East, Bangkok and Tokyo are also usable. Eventually, at some date which is now unpredictable, all the main air routes from Western Europe to the Far East will have been equipped with the traffic aids they need for jet operation at high efficiency.

Profitability of Jet Operations

39. Judged by design specifications, the Boeing 707-420 is an efficient, economical aircraft fit to compete effectively with any other airline jet now in sight. It seats 85 to 135 passengers depending on the configuration of first-class and tourist seats. It cruises at 550 miles an hour, can break even at a payload factor as low as 40-45 percent, and should be able to operate at 20-25 percent less cost, including depreciation, per capacity ton-mile than Super-Constellations or comparable piston-propeller craft.

40. According to Air India estimates, the three jets will bring in about \$1 million a year after depreciation but before interest and taxes (Annex 10). These estimates stem from conservative assumptions regarding load factor (50 percent) but take no account of possible break-in difficulties or possibly over-tight flight scheduling. Although \$1 million a year may well be a reasonable figure in the circumstances, it represents a modest return, i.e. about 5% on the project costs.

IV. PROPOSED METHODS OF FINANCING

General

41. The local currency costs, \$0.9 million equivalent, would be met from retained earnings over the next three years. The dollar costs, \$16.8 million, would be financed by loans from US commercial banks and the IBRD. No definite arrangements have yet been made to finance the sterling costs, £1.9 million.

Credit Agreement

42. Various US commercial banks have agreed to lend Air India, for the express purpose of financing the dollar costs, the sum of \$11.2 million, equal to two-thirds of those costs as now estimated. A Credit Agreement to this end was signed January 31, 1957. The credit will be open from July 1, 1959 until September 30, 1961. The latter is the earliest date, per the Boeing contract, on which Air India can cancel without penalty should delivery be delayed by causes beyond the manufacturer's control.

43. The Credit Agreement is expressly conditional on: (a) an IBRD commitment to lend \$5.6 million, equal to a third of the dollar costs, on first-in terms as regards drawdown and last-out terms as regards repayment; (b) a guarantee of the full debt service by the Government of India; (c) an undertaking by the Reserve Bank of India to assure the availability of dollar exchange for debt service; and (d) satisfactory arrangements to raise the sterling funds needed to pay for the engines and other British-made equipment.

44. The proceeds of the Credit Agreement and the IBRD loan would be applied to meeting scheduled dollar payments as follows:

Year ended	Annual	Cumulative
<u>March 31</u>		
	- \$000 -	
1957	941	941
1958	1,697	2,638
1959	1,983	4,621
1960	12,149	16,770

45. The IBRD loan would have to be fully drawn down before any Credit Agreement funds could be used. Specifically, the IBRD loan would be applied to progress payments due Boeing and other suppliers through mid-1959 (Annex 11), and the Credit Agreement funds to final payments due on delivery. Depending on unpredictable delays, actual delivery of the jets might occur as early as January-March 1960 or as late as September 1961.

46. The Credit Agreement loans are repayable in 7 semi-annual instalments starting 6 months from delivery of the jets, and must be fully repaid before amortization of the IBRD loan can begin. Each of the first six instalments would be 15% of the face amount, i.e. \$1,680,000, and the last would be

10%, or \$1,120,000. Because of the Credit Agreement stipulations and uncertain delivery dates, repayment of the IBRD loan could start as early as October 1, 1963, or perhaps not before April 1, 1965.

47. The Credit Agreement spells out detailed financial covenants binding on Air India until the loans from the commercial banks are fully repaid. Some require positive action by the corporation. Others enjoin it from taking certain action or allowing certain events to occur.

48. The positive covenants call for: (a) Insurance satisfactory to the banks on flight equipment and other properties, including insurance payable in dollars on the new jets and other US-built flight equipment; (b) Certified balance sheets and income - expense statements at six month intervals; (c) Depreciation accounting, for the purpose of these statements, on a service life expectancy, down to 10% residual in each case, of 7 years for piston and turbo-prop equipment and 10 years for jet equipment; and, (d) Upon request of any bank, delivery pro rata for the benefit of all project lenders including the IBRD, of pari passu chattel mortgages on the whole of the borrower's fleet.

49. Some of the restrictive covenants relate to Air India's financial structure and operations as a whole. Without the prior written consent of the banks, Air India may not: (a) Incur indebtedness beyond a 1:1 ratio of debt to equity, or a 75% ratio of debt to depreciated value of flight equipment; (b) Mortgage any of its flight equipment, sell the new jets, or otherwise dispose of them; (c) Permit net working capital before short-term maturities of project debt, to fall below \$1 million equivalent; or (d) Pay cash dividends or redeem equity except from net earnings accumulated after March 31, 1957 plus the sum of \$500,000 equivalent.

50. Other restrictive covenants bear on dollar assets and liabilities alone. Without the prior written consent of the banks, Air India may not: (a) incur additional dollar debt other than the IBRD loan; (b) order additional aircraft payable in dollars other than the Super-Constellations now contingently ordered; (c) incur any commitments for aircraft hire payable in dollars, or commitments beyond \$625,000 equivalent a year, payable in other currencies.

51. The Credit Agreement is further conditional on the Government's agreeing to include certain covenants in its guarantee of debt service. Specifically, the Government is asked (a) to waive its rights, under the Air Corporation's Act, 1953, to transfer any of Air India's services or assets to Indian Airlines; (b) to forego withdrawing any of the capital funds it has already advanced or may hereafter advance; and (c) to effect a full and complete subordination of these advances to the Credit Agreement loans.

52. The financing of the sterling costs, £1.9 million, has not yet been finalized. However, several alternatives are being explored.

Repayment of Project Debt

53. Air India has prepared cash-flow forecasts, April 1957 - March 1965, which are based on the following main assumptions: (a) traffic growth at 14% a year; (b) delivery of the jets in early 1960; (c) a 50% load factor in jet service; (d) a gradual shrinkage of Super-Constellation earnings once the jets start operating; (e) depreciation charges as prescribed by the Credit Agreement; (f) repayment of the assumed debentures from corporate funds and of the purchase money bonds from Government funds; (g) capital expenditure for shops and other works as now programmed; and - (h) 5% loans repayable in 10 semi-annual instalments through March 1965 for the whole equipment cost.

54. Applying these forecasts and other relevant data, the Bank staff estimates that Air India can generate \$43.6 million equivalent through March 1960 from operations, project borrowings, aircraft sales, and capital advances (Annex 12). Project equipment, other aircraft and spares, new ground facilities, and debt redemption might well require \$39.1 million. Net working capital should therefore increase by \$4.5 million.

55. Air India's ability to carry a \$22 - \$23 million debt load will be much stronger by early 1960, than at present. The corporation will have twice as much working capital, a doubled fleet, and enlarged ground facilities. Half of its payload capacity will be jets, and half will be modern piston-propeller craft.

- \$ million equivalent -

	Estimated March 31 <u>1957</u>	Pro forma, March 31 <u>1960</u>
Working capital	3.1	7.6
Flight equipment	23.9	44.5
Ground facilities	2.9	5.6
Other assets	<u>0.5</u>	<u>0.7</u>
Properties	<u>30.5</u>	<u>58.3</u>

- \$ million equivalent -

	Estimated March 31 <u>1957</u>	Pro forma March 31 <u>1960</u>
Long-term debt	6.0	22.5
Pro forma equity	23.6	32.7
Deferred income taxes	<u>0.8</u>	<u>3.1</u>
Claims	<u>30.5</u>	<u>58.3</u>

56. Debt service will be covered by narrow margins throughout the re-payment period from April 1960 through March 31, 1965 (Annex 13). As an offset, working capital will at all times be sufficient to meet the maturities of the next 12 months (Annex 14). At no time will outstanding debt approach the permissible limits prescribed by the Credit Agreement.

Year ended, or effective <u>March 31</u>	<u>T i m e s</u>		<u>\$ M i l l i o n e q u i v a l e n t</u>	
	<u>Debt service covered</u>	<u>Interest earned</u>	<u>Margin of working capital over 12 month maturities</u>	<u>Margin of permissi- ble over outstanding debt</u>
1961	0.9 x	1.0x	3.3	11.9
1962	1.0	1.2	3.3	13.5
1963	1.2	2.6	4.1	14.9
1964	1.4	4.0	5.1	16.3
1965	1.5	9.2	10.8	17.7

57. Return on properties promises to be thin through 1964/65, but should widen considerably during the later life of the jets (Annex 15). Equity earnings are apt to be nominal until the project debt is fully repaid. However, the jets should be able to repay their investment cost unless break-in difficulties exceed Air India's expectations. Air India is obliged to face up to this risk for competitive reasons.

- \$ million equivalent -

	<u>April 1, 1957 to March 31, 1960</u>	<u>April 1, 1960 to March 31, 1965</u>
Average properties	40.2	49.0
Average operating income	1.2 p.a.	1.4 p.a.
Average equity	28.1	33.8
Average net earnings	<u>0.3 p.a.</u>	<u>0.45 p.a.</u>
Return on properties	2.5%	2.9%
Return on equity	1.1	1.3

ANNEX 1

GROWTH OF OPERATIONS AND TRAFFIC  
1953 - 1957

<u>Measure</u>	<u>Fiscal year ended March 31,</u>				<u>Present fiscal year</u>	
	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>7 months</u> <u>ended Oct. 31</u>	<u>estimate</u> <u>for year</u>
000 route miles	x	10.4	15.0	17.8	(22.1)	x
000 hours flown	10.9	12.8	15.4	20.9	(14.5)	24.9
Million miles flown	2.7	3.1	3.8	5.2	( 3.6)	6.2
Million capacity ton-miles	14.4	16.9	23.7	35.2	(24.6)	42.1
Million revenue ton-miles	n.a.	a/ 10.9	14.0	19.6	(15.3)	26.2
000 passengers	27.2	30.0	44.4	62.1	(44.8)	76.8
Million passenger- miles	67.6	85.8	123.5	169.4	(121.9)	209.0
Million lbs. mail	0.5	0.5	0.7	1.0	( 0.7)	1.7
Million lbs. cargo	1.3	1.9	2.3	2.8	( 1.7)	4.8
Passenger load factor	61%	58%	61%	57%	67%	-
Overall load factor	61	62	59	56	62	-
Average passenger haul:miles	2040	2830	2780	2720	2720	-
<u>Average number of aircraft</u>						
Constellations	x	4.0	4.0	3.0	( 3.0)	3.0
Super-Constellations	x	-	1.5	4.8	( 5.6)	7.4
Equated total	x	2.7	4.2	6.8	( 7.6)	9.4

a/ Annual average, 8 months from August through March.

b/ Counting 3 Constellations equal to 2 Super-Constellations.



ANNEX 2

SUMMARY OF REVENUE, EXPENSES, AND EARNINGS, 1953-57

- \$000 equivalent -

Measure	8 Months ended 3/31/54	Year ended 3/1/55	Year ended 3/31/56a/	7 Months ended 10/31/57
Operating revenue	4,980	10,058	14,049	11,071
Working expenses	<u>4,139</u>	<u>8,234</u>	<u>11,890</u>	<u>8,800</u>
Balance	841	1,824	2,204	2,271
Depreciation and obsolescence	<u>458</u>	<u>1,141</u>	<u>1,885</u>	<u>1,370</u>
Operating income	383	683	319	901
Interest earnings	<u>3</u>	<u>18</u>	<u>44</u>	<u>5</u>
Income applicable to interest	386	701	363	906
Interest charges	<u>130</u>	<u>185</u>	<u>199</u>	<u>112</u>
Balance subject to tax	256	516	164	794
Capital gain	<u>-</u>	<u>-</u>	<u>157</u>	<u>-</u>
Taxable income	256	516	32	794
Deferred income taxes	<u>109</u>	<u>225</u>	<u>139</u>	<u>347</u>
Net earnings	147	291	182	447

- \$000 equivalent -

Per annum:	<u>1953/54</u>	<u>1954/55</u>	<u>1955/56</u> <sup>a/</sup>	<u>1956/57</u>
Operating revenue	6,640	10,058	14,094	18,980 <sup>b/</sup>
Operating income	510	683	319	1,230 <sup>b/</sup>
Net earnings	195	291	182	585
Operating ratio	92.7%	92.9%	98.3%	91.9%
Times interest earned	3.0 x	3.8 x	1.8 x	8.1 x

a/ Adjusted for subsequent refund, in early 1957, of Beirut taxes on uplifted fuel charged to expenses in 1955/56.

b/ Adjusted for additional depreciation because of Super-Constellations added toward end of period.

COMPOSITION OF OPERATING REVENUE BY TRAFFIC  
AND ROUTE, 1953 - 1957

- \$000 equivalent -

<u>Traffic</u>	<u>8 months</u> <u>ended 3/31/54</u>	<u>Year</u> <u>ended 3/31/55</u>	<u>Year</u> <u>ended 3/31/56</u>	<u>7 months</u> <u>ended 10/31/56</u>
Passenger	3,401	6,861	9,773	7,786
Mail	929	1,787	2,336	1,604
Freight and excess baggage	548	948	1,559	1,259
Charter	19	141	86	171
Other	<u>83</u>	<u>321</u>	<u>341</u>	<u>250</u>
Total	4,980	10,058	14,094	11,071
 <u>Route</u>				
Bombay-U.K.	3,137	7,570	10,415	7,745
Bombay-Nairobi	830	1,513	1,673	1,050
Bombay/Singapore/ Sydney	-	300	560	448
Bombay-Tokyo	<u>-</u>	<u>330</u>	<u>1,185</u>	<u>1,423</u>
Sub-total	4,967	9,713	13,833	10,666
Unapportioned	<u>13</u>	<u>345</u>	<u>261</u>	<u>405</u>
Total	<u>4,980</u>	<u>10,058</u>	<u>14,094</u>	<u>11,071</u>

ANNEX 4LOAD FACTORS BY ROUTE, 1953-1957

	<u>8 months</u> <u>ended 3/31/54</u>	<u>Year</u> <u>ended 3/31/55</u>	<u>Year</u> <u>ended 3/31/56</u>	<u>7 months</u> <u>ended 10/31/56</u>
<u>Overall load</u> <u>factor</u>				
Bombay-U.K.	67%	64%	58%	65%
Bombay-Nairobi	52	54	55	57
Bombay/Singapore/ Sydney	-	31	43	42
Bombay-Tokyo	<u>-</u>	<u>38</u>	<u>46</u>	<u>60</u>
System	<u>62</u>	<u>59</u>	<u>56</u>	<u>62</u>
<u>Passenger load</u> <u>factor</u>				
Bombay-U.K.	58%	62%	58%	69%
Bombay-Nairobi	57	68	64	66
Bombay/Singapore/ Sydney	-	38	53	56
Bombay-Tokyo	<u>-</u>	<u>45</u>	<u>44</u>	<u>63</u>
System	<u>58</u>	<u>61</u>	<u>57</u>	<u>62</u>

ANNEX 5COMPARATIVE INCIDENCE OF FLIGHT DELAYS WITH  
SUPER-CONSTELLATIONS

Carrier	<u>Air-India</u>	<u>Airline 1</u>	<u>Airline 2</u>	<u>Airline 3</u>	<u>Airline 4</u>	<u>Airline 5</u>
Flight No.	335	275	274	213	152	213
Period	1-10/56	1-9/56	1-9/56	1-7/56	1-5/56	1-7/56
Number of take- offs per delay	18.1	11.2	15.4	14.4	13.8	20.7
Number of fly- ing hours per delay	84.7	69.4	75.2	57.5	75.1	97.1
Ratio of delay hours to flying hours	5.5%	8.4%	7.2%	5.9%	6.4%	2.8%
Average dura- tion of delay: hours	4.7	5.8	5.4	3.4	4.8	2.7
Average engine hours per prema- ture engine renewal	2,273	1,961	2,000	952	n.a.	943

ESTIMATED INVESTMENT RETURN - 1953-1957

	- - - \$ million equivalent - -	
	August 1, 1953 - March 31, 1956	Fiscal year 1956/1957
<u>Properties<sup>a/</sup></u>		
Start of period	10.0	22.8
End of period	<u>22.8</u>	<u>30.5</u>
Average	16.4	23.7 <sup>d/</sup>
Operating income p.a.	0.5	1.2
Return on properties	2.0%	5.1%
<u>Equity<sup>b/</sup></u>		
Start of period	4.2	16.3
End of period	<u>16.3</u>	<u>23.6</u>
Average	10.3	20.0
Net earnings p.a. <sup>c/</sup>	0.2	0.6
Return on equity	1.9%	3.0%

<sup>a/</sup> Sum of net working capital, fixed assets after depreciation, investments, and unamortized development expense.

<sup>b/</sup> Capital advances, capital surplus, undistributed earnings, and voluntary insurance reserve.

<sup>c/</sup> Excluding capital gains.

<sup>d/</sup> Adjusted to allow for addition of 1 new Super-Constellation in mid-June and 2 new Super-Constellations in late December.

CASH INFLOW FROM OPERATIONS, 1953-1957

<u>Measure</u>	8 months ended <u>3/31/54</u>	<u>- \$000 equivalent -</u>			<u>T o t a l</u>
		<u>Fiscal year ended March 31,</u>			
		<u>1955</u>	<u>1956</u>	<u>1957 a/</u>	
Net earnings after provision for deferred income tax	147	291	67	585	1,090
Add back: taxes	<u>109</u>	<u>225</u>	<u>53</u>	<u>455</u>	<u>842</u>
Sub-total	256	516	120	1,040	1,932
Add back: Depreciation and obsolescence charges	<u>458</u>	<u>1,141</u>	<u>1,885</u>	<u>2,655</u>	<u>6,139</u>
Cash inflow from operations	714	1,657	2,005	3,695	8,071
Net insurance proceeds, aircraft loss	<u>-</u>	<u>-</u>	<u>409</u>	<u>-</u>	<u>409</u>
Total inflow	<u>714</u>	<u>1,657</u>	<u>2,414</u>	<u>3,695</u>	<u>8,480</u>

a/ Estimate by Bank staff.

BALANCE SHEET, 1956 and 1957

	- \$000 equivalent -	
	March 31, 1956	March 31, 1957
	<u>audited</u>	<u>estimated</u>
Current assets	5,808	7,545
Current liabilities	<u>4,016</u>	<u>4,418</u>
Net working capital	1,793	3,127
Insurance Fund		
investments	210	300
Other investments	<u>15</u>	<u>15</u>
Investments	225	315
Aircraft, engines, and spares at cost	20,129	28,376
Depreciation and obsolescence	<u>3,174</u>	<u>5,564</u>
Flight equipment in service	16,955	22,812
Advance payments, flight equipment on order	<u>2,054</u>	<u>1,080</u>
Net flight equipment	19,009	23,892
Other fixed assets at cost	1,890	3,540
Depreciation	<u>335</u>	<u>600</u>
Net ground facilities	1,555	2,940
Unamortized development expense	<u>191</u>	<u>191</u>
Properties	22,772	30,465
Claims	<u>22,772</u>	<u>30,465</u>
3½% purchase money bonds, due 1958	5,292	5,292
4¾% staff housing loan, due 1957-71	583	541
4% debentures due 1959	<u>188</u>	<u>188</u>
Long-term debt	6,063	6,021
Deferred income taxes	394	804
Staff Welfare Fund reserve	6	6
Equity	<u>16,309</u>	<u>23,634</u>
Capital advances	15,415	22,210
Capital surplus	251	251
General reserve	386	866
Insurance reserve	250	300
Unappropriated balance of earnings	7	7

PARTICULARS OF JET PROJECT WITH COST ESTIMATES

<u>Item</u>	<u>a/</u> <u>Total</u> <u>\$000</u> <u>equivalent</u>	<u>Of which payments to:</u> <u>US Suppliers</u>	<u>UK suppliers</u>
		<u>\$000</u>	<u>£000</u>
<u>Foreign exchange costs</u>			
- 3 Boeing jets, powered by 12 Rolls Royce engines	15,455	12,653	b/ 994c/
- 9 spare Rolls Royce engines	1,676	-	594
- Radio, galley, and other customer furnished equipment	200	200	-
- Overhaul facilities, test cell and other special equipment	1,800	1,589	75
- Flight simulator	1,000	1,000	-
- Initial spares and stores except engines	<u>2,000</u>	<u>1,329</u>	<u>238</u>
Total	<u>22,132</u>	<u>16,770</u>	<u>1,901</u>
<u>Local currency costs</u>			
- Indian import duty @ 2½%	562	-	-
- Flight and ground training	239d/	-	-
- Delivery charges	<u>79d/</u>	<u>-</u>	<u>-</u>
Total	<u>880</u>		
Grand total	<u>23,012</u>		

a/ Conversion rate (per Boeing contract) : £ = \$2/82.

b/ Subject to price escalation not exceeding 12½% on equipment estimated to cost £ 793,000.

c/ Subject to price escalation not exceeding 12½%.

d/ Some part of which may be payable in foreign exchange.



ESTIMATED REVENUE AND EXPENSE OF FUTURE JET FLEETOperating revenue\$000  
(equivalent : p.a.)Bombay/London/Bombay: (5 times weekly, 51.2% load factor)

- 15 first-class pax, @ \$900 x 260 flights	3,510
- 49 tourist pax, on-season, @ \$625 x 150 flights	4,594
- 49 tourist pax, off-season, @ \$500 x 110 flights	<u>2,695</u>
- : Passenger traffic	10,799
- : Air mail : 3,000 lbs. @ \$2.54 x 260 flights	1,979
- : Air freight : 8,000 lbs. @ \$0.32 x 260 flights	<u>1,712</u>
Sub-total	14,490

Bombay/Tokyo/Bombay: (2 times weekly, 47.8% load factor)

- 15 first-class pax, @ \$837.08 x 104 flights	1,306
- 49 tourist pax, @ \$647.50 x 104 flights	<u>3,300</u>
- : Passenger traffic	4,606
- : Air mail : 2,400 lbs. @ \$1.37 x 104 flights	1,306
- : Air freight : 6,000 lbs. @ \$0.67 x 104 flights	<u>416</u>
Sub-total	<u>5,365</u>
Total	<u>19,855</u>

Operating expense

- Direct costs except depreciation and obsolescence	9,008
- Depreciation and obsolescence	<u>2,081</u>
Sub-total	11,089
- Indirect costs (100% of direct except fuel and oil)	<u>6,986</u>
Sub-total	18,074
- Contingencies (5% of above except depreciation and insurance)	<u>759</u>
Total	<u>18,833</u>

\$ million

Operating revenues	19.9
Working expenses	<u>16.8</u>
Balance	3.1
Depreciation and obsolescence	<u>2.1</u>
Net operating income	<u>1.0</u>

ANNEX 11ADVANCE PAYMENTS DUE PER BOEING CONTRACT

<u>Due date</u>	<u>Percent of basic price</u>	<u>\$000</u>
Prior to contract (signed January 31, 1957)	5%	773
April 1, 1957	2	309
July 1, 1957	2	309
October 1, 1957	3	464
January 1, 1958	3	463
April 1, 1958	3	464
July 1, 1958	3	463
October 1, 1958	3	464
January 1, 1959	3	463
April 1, 1959	3	464
July 1, 1959	<u>3</u>	<u>464</u>
Total	33	5,100
Balance due on delivery	<u>67</u>	<u>10,355</u>
Total	<u>100%</u>	<u>15,455</u>
Advance payments due Boeing through July 1, 1959	-	5,100
Estimated payments due other US suppliers through March 1959	-	<u>830</u>
Total	-	5,930
Proposed IBRD loan	-	5,600

ESTIMATED SOURCES AND APPLICATION OF FUNDS,  
1957 - 1960

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	- \$000 equivalent -			
	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>Total</u>
<u>Sources</u>				
Net earnings	314	\$14	243	871
Deferred income taxes	245	245	189	679
Depreciation charges	<u>2,950</u>	<u>3,040</u>	<u>3,100</u>	<u>8,690</u>
Cash from operations	3,509	3,599	3,532	10,640
Cash from aircraft sales	4,600	-	-	4,600
Government capital advances	730	5,292	190	6,212
Project loans	<u>3,250<sup>a/</sup></u>	<u>2,758</u>	<u>16,124</u>	<u>22,132</u>
Total	12,089	11,649	19,846	<u>43,584</u>
<u>Application</u>				
Project equipment <sup>b/</sup>	2,168 <sup>c/</sup>	2,758	17,004	21,930
Other flight equipment	5,700	420	-	6,120
Ground facilities	<u>1,650</u>	<u>940</u>	<u>940</u>	<u>3,530</u>
Sub-total	9,518	4,118	17,944	31,580
Normal replacements	<u>690</u>	<u>520</u>	<u>520</u>	<u>1,730</u>
Capital expenditure	10,208	4,638	18,464	33,310
Insurance Fund investments	50	50	50	150
Debt redemption	<u>230</u>	<u>5,334</u>	<u>42</u>	<u>5,606</u>
Sub-total	10,488	10,022	18,556	39,066
Increased working capital	<u>1,601</u>	<u>1,627</u>	<u>1,290</u>	<u>4,518</u>
Total	<u>12,089</u>	<u>11,649</u>	<u>19,846</u>	<u>32,584</u>

<sup>a/</sup> Includes \$1,082,000 for project expenditures in 1956/1957.

<sup>b/</sup> Includes local currency as well as foreign exchange costs.

<sup>c/</sup> Excludes \$1,082,000 advance payments in 1956/1957.

TIMES INTEREST EARNED AND DEBT SERVICE COVERED  
1963 - 1965

Fiscal year	- \$000 equivalent -		Times interest earned	Total debt service	Cash from operations	Times debt service covered
	Net operating income	Interest charges				
1953/54	386	130	3.0 x	130	714	5.5 x
1954/55	701	185	3.8	185	1,657	8.9
1955/56	319 <sup>a/</sup>	199	1.6	199	2,005	10.1
1956/57	1,230 <sup>b/</sup>	190	6.5	232	3,695	15.9
1957/58	1,110	551	2.0 x	781	3,509	4.5 x
1958/59	1,000	441	2.3	5,775 <sup>c/</sup>	3,599	(0.6)
1959/60	1,000	568	1.8	610	3,532	5.8
1960/61	1,020	1,071	1.0 x	5,539	5,199	0.9 x
1961/62	1,020	850	1.2	5,318	5,480	1.0
1962/63	1,020	629	2.6	5,097	6,361	1.2
1963/64	1,620	407	4.0	4,875	6,653	1.4
1964/65	1,620	176	9.2	4,646	6,944	1.5

<sup>a/</sup> Adjusted

<sup>b/</sup> Estimated

<sup>c/</sup> Includes \$5,292,000 on account of purchase money bonds which will be redeemed from funds which Government has undertaken to provide.

FORECAST OF FINANCIAL POSITION,  
1957 - 1965  
\$ million equivalent  
March 31.

Item	1957	1958	1959	1960	1961	1962	1963	1964	1965
Net working capital <sup>a/</sup>	3.1	4.8	6.3	7.6	7.8	7.7	8.5	9.5	10.8
Net flight equipment <sup>b/</sup>	23.9	28.8	29.8	44.5	40.1	36.1	32.1	28.0	23.9
Net ground facilities <sup>b/</sup>	2.9	4.3	4.9	5.6	5.3	4.9	4.6	4.3	4.0
Investments <sup>c/</sup>	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.8
Unamortized develop- ment expense	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>
Properties	30.5	38.4	41.6	58.3	53.8	49.5	46.0	42.7	39.7
Pre-project debt	6.0	5.8	0.5	0.4	0.4	0.3	0.3	0.2	0.2
Project debt	<u>-</u>	<u>3.3</u>	<u>6.0</u>	<u>22.1</u>	<u>17.7</u>	<u>13.3</u>	<u>8.9</u>	<u>4.4</u>	<u>-</u>
Long-term debt	6.0	9.0	6.5	22.5	18.1	13.6	9.1	4.7	0.2
Deferred income taxes	0.8	2.6	2.9	3.1	3.1	3.1	3.5	4.0	4.6
Government equity	<u>23.6</u>	<u>26.7</u>	<u>32.2</u>	<u>32.7</u>	<u>32.6</u>	<u>32.7</u>	<u>33.3</u>	<u>34.0</u>	<u>34.9</u>
Claims	30.5	38.4	41.6	58.3	53.8	49.5	46.0	42.7	39.7
Net working capital	3.1	4.7	6.3	7.6	7.8	7.7	8.5	9.5	10.8
Project debt due next 12 months	<u>-</u>	<u>-</u>	<u>-</u>	<u>4.4</u>	<u>4.4</u>	<u>4.4</u>	<u>4.4</u>	<u>4.1</u>	<u>-</u>
Margin	x	x	x	3.2	3.3	3.3	4.1	5.1	10.8
100% of equity	(23.6)	(26.7)	(32.2)	32.7	(32.6)	(32.7)	(33.3)	(34.0)	(34.9)
75% of net flight equipment	17.9	21.6	22.4	(33.4)	30.1	27.1	24.1	21.0	17.9
Long-term debt	<u>6.0</u>	<u>9.0</u>	<u>6.5</u>	<u>22.5</u>	<u>18.1</u>	<u>13.6</u>	<u>9.1</u>	<u>4.7</u>	<u>0.2</u>
Margin	<u>11.9</u>	<u>12.6</u>	<u>15.9</u>	<u>10.2</u>	<u>11.9</u>	<u>13.5</u>	<u>14.9</u>	<u>16.3</u>	<u>17.7</u>

a/ Before short-term maturities of project debt.

b/ After accrued depreciation and obsolescence.

c/ Almost entirely for Investment Fund.

FORECAST RETURN ON PROPERTIES AND EQUITY  
1957 - 1965

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Properties	1957/58	1958/59	--- (\$ million equivalent) ---					1963/64	1964/65
			1959/60	1960/61	1961/62	1962/63	1963/64		
Start of year	30.5	38.4	41.6	58.3	53.8	49.5	46.0	42.7	
End of year	<u>38.4</u>	<u>41.6</u>	<u>58.3</u>	<u>53.8</u>	<u>49.5</u>	<u>46.0</u>	<u>42.7</u>	<u>39.7</u>	
Average	34.4	40.0	49.9	56.0	51.7	47.7	44.3	41.2	
Net operating income	1.1	1.0	1.0	1.0	1.0	1.6	1.6	1.6	
Percent return	3.2%	2.5%	2.0%	1.8%	1.9%	3.3%	2.6%	3.8%	
<u>Equity</u>									
Start of year	23.6	26.7	32.2	32.7	32.6	32.7	33.3	34.0	
End of year	<u>26.7</u>	<u>32.2</u>	<u>32.7</u>	<u>32.6</u>	<u>32.7</u>	<u>33.3</u>	<u>34.0</u>	<u>34.9</u>	
Average	25.1	29.4	32.4	32.6	32.6	33.0	33.6	34.4	
Net earnings	0.3	0.3	0.2	- 0.1	0.1	0.6	0.7	0.8	
Percent return	1.2%	1.0%	0.9%	-	0.3%	1.8%	2.1%	2.3%	