



China Eastern Airlines: A Minority Stake?
Executive Summary, Case Materials, and Case Solution / Teaching Notes

April 9th, 2003
Topics in Emerging Financial Markets
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Executive Summary

This student written case for China Eastern Airlines (CEA) is a relevant case study because it covers a wide range of aspects and topics in emerging financial markets within the write-up and the solution. This case demonstrates the many difficulties and challenges involved in dealing with emerging market corporations, and the many additional factors that must be considered to invest in an emerging market that are normally taken for granted in the U.S. domestic market.

Objective

The purpose of this case study is to perform both a qualitative and quantitative evaluation and analysis of a Chinese airline during the air transportation industry's process of consolidation, deregulation, and quality improvement to international standards. The case study is written from the perspective of a large U.S. airline evaluating the possibility of taking a minority stake in a high growth market, positioning the firm for favorable entry into the Chinese aviation market.

Significant Issues

The CEA case study emphasizes the following key issues:

- Valuation of the firm by using published financial statements and employing discounted cash flow, Altman's Z-score, and competitive analysis techniques.
- Analysis of emerging market risks such as those related to government and macroeconomic conditions.
- Discover the challenges encountered in consolidation and deregulation of a highly fragmented industry and determine which foreseeable risks can be quantified and incorporated into the value of a firm.
- Evaluation of the firm's likelihood to enter bankruptcy through Altman's Z-Score.

With China as an increasing focus of international investment and with the country's aviation industry undergoing many changes to become a global competitor, this case offers students a chance to perform an in-depth analysis on a highly competitive industry that clearly underline and demonstrate the risks inherent in emerging markets.





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China Eastern Airlines: A Minority Stake?

Looking out the window of his office overlooking the blossoming trees of Sam Houston Park in Houston, Texas, Larry Kellner is lost in thought. Kellner worked feverishly the past three years when the trouble began in the airlines industry, but came out with only limited success. On his mahogany desk, there are piles and piles of papers and files from all sources waiting for his decision. He slowly turns and glances at them. One particular proposal is sitting on top of the mess; titled “Valuation of China Eastern Airlines: *Exploit the Opportunity to Expand into Asia.*” This might be the one, Kellner thinks. His previous achievements were made often by making bold moves when everyone else is retracting from risky investment opportunities. Kellner is aware that with the company’s budget and its current financial condition, it is hard to make new investments. But China was the only growing economy in the world and was expected to become the largest civil aviation market in the world by 2020¹. Kellner had many questions. How much is the 10% stake in China Eastern really worth? What is the appropriate cost of capital for this new project? He sat down on his chair and placed his hand on the mouse and opened new excel spreadsheet on the screen.

Continental Airlines

Continental Airlines was founded in 1937 by Robert Six, who convinced his father-in-law, chairman of drugmaker Charles Pfizer Co., to lend him \$90,000 for the stake in Varney Speed Lines, the fourth airline in the US that started in 1934. Surviving two Chapter 11 filings and many other turbulent times during its 70 year history, Continental Airlines stands strongly as the fifth largest US carrier even after the 9/11 terrorist attack, despite some reduction in flights and its workforce.

The Company, together with its indirect 53.1%-owned subsidiary, ExpressJet Airlines, Inc., and its wholly owned subsidiary, Continental Micronesia, Inc. (CMI), served 223 airports worldwide as of January 31, 2003. The Company flew to 129 domestic and 94 international destinations and offered additional connecting service through alliances with domestic and foreign carriers. Continental directly served 15 European cities, seven



South American cities, Tel Aviv, Hong Kong and Tokyo as January 31, 2003. It served 28 cities in Mexico and Central America. Through its Guam hub, CMI provides service in the western Pacific, including service to more Japanese cities than any other United States carrier.

For the fiscal year ended 12/31/02, revenues fell 6% to \$8.40 billion. Net loss totaled \$451 million, up from \$95 million. Revenues reflect a decrease in both traffic and yields subsequent to the September 11, 2001 terrorist attacks. Needless to say, the terrorist attacks have had a profound affect on the aviation industry, a devastating blow to the market that was already reeling from a market slowdown. More strategic thinking and planning is required than ever to face these new challenges and obstacles.

International Operations

The Company directly serves destinations throughout Europe, Canada, Mexico, Central and South America and the Caribbean, as well as Tel Aviv, Hong Kong and Tokyo. Continental also provides service to numerous other destinations through codesharing arrangements with other carriers and has extensive operations in the western Pacific conducted by CMI. As measured by 2002 available seat miles, approximately 39% of the Company's mainline jet operations, including CMI, were dedicated to international traffic.

From its hub operations based on the island of Guam, as of January 31, 2003, CMI provided service to eight cities in Japan, as well as other Pacific rim destinations, including Taiwan, the Philippines, Hong Kong, Australia and Indonesia. CMI is the principal air carrier in the Micronesian Islands, where it pioneered scheduled air service in 1968. CMI's route system is linked to the United States market through Hong Kong, Tokyo and Honolulu, each of which CMI serves non-stop from Guam. CMI and Continental also maintain a codesharing agreement and coordinate schedules on certain flights from the United States to Honolulu and from Honolulu to Guam to facilitate travel from the United States into CMI's route system.



The Company has entered into alliance agreements, which are also referred to as codeshare agreements or cooperative marketing agreements, with other carriers. The Company has a long-term global alliance with Northwest Airlines through 2025, subject to earlier termination by either of the companies in the event of certain changes in control of either Northwest or Continental. The Company's alliance with Northwest provides for each of the companies to place their respective code on a large number of the flights of the other, reciprocity of frequent flyer programs and airport lounge access, as well as other joint marketing activities. Together with Northwest, the Company also has joint contracts with major corporations and travel agents designed to create access to a broader product line encompassing the route systems of both carriersⁱⁱ.

Larry Kellner, President of Continental Airlines, is responsible for the airline's Sales and Marketing, Scheduling, Pricing, Reservations, Technology, Financial Operations, Corporate Real Estate, Alliances and Corporate Development. The past two years have been the most difficult times in his career since joining the firm in 1995. As the winner of CFO Excellence Awards - published by CFO magazine – in the Turnaround Management category (1999), he is determined to show his talent using the company's strengths to boost profitability and become top-tier carrier in the world. There are many decisions to be made in all areas of business Kellner covers that can ultimately lead the company to success or failure.

China

Market Reforms

Over the last 20 years China's economy has been fundamentally transformed from one in which the industrial sector was largely centrally planned to one in which the allocation of resources is increasingly determined by the free operation of market forces. Economic reforms have not been carried out according to a comprehensive blueprint, but rather have been piecemeal and ad hoc, best summarized by the Chinese phrase "crossing the river by feeling for the stones"ⁱⁱⁱ. The process began with the gradual phasing out of



communes in the agricultural sector and their replacement by the semi-private household responsibility system, a change that gave individual families the right to keep—and then sell at market—any produce above a set level procured by the government. The government also established four Special Economic Zones (SEZs), whose authorities were given the power to offer tax incentives to attract foreign direct investment (FDI). Over time reforms have affected all sectors and have become progressively far-reaching: SOEs have been privatized, private-sector companies have been allowed to be formed, price controls have been lifted, credit quotas in the banking sector have been abolished—the list of changes is long.

Current Economic Performance

The progress of China's economy in the new millennium is heavily influenced by the actions taken by the Chinese Communist Party's new general secretary, Hu Jintao. Based on the broad economic policy that will continue over from Jiang Zemin's reign, China expects consumer prices to rise by .2% in 2003, and by 1% in 2004^{iv}. The country's economy is expected to grow by 7-8% during the next 2 years. Publicly financed investment spending in addition to all of the restructuring charges will drive up industrial production growth.

Macroeconomic obstacles still face China in their quest to being a super economic power. One of the biggest concerns is the much needed restructuring of China's banking system which is threatened by a huge amount of bad loans. A loan bailout will cost some \$518 billion, or 43% of China's 2002 gross domestic product, to clean up, estimates debt rating agency Standard & Poor's.^v China's bad loan dilemma can cause a huge bank system meltdown should a surge of depositors decide to withdraw their money. In the long-run, these bad loans may also affect government finances and result in banks being short in cash to lend profitable companies.

China's economy is one of great interest and controversy. The country is slowly pushing towards a capitalist market economy while maintaining a Communist political regime. Though the combination of this political-economic system has created many conflicts of interest, China has been able to spur growth and investment in the country at an amazing rate. With China's December 2001 entry into the WTO, much restructuring is anticipated, including reforms in the agriculture industry, the banking industry, and the state-owned sector. All of this restructuring is incorporated into China's 10th Five Year Plan, which outlines the planned steps taken to achieve reforms from 2001-2005. Additionally, government reform is a significant concern to many – the government's ability to become more efficient and transparent greatly influences the country's ability to become a leading global economic power.

WTO

China's entrance into the World Trade Organization (WTO) in fall of 2001 launched China into global capitalism and marked one of the biggest milestones in the country's economic history. Among the benefits China gains from joining the WTO include reduction in tariffs on raw materials, more competitive domestic prices, access to more markets for Chinese exports, and introduction to favorable international environments for which Chinese enterprises to do business in.

Movement towards major economic restructuring and reform continue in China after achieving WTO membership. With WTO accession, China is speeding up the process of opening its state owned enterprises and financial institutions to foreign ownership. In addition corporate governance reform in China is gaining momentum. With increasing awareness among policy makers, corporate governance reform has been an important agenda for the government. In an act to heighten regulatory measures, the China Securities Regulation Commission (CSRC) and State Economic Trade Commission have implemented corporate governance inspections on listed companies, with a special focus on the behavior of state owned controlling shareholders. The China Association of CPAs

had also issued an “instructive opinion” on internal control of accounting firms, as part of its ongoing efforts to raise the quality of services in the accounting industry. The CSRC has also published a draft regulation on merger and acquisition in the stock market for public.

Joining the WTO also creates challenges for China. The country now faces international competition from foreign firms. In addition reduction in import tariffs have hurt China’s agriculture sector since many of the products can not compare in quality or price. Customers however will benefit from this sea of foreign competition as domestic firms will be pushed to produce and manufacture better quality goods at lower prices. China’s entrance into the WTO elevates the country into a transparent, competitive, open policy, international business environment benefiting both the consumers and business enterprises and enabling further economic growth.

Economic Outlook ^{vi}

Despite the slowdown in GDP growth rates in the 90’s, the government will continue to target GDP growth rate at 7-8% for at least the next five years. China’s entry into the WTO will likely continue China’s attractiveness to FDI, increasing to USD 73B in 2007. Inflation rates will be modest as the government has shifted to a policy of stable growth and inflation rates.ⁱⁱ Exchange rates will remain stable at 8.28 RMB to the Dollar, as China’s foreign exchange reserves swell to record levels as FDI flows increase.

Shanghai Special Economic Zone

In the 1980’s, The Chinese government set up Special Economic Zones in Southern China that gave preferential treatments, primarily tax rate reductions, to foreign investments. The first 4 SEZs were set up in southern China to take advantage of the proximity to Hong Kong, the source of most investments.



The Economic characteristics of Special Economic Zones are represented as "4 principles":^{vii}

1. Constructions primarily relies on attracting and utilizing foreign capitals
2. Primary economic forms are sino-foreign joint ventures and partnerships as well as wholly foreign-owned enterprises
3. Products are primarily export-oriented
4. Economic activities are primarily driven by market

Since the founding of New China in 1949, especially after China adopted the policy of economic reform and opening to the outside world, Shanghai has witnessed fast and sustained growth in its economy as well as marked increase in its comprehensive economic strength. In early 1990s, the Party Central Committee and the State Council decided to develop Pudong into a special economic zone, pushing the city to the forefront of the reform and opening drive. Foreign Investments and companies located in the Pudong area receive special tax treatments, with a maximum corporate income tax rate of 15%. Shanghai has since firmly grasped this historic opportunity to deepen economic reforms, open the city wider to the outside world, and pursue arduously social and economic progresses. As a result, the city has achieved sustained, fast and sound economic advancement. From 1992 to 2000, Shanghai had registered a double digit annual GDP growth rate for nine consecutive years. In the Ninth Five-Year Plan period (1995-99), the city's GDP witnessed an annual growth rate of 11.4%

The Shanghai Pudong New Zone has made great progress in both absorbing foreign capital and accelerating the economic development of the Yangtze River valley. The state has extended special preferential policies to the Pudong New Zone that are not yet enjoyed by the special economic zones. For instance, in addition to the preferential policies of reducing or eliminating Customs duties and income tax, common to the economic and technological development zones and certain special economic zones, the state also permits the zone to allow foreign business people to open financial institutions, and run tertiary industries. In addition, the state has given Shanghai permission to set up a

stock exchange, expand its examination and approval authority over investments and allow foreign-funded banks to engage in RMB business.

As a result of the development of the special economic zone, Shanghai has become one of the fastest growing areas of China and will likely to continue to have double digit growth in the next 5 years. Shanghai has also become the de facto financial capital of China, even competing with Hong Kong to become a global financial hub. Shanghai continues to draw foreign investments, as foreign firms set up headquarters in Shanghai.

The Chinese Civilian Aviation Market

History

The Civil Aviation Administration of China (CAAC) was created in 1949 shortly after Chairman Mao and the communist party came into power in China. In March 1950, the Aviation Industry Preparation Team was set up under the Ministry of Heavy Industry. China Aviation Industry formally came into existence on in April 1951, when the 16 aircraft factories were transferred from the Chinese Air Force to the China Aviation Industrial Bureau. The CAAC was the only airline operator in China. In 1988, the CAAC broke up its air operations into 9 regional airlines to promote competition. Though CAAC no longer had direct operational control of the airlines, it remained China's aviation regulator, having the same role as the FAA does in the US. From then on, China's civil industry has been making concerted efforts to separate the government functions from company ones and to create an open air transport market with efficient administration backup.

The 1990's was marked by rapid expansion by each of the newly formed airlines. The route maps and capacity of the airlines expanded rapidly. By the late 90's the airlines had too much capacity, which led to frequent price wars. Because the airlines did not have the scale to back the price wars, each airline lost huge amounts of money.



Consolidation & Deregulation

In an effort to keep the airlines profitable, CAAC instituted controls on the price of airline tickets. Price controls proved to be fruitless, as the airlines just discounted illegally. In 2001, in an effort to make the Chinese airline industry more efficient, CAAC announced plans for the merging of 9 airlines into 3 larger airlines: China National Aviation Holding Co. (using the Air China brand), China Eastern Airlines and China Southern Airlines. This move also deregulated the market. Price controls would be removed. The airlines would no longer need to buy fuel or airlines from CAAC, but directly from suppliers.

Deregulation will allow the airlines to be more independent than ever. They would be allowed to accept foreign equity investments and raise capital in foreign markets. They would no longer have to buy fuel from CAAC at market premiums and be able to utilize futures contracts to hedge changes in jet fuel prices. They would also be given independence in buying and assembling their optimal fleet of aircrafts.

Outlook of the Market

The future of the Chinese Aviation Market is quite bright. The growth of the airline industry is highly correlated with GDP growth. Based on SHK Research, this correlation is .98. Since China started its economic reform, GDP has been growing at an average of 12% and in recently years maintaining a 7-8% growth. The creation of three large aviation groups will allow the airlines to charge higher prices will also gaining economies of scale. There is still a large gap between the efficiencies and quality of Chinese aviation and international standards. As the Chinese airlines move towards international standards, profit margins will better. And as quality improves, the three main airlines will most likely each join one of the global airline alliances. Code share alliances will allow for expanded route networks and added revenues while sharing costs.



Direct Links with Taiwan

Recently, the Taiwanese government announced that it would allow its carriers to fly chartered flights from the mainland to Taiwan with stopovers in Hong Kong or Macau. Flying such chartered flights will make no difference to profits, but raises the probability of full direct links in the future. Virtually all airlines in China will be affected both directly and indirectly if full direct link is put to practice. These benefits or possibly negatives will come from: 1) stimulation of traffic volumes, 2) changing competitive landscape, 3) changing flight allocations, 4) limit the ‘hollowing out’ process, i.e. Taiwanese carriers will be able to carry Chinese manufactured goods for export, by using Taiwan as a main hub.

Chinese Eastern Airlines Corporation Limited

History

China Eastern Airlines Company was officially established in December 1987 under the control of the Civil Aviation Administration of China (CAAC). China Eastern is one of China’s three largest air carriers with seven subsidiaries in East and North China. With its operational base and headquarter located at Shanghai Hongqiao Airport, the company flies passengers and ships cargo to more than 94 destinations in China and other countries. The company now has a fleet of around 75 aircraft (composed of McDonnell Douglas, Airbus, and Fokker) and operates 200 air routes serving 70 cities and regions both at home and abroad.^{viii} In 1997, China Eastern Airlines realized the fundamental leap from a traditional state-owned enterprise over to a joint-stock company limited, becoming the first airline to have its stocks listed both inside and outside of China.^{ix} More specifically, its stocks are listed on the Stock Exchange of Hong Kong (0670.HK), New York Stock Exchange (CEA, ADR = 10 X 0670.HK), and Shanghai Securities



Exchange(600115.SS). In addition, China Eastern is a constituent stock of the Shanghai 30 Index.

China Eastern also constructed the holding company of China Cargo Airlines with China Ocean Shipping Corporation (COSCO), China's flagship shipping company. The co-operation will enable, China Eastern to augment its overseas cargo business and improve its worldwide air network. In addition the company successfully merged China General Aviation Company and made the scale of the company larger. The scope of business includes a wide variety of businesses such as commercial air transportation, general aviation, air catering, advertisement, import and export, air traveling, equipment manufacturing, real estate, hotel business, finance, and training. China Eastern continues to provide great services to its passengers. In recent years, China Eastern has won the highest awards for Safe Flight from CAAC. More specifically, in 1997, China Eastern performed 120,000 flying hours and the rate of flight accidents per 10,000 hours was reduced to 0.41, the lowest over the years. In March 2001, China Eastern Airline was given the highest qualified service award, the "Five Star Diamond Award," by the American Academy of Hospitality Sciences. Evidently, China Eastern has progressively transformed from a local airline into a global conglomerate operating a wide variety of travel-related businesses ranging from air transportation and related sectors to financial services, import and export trade, tourism and real estate. By expanding into relevant sectors, China Eastern will be able to enhance its competitiveness and capture a larger market share. On October 11, 2002, China Eastern merged with Northwest Airlines and Yunnan Airlines as part of the restructuring of the domestic aviation industry. The restructured group is now one of China's three largest aviation groups, with assets of 47.3 billion yuan (US\$5.7 billion), 118 aircraft, 437 air routes and 25,000 staff.^x

China Eastern's Current Performance



Passenger Traffic

With the country's robust domestic economic growth and solid international demand, China Eastern Airlines (CEA) has performed relatively well. Passenger volumes were up 37.6% YoY with domestic passenger traffic rising by 57.7%.^{xi} In addition, passenger load factor was 60%, up by 6.2 points YoY on a 23.3% capacity increase.^{xii} Despite overcapacity, China Eastern has responded to mainland demand for air travel growing by its acquisition of 14 new aircraft this year. In addition, CEA last year acquired a 40% stake in Wuhan Airlines which partly explains its sharp increase in domestic passenger traffic. Strong traffic growth for CEA in the next few years is likely to result due to its strategic hub in Shanghai. This past Chinese New Years holidays proved to be a strong January month for CEA as many traveled in and out of China to celebrate with family and friends.

Cargo Traffic

CEA's cargo traffic has improved increasing 27.5% up from the 22.7% in December 2002.^{xiii} On back of a 14.7% capacity expansion, this led to a 5.7 point rise in load factors to 56.5%.^{xiv} With finalized plans to sell a 25% stake in cargo operations to China Airlines, puts the CEA in a good position to take advantage of potential opportunities in Taiwan should there be resumption of direct links between China and Taiwan. CEA however faces overcapacity in its domestic cargo operation as evidenced by its domestic load factor of 49%.^{xv} This past Chinese New Year holiday was also a busy time for CEA as many local stores and business utilized cargo services and stocked up on festive goods and inventory in advanced for households to purchase.

Backed by a strong domestic economy and the country's admission into the WTO, the long term outlook of CEA seems positive. Currently CEA is undergoing consolidation merging with China Northwest Airlines and Yunnan Airlines.^{xvi} Upon the completion of the government's restructuring of the industry, CEA will be one of the top three major airlines in China owning an estimated 24% of the total passenger market share.^{xvii}



Competition – China Southern Airlines

CEA's main international competitors are Cathy Pacific Airways and Malaysian Airlines.^{xviii} CEA's top domestic competitor is China Southern Airlines (CSA).^{xix} CSA, also under the CAAC's direct control is China's largest airline in terms of passengers carried, scheduled flights, routes and fleet size. The company itself is undergoing consolidations, merging with China Northern and Xinjiang Airlines.

In terms of performance, during November 2002, CEA's passenger traffic (increase of 40% YoY) grew more than CSA's passenger traffic (increase of 20% YoY). This can be attributed by a growth in the domestic market for CEA (at 43% compared to CSA which grew at only 14%). Despite CEA's recent superior performance over CSA, the year-to-date passenger growth between the two airlines is very similar with CEA's passenger growth increasing 15.5% for the 11 months to November and CSA's passenger growth increasing 15.1%^{xx} In contrast, CEA's cargo volume has lagged compared CSA's cargo volume as CSA experienced strong growth in its international cargo volume through new aircrafts and routes. During October 2002, CSA had launched an all-cargo route between Shenzhen to L.A. putting pressure on China Eastern's own cargo route from Shanghai to L.A.

CEA faces competition pressure from both domestic and international airlines. With the consolidation of China's airline industry, CEA will become a more competitive player against international airlines as it increases its quality and service. Domestic competition from CSA is strong and will put pressure on CEA's ability to gain market share and revenue.

Financials

Faced with the increasingly intense competition in the domestic aviation market, China Eastern has formulated a number of business policies, such as centralizing its transport



capabilities, capitalizing on its strengths and building a good brand name. China Eastern has adjusted and reallocated its transport capacity and has, by launching the “China Eastern Express” service, optimized its route network and increased its route earning rate.

The steady increase in revenues is mainly generated from the passenger air transport business. However, total operating expense has also increased from \$1261.5 million in 2000 to \$1362.5 million in 2001, representing an increase of 8.01%. Such increase was primarily due to the increase in the number of flights – expenses including consumption of aviation materials, landing and takeoff expenses and fuel costs.

Income after tax has increased over 178% in 2001 from \$24.7 million in 2000 to \$68.9 million in 2001, but after US GAAP adjustments, it shows that net income has decreased in 2001 from \$88.7 million in 2000 to \$57.3 million. Aircraft depreciation increased from \$300.6 million in 2000 to \$333.7 million in 2001, or 11%.

China Eastern finances its working capital requirements through a combination of funds generated from operations and short-term bank loans. As of year-ending 2001, the company has \$132.3 million in cash and equivalents. During the last two years, the company’s primary cash requirements had been for additions of and upgrades on aircraft and flight equipment and payments on related indebtedness. According to the Xinhua Financial Network^{xxi}, CEA’s credit rating is BB+ as of September 2002.

The outlook for the near future is positive, with global economy showing signs of recovery. The issue of whether or not the US, European, and Japanese economies can successfully recover will have a significant impact on the future of the aviation industry. Domestically, Shanghai, the base from which China Eastern has principally been operating has for ten consecutive years attained double-digit growth in its GDP, maintaining an open and developing economy.

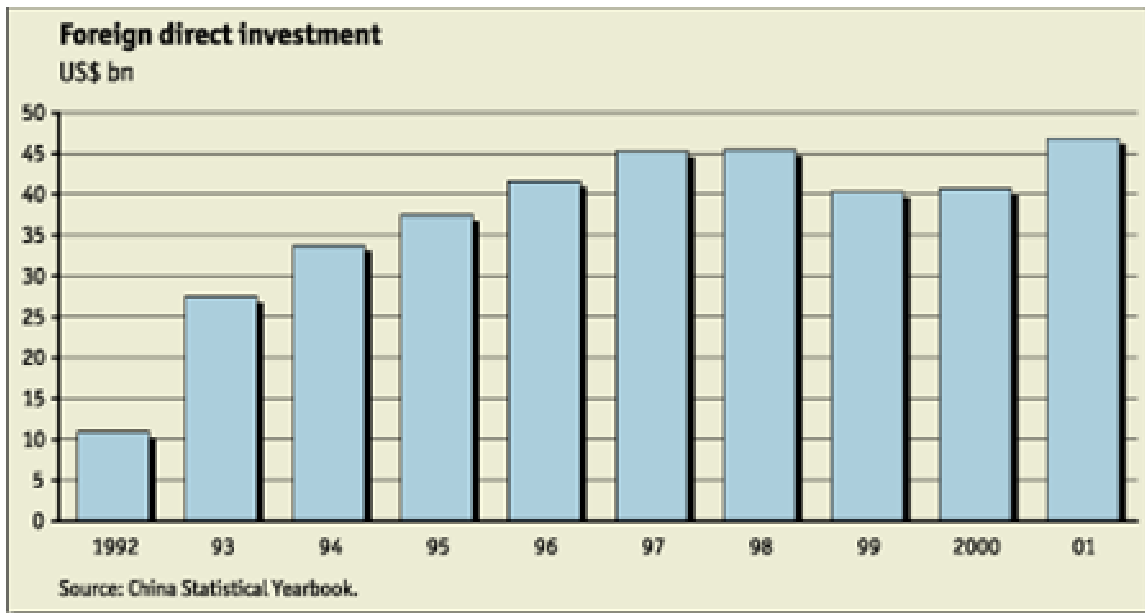
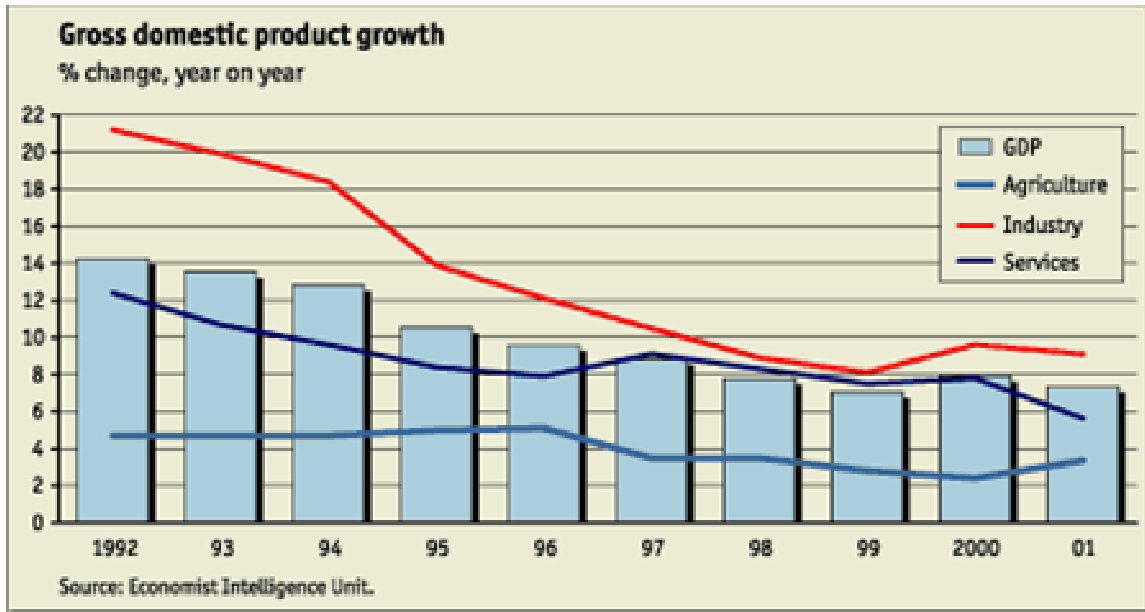
How to Value?

On the flight back to Houston, from the Annual New York Air Finance Journal Conference, Kellner reconsidered the proposal of purchasing 10 percent stake in China Eastern Airlines. Many professionals at the conference predicted that the U.S. airline industry slump will probably linger until at least 2005^{xxii}, with more than 80 percent predicting another major airline bankruptcy in 2003. Kellner remembered what Richard Bittenbender, senior credit analyst at Moody's, said at the conference, that in the last two years, U.S. airlines have added \$30 billion in lease-adjusted debt for a total of more than \$100 billion, which would take about five years to pay back. Bittenbender saw airlines' liquidity recovering in the 2004 to 2005 time frame, earnings and cash flow in 2005 and the capital structures returning to health in 2008 to 2010.

The company needs to make strategic decisions that will ensure profitability in the long-term. Kellner thought that now might be the time to make foreign investments that can expand the company's international presence as well as increase revenue in the future, when domestic market is in a difficult state. But how can the company finance this project? Which method of valuation will appropriately value the 10 percent stake? How is China Eastern Airlines different from its competitors, and which aspects assure that China Eastern is the best option for Continental?

Back in his office, Kellner called up Jeff Misner, Senior Vice President and CFO of Continental to have an analyst do a rough DCF analysis and come up with non-quantitative factors.

Appendix

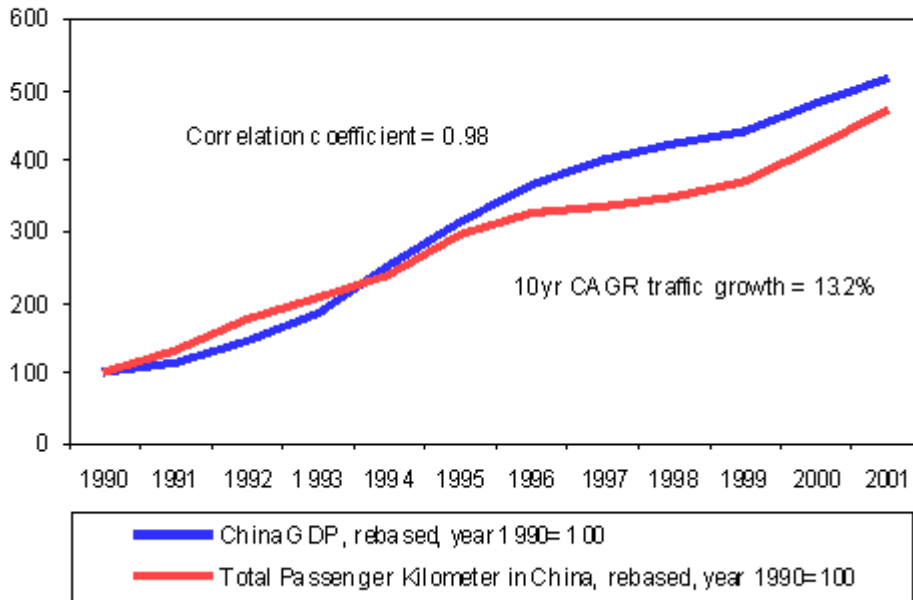


Forecast of Economic Variables 2003-2007

	GDP (% real change pa)	Inward direct investment	Consumer prices (% change yoy)
1993	13.5	27,515	14.6
1994	12.8	33,787	24.2
1995	10.5	35,849	17.1
1996	9.6	40,180	8.3
1997	8.8	44,237	2.8
1998	7.8	43,751	-0.8
1999	7.1	38,753	-1.5
2000	7.9	38,399	0.4
2001	7.5	44,241	0.7
2002	8	52,700	-0.8
2003*	7.6	58,000	-0.2
2004*	7.8	62,000	0.5
2005*	7.9	64,000	0.9
2006*	8	67,000	1.2
2007*	8	73,000	1.4

*estimated
Source: EIU Country Data

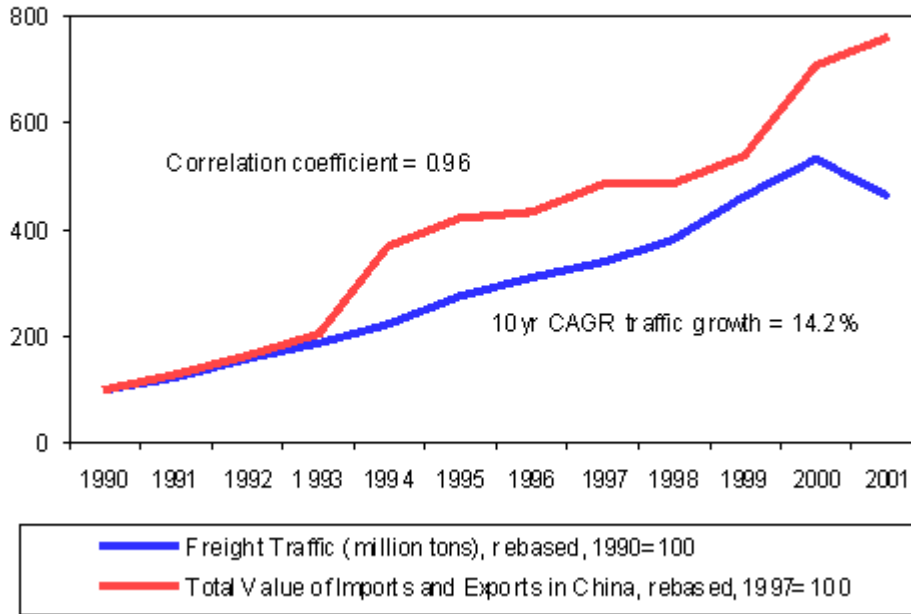
High Correlation of GDP & Passenger



Source: China Stat. Yearbook

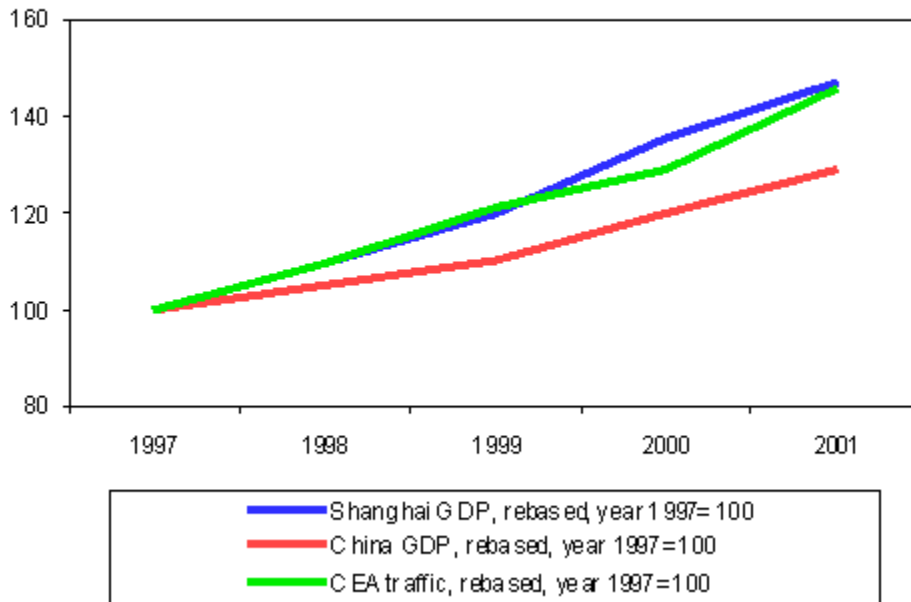


High Correlation of Imports and Export & Freight Traffic



Source: China Stat. Yearbook

Capture the Growth of Shanghai's Economy



Source: China Stat. Yearbook, SHK Research Data



The Big Three after Consolidation

	New Air China Group	New CEA Holding Group	New CSA Group
	Air China	China Eastern Airlines (HK listed company)	China Southern Airlines (HK listed company)
Base	Beijing	Shanghai	Guangzhou
	China United Airlines (included CNAC Zhejiang Airlines)	China Northwest Airlines	China Northern Airlines
Base	Beijing	Shaanxi Xianyang	Shenyang Taoxian
	China Southwest Airlines	China Yunnan Airlines	China Xinjiang Airlines
Base	Guiyang, Chongqing	Kunming	Urumqi
Size of fleet	118	118	180
Total Assets (RMB Billion)	56.05	47.3	50.1
Number of Domestic Routes	286	383	512
Number of International Routes	53	54	94
Number of Employees	20,325	25,109	34,089

Source: CAAC

China Eastern Airlines Financial Statements

Balance Sheet Statement (\$ Mil)				
Fiscal Year End	12/2001	12/2000	12/1999	12/1998
Assets				
Cash & Equivalent	132.8	155.2	115.7	156.6
Receivables	177.5	256.9	139.6	119.5
Inventories	56.2	45.4	50.9	51.9
Other Cur Assets	45.4	23.7	175.7	142.6
Total Cur Assets	411.9	481.2	481.9	470.6
Gr Fixed Assets	3,549.5	3,280.4	2,969.8	2,757.9
Accum Depr & Depl	915.9	710.0	533.4	382.5
Net Fixed Assets	2,633.6	2,570.4	2,436.4	2,375.4
Intangibles	5.2	12.3	13.0	0.0
Oth Non-Cur Asset	450.8	442.6	488.0	535.0
Tot Non-Cur Asset	3,089.6	3,025.3	2,937.4	2,910.4
Total Assets	3,501.5	3,506.5	3,419.4	3,381.0



Liabilities				
Accounts Payable	5.8	9.3	9.0	33.2
Short-Term Debt	433.0	258.6	265.8	286.2
Other Cur Liab	355.2	317.0	294.1	226.8
Total Cur Liab	794.0	584.9	569.0	546.2
Long-Term Debt	1,555.3	1,760.3	1,771.6	1,935.9
Defer Inc Taxes	94.3	175.6	129.2	119.8
Oth Non-Cur Liab	104.1	90.2	134.0	0.0
Minority Interest	31.1	27.0	21.3	3.0
Tot Non-Cur Liab	1,784.8	2,053.1	2,056.1	2,058.7
Total Liabilities	2,578.8	2,638.0	2,625.0	2,604.9
Preferred Equity	0.0	0.0	0.0	0.0
Common Equity	922.8	868.4	794.3	776.1
Retained Earnings	186.0	132.7	61.4	43.5
Total Equity	922.8	868.4	794.3	776.1
Tot Liab & Stk Eq	3,501.6	3,506.4	3,419.3	3,381.0
Cash Flow	274.2	217.3	212.7	121.7
Working Capital	-382.1	-103.7	-87.0	-75.6
Free Cash Flo	86.0	142.4	-10.7	102.4
Free Cash Flo P/S	0.0	0.0	0.0	0.0
Invested Capital	2,478.1	2,628.7	2,565.9	2,712.0
Com Shr Out(000)	48,670	48,670	48,670	48,670
Pref Shr Out(000)	0	0	0	0
Tot Ord Shr(000)	4,866,950	4,866,950	4,866,950	4,866,950
Treasury Shr(000)	0	0	0	0
Inventory Method	Averaging	Averaging	Averaging	Averaging

Income Statement (\$ Mil)				
Fiscal Year End	12/2001	12/2000	12/1999	12/1998
Revenues/Sales	1,468.1	1,355.4	1,227.5	987.0
Cost of Sales	830.3	743.3	615.6	494.7
Gr Oper Profit	637.8	612.1	611.9	492.3
S, G & A Expenses	323.3	322.0	294.0	291.5
Other Taxes	0.0	0.0	0.0	0.0
Op Prof bef Depr	314.5	290.1	317.9	200.8
Deprec & Amort	208.8	196.1	194.5	179.8
Oper Inc aft Depr	105.7	94.0	123.4	21.0
Other Income, Net	45.6	61.3	45.3	8.3
Inc Avail for Int	151.3	155.3	168.7	29.3
Interest Expense	113.4	118.5	141.1	103.0
Minority Interest	4.0	3.5	2.0	-6.1
Pretax Income	37.9	36.8	27.6	-73.7

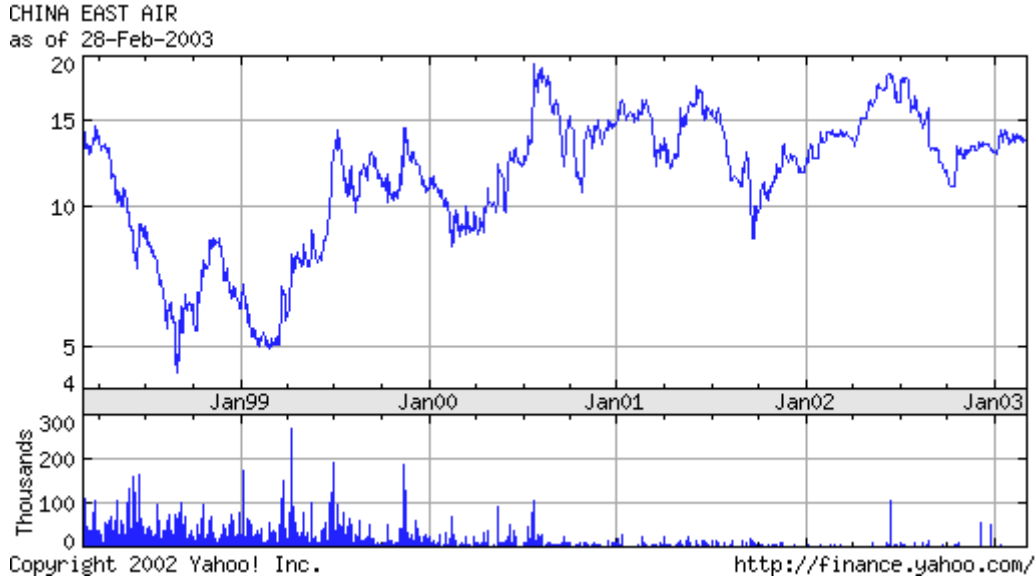


Income Taxes	-31.6	12.0	7.2	-9.4
Net Inc Cont Ops	65.4	21.2	18.2	-58.1
Net Inc Disc Ops	0.0	0.0	0.0	0.0
Net Inc Tot Ops	65.4	21.2	18.2	-58.1
Special Inc/Chrg	0.0	0.0	0.0	0.0
Normalized Income	65.4	21.2	18.2	-58.1
Extra Inc (Loss)	0.0	0.0	0.0	0.0
Cum Eff Acct Chg	0.0	0.0	0.0	0.0
Inc Tax Loss Cfwd	0.0	0.0	0.0	0.0
Oth Gains (Loss)	0.0	0.0	0.0	0.0
Total Net Income	65.4	21.2	18.2	-58.1
Preferred Div	0.0	0.0	0.0	0.0
Net Inc Avail Com	65.4	21.2	18.2	-58.1
Basic EPS Cont Ops	1.30	0.43	0.40	-1.20
Basic EPS Disc Ops	0.00	0.00	0.00	0.00
Basic EPS Tot Ops	1.30	0.43	0.40	-1.20
Basic EPS Ex Inc	0.00	0.00	0.00	0.00
Basic EPS CAE	0.00	0.00	0.00	0.00
Basic EPS TLC	0.00	0.00	0.00	0.00
Basic EPS Oth Gain	0.00	0.00	0.00	0.00
EPS fr Net Income	1.30	0.43	0.40	-1.20
Prim Nor Net Inc	1.30	0.43	0.40	-1.20
Dil EPS Cont Ops	1.30	0.43	0.40	-1.20
Dil EPS Disc Ops	0.00	0.00	0.00	0.00
Dil EPS Total Ops	1.30	0.43	0.40	-1.20
Dil EPS Extra Inc	0.00	0.00	0.00	0.00
Dil EPS CAE	0.00	0.00	0.00	0.00
Dil EPS TLC	0.00	0.00	0.00	0.00
Dil EPS Oth Gains	0.00	0.00	0.00	0.00
Dil EPS Net Inc	1.30	0.43	0.40	-1.20
Dil Normal Inc	1.30	0.43	0.40	-1.20
Domestic Sales	694.4	560.0	565.3	439.7
Foreign Sales	851.1	79.5	662.4	547.5

Statement of Cash Flow (\$ Mil)				
Fiscal Year End	12/2001	12/2000	12/1999	12/1998
Net Income	65.4	21.2	18.2	-58.1
Deprec & Amort	208.7	196.1	194.5	179.8



Deferred Inc Tax	-32.3	9.3	7.2	-9.4
Oper Gains (Loss)	-2.6	-3.4	33.1	64.1
Extra Gain (Loss)	0.0	0.0	0.0	0.0
Oth Non-Cash Item	0.0	0.0	0.0	0.0
Chg Receivables	61.5	-1.8	-72.5	-2.3
Chg Inventories	-10.5	5.4	-4.6	6.7
Chg Oth Cur Asset	-8.8	13.4	0.3	-39.6
Chg Payables	-10.1	0.3	1.8	-11.1
Chg Oth Cur Liab	18.7	16.8	40.7	57.2
Net Cash Cont Ops	290.1	257.3	218.7	187.3
Net Cash Disc Ops	0.0	0.0	0.0	0.0
Net Cash fr Ops	290.1	257.3	218.7	187.3
Sale P,P & Equip	8.9	39.4	170.9	68.0
Sale ST Invest	9.0	0.0	0.0	39.3
Purch P,P & Equip	-204.1	-114.9	-229.4	-84.9
Purch ST Invest	0.0	-5.2	0.0	0.0
Oth Inv Chg, Net	-122.3	-59.0	-13.7	-29.5
Net Cash fr Inv	-308.6	-139.7	-72.2	-7.1
Issuance of Debt	409.9	348.6	537.1	78.1
Issuance Cap Stk	0.0	0.0	0.0	0.0
Repay LT Debt	-408.5	-452.9	-769.3	-233.6
Repur Capital Stk	0.0	0.0	0.0	0.0
Payment Cash Div	0.0	0.0	0.0	0.0
Oth Fin Chrg, Net	8.3	2.2	26.0	0.0
Net Cash fr Fin	9.7	-102.2	-206.2	-155.5
Eff Exch Rate Chg	-2.3	-2.4	2.0	3.5
Net Chg Cash & Eq	-11.1	13.0	-57.7	28.2
Cash Begin Period	171.9	158.9	216.5	188.4












Splits: none

Last Trade Feb 27 · 13.69	Change 0.00 (0.00%)	Prev Cls 13.69	Open N/A	Volume 0
Day's Range N/A - N/A	Bid N/A	Ask N/A	P/E 10.87	Mkt Cap 666.3M
52-wk Range 11.00 - 18.50	Bid Size N/A	Ask Size N/A	P/S 0.45	Div/Shr 0.24
1y Target Est N/A	EPS (ttm) 1.26	EPS Est 0.00	PEG N/A	Yield 1.76
				Ex-Div 14-May-02

Industries Detail: April 7

Updated nightly

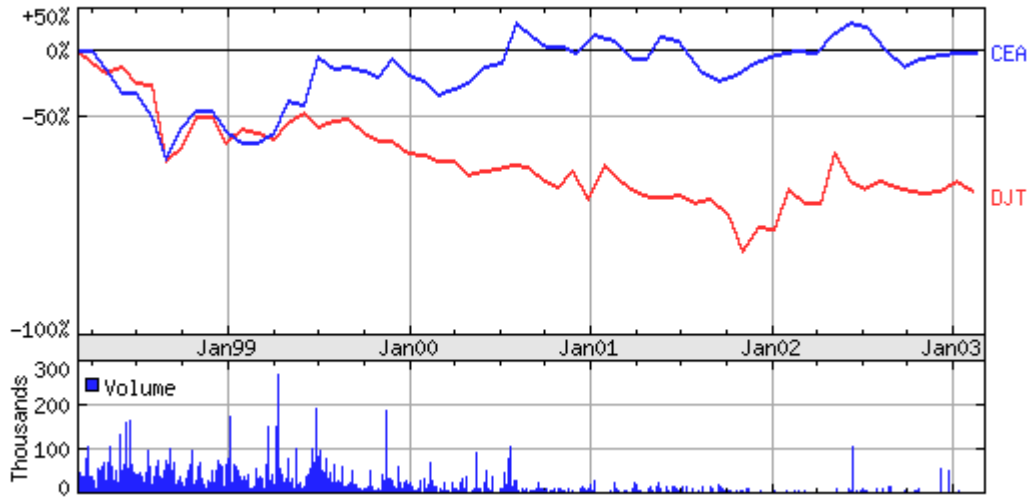
10 Best Performing Major Airlines Stocks

Symbol	Company	% Change One Month	
AMR	AMR Corporation	40.6%	
FRNT	Frontier Airlines, Inc.	24.4%	
CAL	Continental Airlines, Inc.	19.2%	
BAB	British Airways Plc	14.2%	
DAL	Delta Air Lines, Inc.	12.8%	
KLM	KLM Royal Dutch Airlines	3.7%	
CEA	China Eastern Airlines Corporation Limited	-6.6%	
NWAC	Northwest Airlines Corporation	-10.1%	
UALAQ	UAL Corporation	-26.2%	

Source: <http://moneycentral.msn.com/>



CHINA EAST AIR
as of 27-Feb-2003



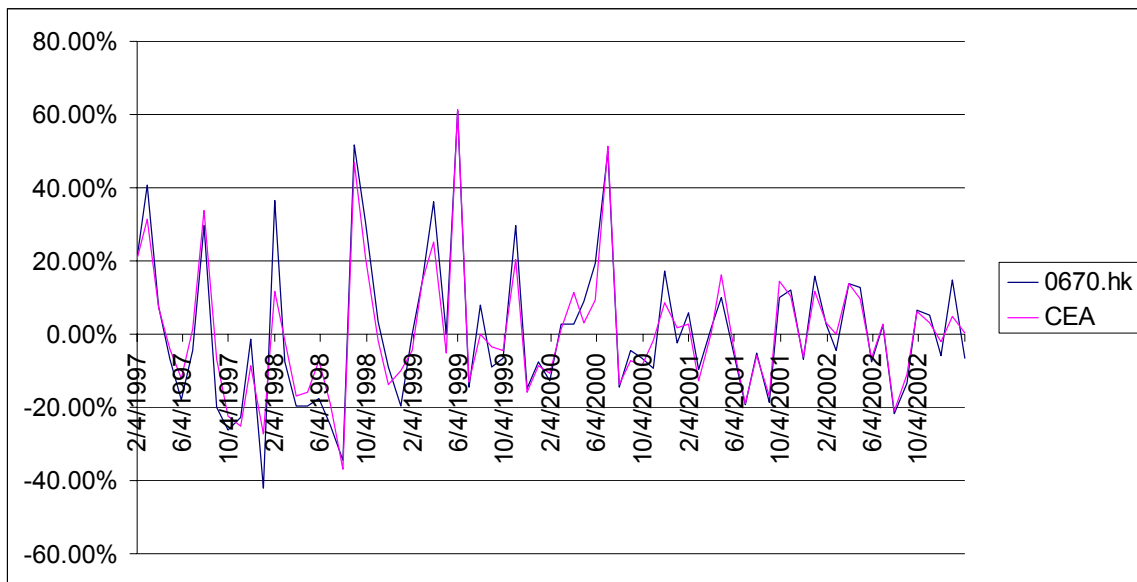
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<http://finance.yahoo.com/>

Splits: none

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1y Target Est N/A	EPS (ttm) 1.26	EPS Est 0.00	PEG N/A	Yield 1.76
				Ex-Div 14-May-02

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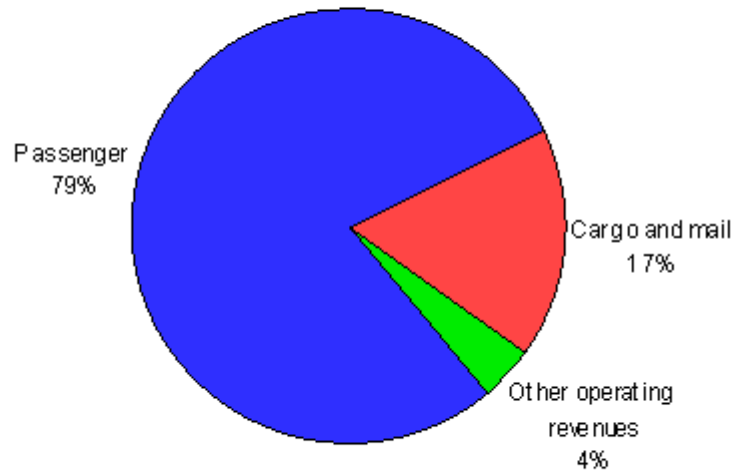


ADR vs. Underlying Shares Returns

Source: Yahoo!Finance

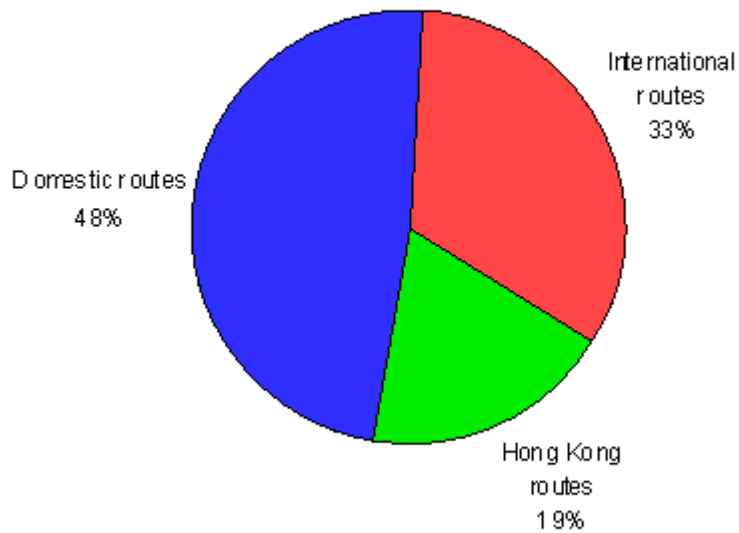


1H2002 Revenue Breakdown



Source: SHK Research

1H2002 Passenger Revenue Breakdown



Source: SHK Research



China Eastern Airlines Fleet Planning

	2001	2002F	2003F	2004F
Passenger jet over 100 seats	68	75	92	98
Freight jet	3	4	5	3
Total	71	79	97	101

Source: SHK Research

Lowest Passenger Load Factor among Peers

2001	EBITDA Margin (%)	ROAE (%)	Passenger Load Factor (%)
China Eastern Airlines	21.5	7.3	61.6
China Southern Airlines	18.9	3.62	62.5
Cathay Pacific	15.3	2.02	71.3
Singapore Airlines	18.7	6.23	72.8
Qantas	11.8	12.6	78.3
China Airlines	13.6	4.09	74.2
EVA Airlines	8.87	N/A	74.9
Korean Air	12.3	N/A	68.8
Malaysia Airlines	4.7	N/A	66.0
Thai Airways	21.3	43.9	74.7
Average	14.7	11.4	70.5

Source: SHK Research 2001



Comparison of Shanghai Airlines and CEA

	Shanghai Airlines	CEA
ROAA (%)	2.33	1.9
ROAE (%)	24.8	7.3
Debt to assets (%)	43.72	57.34
Turnover (RMBm)	3,501	11,454
Net profit (RMBm)	138	542
EBITDA (RMBm)	706	2,642
Net profit margin (%)	3.9	4.7
EBITDA margin (%)	20.1	23.1
Number of employees	2,798	13,500
Size of fleet	25	72
Base	Shanghai	Shanghai
Number of domestic routes	136	155
Passenger load factor (%)	65.3	61.6
Major Shareholders	Shanghai Lianhe Investment Co. (56.25%) Zhongyin Group Investment Co. Ltd. (20.28%)	Eastern Air Group (61.64%)

Source: Bloomberg, SHK Research 2001



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- ⁱ ICEA Securities Asia Limited. “Chinese Airlines – Sector Update” Jan. 24 2002.
- ⁱⁱ Multex Investor: company overview <http://cnmfn.multexinvestor.com>
- ⁱⁱⁱ EIU Country Profile: China
- ^{iv} EIU Country Outlook: China
- ^v *Business Week*, Commentary: *Are China's Banks Caught in Quicksand?*, Clifford, Mark L., November 25, 2000
- ^{vi} EIU Country Data: China
- ^{vii} <http://www.wikipedia.org>
- ^{viii} http://www.geae.com/aboutgeae/presscenter/services/services_20010514b.html
- ^{ix} www.caac.gov.cn/gznb/97e-32.htm
- ^x <http://www1.chinadaily.com.cn/supplement/2002-10-16/89831.html>
- ^{xi} David Strine, *China Eastern Airlines (670.hk-HK\$1.08)-Underperform: Robust Domestic Traffic in Jan., But Overcapacity Still a problem*, *Bear Sterns*, February 19, 2003.
- ^{xii} *Ibid.*
- ^{xiii} *Ibid.*
- ^{xiv} Simon Gresham, Julie Lim, *Jan Operating Statistics: Strong but disotred upwards by Chinese New Year*, Merrill Lynch; Julie Lim, , February 19th 2003
- ^{xv} David Strine, *China Eastern Airlines (670.hk-HK\$1.08)-Underperform: Robust Domestic Traffic in Jan., But Overcapacity Still a problem*, *Bear Sterns*, February 19, 2003.
- ^{xvi} *Ibid.*
- ^{xvii} *Transportation Sector*, Credit Suisse First Boston, February 18 2003
- ^{xviii} *Hoovers Online*, www.hoovers.com
- ^{xix} *Ibid.*
- ^{xx} Kevin O'Connor, Virginia Lam, *November Traffic—Solid Growth in Passengers and cargo volumes*, Deutsche Bank, December 16, 2002.
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- ^{xxii} Kathy Fieweger. *Reuters*. “Airlines Execs: Slump will Probably Linger” April 7, 2003

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- 2) John Pomfret “China’s Poor Fear Cost of Free Trade: Many Worry Joining WTO Will Expand Wealth Gap” *The Washington Post*, Washington DC. Sep 24, 2000
- 3) Anthony L. Velocci “Burgeoning Asian Economy will Drive Travel Demand” *Aviation Week & Space Technology*, New York. April 16, 2001
- 4) *China: MacroEconomic Overview* www.worldbank.org





China Eastern Airlines: A Minority Stake?
Teaching Note & Case Solutions

April 9th, 2003
Topics in Emerging Financial Markets
Prof. JP Mei

QiTing Cen
Kevin Cheng
Patrick Chu
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New York University | Leonard Stern's School of Business

Approach to Evaluating China Eastern

Kellner plans to use the discounted cash flow (DCF) model and sensitivity analysis to determine the appropriate value of a 10% stake in China Eastern. In order to evaluate China Eastern, Kellner would have to project future cash flows and discount them back to present value using the company's weighted average cost of capital (WACC). Whether or not the NPV of CEA is positive or negative will greatly affect his investment decision. In addition, analysis using the EM credit scoring model can provide further insight for Kellner to the company's credit integrity as well as currency devaluation risk and also influence his decision on whether or not to invest in CEA.

EM Scoring Model

There are several versions of the Altman Credit Score model. The EM Score model is a four variable version of the Z-Score approach. It is defined as:

$$\text{EM Score} = 3.25 + 6.56(X_1) + 3.26(X_2) + 6.72(X_3) + 1.05(X_4)$$

Where:

- X_1 = Working Capital/Total Assets
- X_2 = Retained Earnings/Total Assets
- X_3 = EBIT/Total Assets
- X_4 = Book Value of Equity/Total Liabilities

This model is useful in predicting the firm's vulnerability to foreign currency fluctuation (financial health) by effectively assessing the credit risk of corporate bonds in the emerging market arena. From the 2001 financials, Kellner was able to calculate the following ratios:

$$X_1 = -0.1091$$

$$X_2 = .05312$$

$$X_3 = .01082$$

$$X_4 = .35784$$

After plugging the variables into the equation, Kellner discovered that the EM Score for CEA was 3.15578. In other words, CEA has a B- rating and therefore is vulnerable to the devaluation of currency and industry affiliation.

$$\text{EM Score} = 3.25 + 6.56(-0.1091) + 3.26(.05312) + 6.72(01082) + 1.05(.35784) = 3.15578$$



Discounted Cash Flow Analysis (DCF)

CEA's Weighted Average Cost of Capital (WACC)

In order to calculate the WACC of CEA, Kellner needed to figure out the company's cost of debt as well as cost of equity. Kellner will be using the following model to obtain CEA's WACC:

$$\text{WACC} = K_d(1-T_c) \frac{D}{V} + K_e \frac{E}{V}$$

Calculating Cost of Debt

From the EM credit scoring model, Kellner determined CEA's company rating to be B- as of September 2002. From Bridge Fixed Income Services, he obtained the yield spreads for transportation companies (See Appendix). Kellner calculated that CEA's B- would give it a spread of 1350 basis points for 10 year bonds. CEA's after tax cost of debt is calculated to be 14.60%. Kellner then looked up the US risk-free rate on March 3, 2003 and found that a 10 year treasury yield was 3.68%.

Kellner then calculated the cost of debt (recall corporate tax is at 15%):

$$\begin{aligned} K_d &= (\text{risk free rate} + \text{spread}) * (1 - \text{tax rate}) \\ K_d &= (.0368 + .135) * (1 - .15) \\ K_d &= 14.60\% \end{aligned}$$

CEA's after tax cost of debt is calculated to be 14.60%.

Calculating CEA's International Cost of Capital

In his analysis, Kellner used the Goldman Integrated Model to figure out the international cost of capital:

$$R = r_f + \text{SYS} + \beta \lambda_m$$

Sovereign Yield Spread (SYS)

To obtain the sovereign yield spread (SYS), Kellner looked for a Chinese Government Dollar bond with a maturity of 10 years. Using the information given, the closest bond he found was a bond with 8 years maturity having a current yield of 2.81%. Recall that



the risk-free rate of a US Treasury bond was 3.68%. Kellner calculated the SYS to be negative 87 basis points.

Beta (β)

To figure out the value of Beta, Kellner calculated the historical Beta of CEA ADR to S&P 500. The value comes out to be 0.69.

Lambda (λ_m)

Kellner assumed that the US market premium is representative of the market premium of a world portfolio. Therefore he assumed a market premium of 8%.

Plugging in the corresponding values into the Goldman Integrated Model:

$$R = .0368 + -.0087 + 0.69*0.08$$

Kellner calculated the CEA's international cost of capital to be 8.33%.

Debt/Equity Ratio

Finally, Kellner will have to obtain the current value of debt and equity of CEA. Kellner obtained the CEA's debt/equity ratio by looking at the company's equity and short term debt at the end of the 2001 fiscal year. The debt/equity ratio is 2.15 (\$16,460M/\$7639M).

Kellner could now calculate the WACC for CEA. After plugging in the required variables into WACC, Kellner arrived at a value of 12.61%. This number will be used to discount the projected cash flows for the DCF analysis.

Calculating the Cash Flows

CEA Projected Revenue

Kellner assumes that the GDP growth rate in Shanghai China, where CEA headquarters is based, will grow in the next six years at 14%. Based on SHK's Research Kellner knows that the growth of the airline industry is highly correlated with China's GDP growth (correlation is .98) and so will use Shanghai's forecasted GDP growth rate as the



corresponding revenue growth rate. Although the 2002 fiscal year had already passed, CEA's income statements and balance sheets have not been disclosed for that year. Therefore, Kellner had to use the 2001 financials as the base year to project revenue from 2003 to 2007.

	Base Year 2001	2002	2003	2004	2005	2006	2007
Shanghai GDP	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Revenue	1468.10	1673.63	1907.94	2175.05	2479.56	2826.70	3222.44

Profit Before Taxes

In order to calculate operating cash flow for CEA, Kellner would need the net profit after-taxes and depreciation of the company. Kellner first calculated the profit before tax (PBT) for each year using a PBT/Rev ratio. Since the Chinese aviation market is currently undergoing deregulation and consolidation, he believes that CEA's PBT/Rev ratio would converge to regional industry average in 5 years time. The 2001 PBT/Rev ratio was 2.58% (\$37.9M/\$1468.10M). Kellner then took companies comparable to CEA (Thai Airways, Malaysian Airlines, and Singapore Airlines) and calculated the average PBT/Rev ratio for the last 7 year in order to find the regional industry average:

Comparable Companies	PBT/Rev
Thai Airways	27.85%
Malaysian Airlines	-2.78%
Singapore Airlines	15.04%
	13.37%

According to Kellner's excel sheet the PBT/REV ratio for the regional industry is 13.37%. He then used a straight line forecast of convergence to simulate the growth rate of PBT:

	2003	2004	2005	2006	2007
Revenues	1907.94	2175.05	2479.56	2826.70	3222.44
PBT/Rev Ratio Growth	4.7%	6.9%	9.1%	11.2%	13.4%
Profit Before Taxes	90.43	150.03	224.54	316.97	430.89



Tax Expenses

With CEA's recent move of headquarters to Shanghai, Kellner used a tax rate of 15% to calculate the tax on profits:

	2003	2004	2005	2006	2007
Profit Before Taxes	90.43	150.03	224.54	316.97	430.89
Tax Expenses	13.56	22.50	33.68	47.55	64.63

Depreciation and Amortization

To project depreciation and amortization expenses, Kellner calculated an average of the historical D&A/Rev ratios for CEA from the past 4 years (1998 to 2001). According to Kellner's excel sheet the D&A/Rev ratio is 15.64% which is relatively constant.

	1998	1999	2000	2001
Revenues	987	1227.50	1355.40	1468.10
Profit After Taxation	-73.7	27.6	36.8	37.9
D&A/Rev Ratio	0.1822	0.1585	0.1447	0.1422
Historical Average	15.69%			

Kellner uses the historical average D&A/Rev ratio to calculate the D&A expense:

	Base	2003	2004	2005	2006	2007
Revenues	1468.10	1907.94	2175.05	2479.56	2826.70	3222.44
D&A	230.29	299.29	341.19	388.95	443.41	505.49

Operating Cash Flow

Kellner could then calculate the projected operating cash flow.

	2003	2004	2005	2006	2007
Profit Before Taxes	90.43	150.03	224.54	316.97	430.89
Tax Expenses	(13.56)	(22.50)	(33.68)	(47.55)	(64.63)
D&A	299.29	341.19	388.95	443.41	505.49
OCF	376.15	468.71	579.81	712.84	871.74



Capital Expenditures

Kellner calculated an average of the historical CapEx/Rev ratios for CEA from the past 4 years (1998 to 2001). According to Kellner's excel sheet the CapEx/Rev ratio is 12.42% which is relatively constant.

	1998	1999	2000	2001
Capital Expenditures	-84.9	-229.4	-114.9	-204.1
Revenues	987	1227.50	1355.40	1468.10
CapEx/Rev Ratio	-0.0860	-0.1869	-0.0848	-0.1390
Historical Average	12.42%			

Kellner uses the CEA's historical average CapEx/Rev ratio to calculate capital expenditure:

	2003	2004	2005	2006	2007
Revenues	1907.94	2175.05	2479.56	2826.70	3222.44
CapEx	236.92	270.09	307.90	351.00	400.14

Networking Capital

Kellner first used CEA's financial statements to calculate the change in the company's networking capital over the past 4 years:

	1998	1999	2000	2001
Current Assets	470.6	481.9	481.2	411.9
Current Liabilities	546.2	569	584.9	794
Net working Capital	-75.60	-87.10	-103.70	-382.10
Change in Networking Capital		11.50	16.60	278.40

He then calculated delta NWC/Rev ratios and averaged them to reveal a historical average of 7.04%

	1999	2000	2001
Change In Networking Capital	11.50	16.60	278.40
Revenues	1227.50	1355.40	1468.10
Δ NWC/Rev	.0094	.0122	.1896
Historical Average	7.04%		



Using this historical average, Kellner projected the NWC of CEA:

	2003	2004	2005	2006	2007
Revenues	1907.94	2175.05	2479.56	2826.70	3222.44
NWC	134.35	153.15	174.60	199.04	226.90

Due to the inconsistency of the ratios, Kellner also did a sensitivity analysis between different long term growth rates and values of Δ NWC (See Exhibit 1).

Terminal Value and DCF Cash flows

Kellner used the constant growth rate model ($CF/(WACC-LTg)$) to come up with a terminal value of \$3937.43M. The base case scenario has a long-term growth rate of 6.4%. Kellner also did a sensitivity analysis of long-term growth rates versus Shanghai GDP growth rates (Appendix).

	2003	2004	2005	2006	2007	Terminal value
OCF	376.15	468.71	579.81	712.84	871.74	
Cap Ex	236.92	270.09	307.90	351.00	400.14	
NWC	134.35	153.15	174.60	199.04	226.90	
	4.89	45.47	97.32	162.79	244.69	3937.43

Having calculated operating cash flow, capital expenditures, and net-working capital, Kellner can now calculate the projected cash flows for CEA:

	2003	2004	2005	2006	2007	Terminal value
OCF	376.15	468.71	579.81	712.84	871.74	
Cap Ex	236.92	270.09	307.90	351.00	400.14	
NWC	134.35	153.15	174.60	199.04	226.90	
	4.89	45.47	97.32	162.79	244.69	3937.43
CF	4.89	45.47	97.32	162.79	4182.12	

DCF Analysis

With projected cash flows and CEA's weight average cost of capital calculated, Kellner could now carry out the DCF analysis to figure out the net present value of the company.



Using CEA's WACC of 12.61%, Kellner discounted the cash flows to arrive at an NPV value of \$2,518.55M. To figure out the value of its equity, he CEA's subtracted total debt ($\$15,360\text{M}/8.277 = \1855.74M) from the company's NPV. CEA's value of equity is calculated to be \$622.81M ($\$2,518.55\text{M} - \1855.74M).

Risks to Be Considered

Many risks are involved with the investment in and operation of CEA. Risks can be classified depending on the perspective taken. From an investor's point of view, foreign exchange, political, and macroeconomic risks must be considered. From an operations perspective, CEA must take into account all of these risks, as well as consider its transaction, translation, and economic exposures.

Political Risk

As a country not with the best track record for government compliance and transparency, China's political risk may prove to be the greatest risk factor for CEA. China is currently preparing for a turnover in leadership, where General Secretary of the CPC Hu Jintao, will succeed Jiang Zemin as President of China. The decisions made by Hu and by Wen Jiabao, the new Premier economic policymaker, will greatly impact the direction and pace at which the economy will expand. Further support by the government for the efficient consolidation and deregulation of the Chinese aviation industry will be crucial to CEA's profitability and success in future years.

Macroeconomic Risk

Studies have shown that there is a slight positive correlation between the macroeconomic performance of China and the expansion and performance of the Chinese airline industry. It has been noted in CEA's 2002 Interim Report that China's relatively sound macroeconomy has paved the way for the restructuring and consolidation of the airline industry and the expansion of CEA's operations. "The Company has captured this business opportunity to launch more international routes, including those between Shanghai and Delhi, Beijing and Delhi, Beijing and Tokyo as well as Jinan and Seoul." (CEA Interim 2002 Report, 28) Additionally, China's entry into the WTO has garnered



much attention as well as scrutiny from foreigners over how the country will progress in the next few years. As a result, a sudden macroeconomic downturn will indirectly hurt CEA's operations, and tensions that may arise between China and foreign countries will dampen foreign investment and support for the economy and the airline industry.

Transaction Exposure

The possibility of changes in the value of outstanding financial obligations due to fluctuations in exchange rates make CEA vulnerable to transaction exposure. "Due to the continued appreciation of the exchange rate of Euro and Japanese Yen to Renminbi, during the first half of 2002, net foreign exchange loss arising from assets and debts of the Group denominated and settled in foreign currency during such period amounted to approximately RMB58 million." (CEA 2002 Interim Report, 30) Backlog exposure is a specific type of transaction exposure that CEA has to manage carefully. CEA fleets include US-based Boeing planes and European-based Airbus planes. These US and Euro dollar denominated orders that have been accepted but not yet invoiced will pose to be a great concern if the RMB should devalue significantly and no contracts or hedges are implemented. Most recently, CEA has hired J.P. Morgan Chase for its global cash management to improve capital flow. With revenue being reported in 8 currencies generated from 47 international destinations, it is important for CEA to efficiently manage its foreign-currency denominated income and expenditures. CEA has to fulfill a 24-hour capital flow and make the best use of its free cash in order to minimize transactional losses. ("Airline Hires Banking Adviser" <http://www.eastday.com> 02/21/03)

Translation Exposure

According to CEA's 2002 Interim Report, financial statements originally prepared in Chinese RMB have been translated into USD at the rate of RMB 8.2771/ 1 USD. This rate is based on the average buying and selling rates quoted by the People's Bank of China at the close of June 30, 2002. Other foreign operations of CEA must also be translated into RMB at a set rate in order to prepare consolidated financial statements. Fluctuations in exchange rates since this time will result in a change in CEA's net worth and reported net income.



Operating Exposure

CEA is subject to operating exposure, since any unpredicted fluctuation in exchange rates can result in a change in future operating cash flows, thereby causing a change in the present value of the company. Such changes in value depend on the effect that exchange rate fluctuations will have on sales volumes, prices, or costs. Most recently, speculation of a war in the Middle East has sent jet fuel prices soaring. However, the permission to raise the fuel surcharge on airfares by the Civil Aviation Administration of China (CAAC) allows carriers to pass the higher prices to customers. As a result, CEA shares were on the rise, although there is criticism that such a hike in airfare will hurt passenger volume. (“Shares of 2 China Airlines Rise on Fuel Surcharge Hike OK” Dow Jones Business News, 02/10/03) Since CEA is exposed to international competitors throughout the global airline industry, similar decisions of competitors will inadvertently affect the company’s competitive position. Operating exposure thus deals with managing the long-term health of CEA.

Interest Rate Exposure

Sensitivity to fluctuations in interest rates is also a point of concern for CEA. CEA’s debt structure is highly subject to interest rate risk, especially with debt denominated in foreign currencies. The holding of interest-sensitive securities also poses a problem in that it can change the potential earnings or interest inflows to CEA on the balance sheet.

CEA’s ability to repay its debt obligations is reflected in its credit risk rating. Changes in such ratings can result in changing fees, higher interest rates, and reduced credit-line commitments.

Kellner’s Recommended Decision

Based on the DCF analysis, Kellner should definitely look into investing in CEA as the company currently has a positive NPV. Companies should always engage in positive NPV projects. Another reason why Kellner should invest in CEA is that despite its high cost of debt EM score, the company’s value of equity is still positive. In addition,



Kellner observes that the NWC of 2001 skews the numbers—indicating that NPV will continue to be positive. As deregulation of the airline industry continues, Kellner may have an option value to having code-shares in CEA. In the event Continental and CEA join together either through mergers or joint ventures, real synergies that may be created from the two companies could be beneficial to both. All these reasons are drivers behind why Kellner should take a 10% stake in CEA.



Appendix

Bond Spread for Transportation Industry

Rating/Years	1	2	3	5	7	10	30
Aaa/AAA	43	53	62	71	85	95	105
Aa1/AA+	47	58	67	81	95	105	120
Aa2/AA	53	63	72	86	110	115	130
Aa3/AA-	58	68	77	96	115	130	145
A1/A+	63	78	87	106	130	145	165
A2/A	68	88	97	121	140	165	185
A3/A-	78	93	107	131	150	180	205
Baa1/BBB+	98	113	127	146	170	195	220
Baa2/BBB	113	128	142	161	185	215	240
Baa3/BBB-	133	148	162	181	205	230	255
Ba1/BB+	650	600	550	500	450	475	425
Ba2/BB	1000	950	900	700	650	750	600
Ba3/BB-	1300	1250	1150	1000	900	900	1000
B1/B+	1500	1400	1300	1200	1100	1200	1250
B2/B	1600	1500	1400	1350	1250	1300	1400
B3/B-	1700	1600	1500	1400	1300	1350	1500
Caa/CCC	2300	2100	1900	1800	1600	1500	1600

Source: <http://bondchannel.bridge.com/EJVsreads.html>



Goldman Integrated {EHV Hybrid}

Goldman Integrated {EHV Hybrid}		
rf	0.0368	
SYS	-0.0087	
Beta to S&P	0.69	
lambda	0.08	
KE	0.0833	
8-year bond	0.0281	
K_d	0.14603	
Rating	B-	
Spread	0.135	
D/E	2.15	0.683016
WACC	12.61%	
Long term g	0.064	



DCF Model: Growth Correlated with Shanghai GDP growth

USD (Millions)

Correlation of Revenue to GDP	0.98
Shanghai GDP Growth	0.14
Tax Rate	0.15
Calculated Ratios	

Profit Before Taxes / Revenue

<i>Current</i>	2.58%		<i>Int'l Avg</i>	13.37%	
	2003	2004	2005	2006	2007
PBT/REV	4.7%	6.9%	9.1%	11.2%	13.4%

Depreciation & Amortization / Revenue

D&A/Rev	15.69%
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Capital Expenditures / Revenue

CapEx/Rev	12.42%
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Change in NWC / REV

Delta NWC / REV	7.04%
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	Base	2002	2003	2004	2005	2006	2007	
Revenue	1,468.10	1673.634	1,907.94	2,175.05	2,479.56	2,826.70	3,222.44	
PBT			90.43	150.03	224.54	316.97	430.89	
Tax			13.56	22.50	33.68	47.55	64.63	
D&A	230.29		299.29	341.19	388.95	443.41	505.49	
OCF			376.15	468.71	579.81	712.84	871.74	
CapEx			236.92	270.09	307.90	351.00	400.14	
NWC			134.35	153.15	174.60	199.04	226.90	Terminal Value
			4.89	45.47	97.32	162.79	244.69	3,937.43
CF			4.89	45.47	97.32	162.79	4,182.12	

NPV	\$2,518.55
Total Debt	\$1,855.74
Value of Equity	\$ 662.81



Shanghai GDP growth (row)
vs. LT g (Column)

	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%
4.200%	(576.99)	(505.57)	(430.83)	(352.65)	(270.90)	(185.45)	(96.17)	(2.92)	94.44	196.05	302.07
4.400%	(551.72)	(478.84)	(402.57)	(322.78)	(239.35)	(152.14)	(61.02)	34.16	133.53	237.25	345.46
4.600%	(525.20)	(450.78)	(372.90)	(291.42)	(206.22)	(117.17)	(24.11)	73.09	174.57	280.50	391.01
4.800%	(497.32)	(421.28)	(341.71)	(258.46)	(171.40)	(80.40)	14.68	114.01	217.71	325.96	438.90
5.000%	(467.98)	(390.24)	(308.88)	(223.76)	(134.76)	(41.71)	55.52	157.08	263.12	373.81	489.30
5.200%	(437.05)	(357.52)	(274.28)	(187.20)	(96.13)	(0.93)	98.55	202.47	310.98	424.24	542.42
5.400%	(404.40)	(322.98)	(237.76)	(148.60)	(55.36)	42.11	143.97	250.38	361.49	477.47	598.49
5.600%	(369.90)	(286.48)	(199.16)	(107.81)	(12.27)	87.61	191.99	301.02	414.88	533.73	657.75
5.800%	(333.37)	(247.83)	(158.30)	(64.62)	33.35	135.78	242.82	354.64	471.41	593.30	720.50
6.000%	(294.63)	(206.85)	(114.96)	(18.82)	81.73	186.86	296.72	411.49	531.35	656.47	787.03
6.200%	(253.48)	(163.31)	(68.92)	29.84	133.13	241.12	353.99	471.89	595.03	723.57	857.72
6.400%	(209.67)	(116.97)	(19.92)	81.62	187.83	298.88	414.94	536.18	662.81	795.00	932.95
6.600%	(162.96)	(67.54)	32.34	136.86	246.18	360.48	479.94	604.75	735.10	871.18	1,013.19
6.800%	(113.03)	(14.72)	88.20	195.89	308.53	426.32	549.42	678.03	812.36	952.60	1,098.95
7.000%	(59.54)	41.87	148.03	259.13	375.33	496.84	623.84	756.54	895.12	1,039.81	1,190.82
7.200%	(2.10)	102.64	212.29	327.04	447.07	572.58	703.77	840.84	984.00	1,133.48	1,289.48
7.400%	59.75	168.07	281.47	400.16	524.31	654.13	789.82	931.61	1,079.70	1,234.32	1,395.70



Sensitivity (LT g (Column) vs. Delta NWC (Row))

	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%
4.200%	405.04	106.78	(191.48)	(489.74)	(788.00)	(1,086.25)	(1,384.51)	(1,682.77)	(1,981.03)	(2,279.29)	(2,577.54)
4.400%	449.49	146.08	(157.32)	(460.73)	(764.14)	(1,067.54)	(1,370.95)	(1,674.35)	(1,977.76)	(2,281.17)	(2,584.57)
4.600%	496.16	187.35	(121.46)	(430.27)	(739.09)	(1,047.90)	(1,356.71)	(1,665.52)	(1,974.33)	(2,283.14)	(2,591.95)
4.800%	545.22	230.72	(83.77)	(398.26)	(712.75)	(1,027.25)	(1,341.74)	(1,656.23)	(1,970.72)	(2,285.21)	(2,599.71)
5.000%	596.85	276.38	(44.09)	(364.57)	(685.04)	(1,005.51)	(1,325.98)	(1,646.45)	(1,966.93)	(2,287.40)	(2,607.87)
5.200%	651.27	324.50	(2.28)	(329.05)	(655.83)	(982.60)	(1,309.38)	(1,636.15)	(1,962.93)	(2,289.70)	(2,616.47)
5.400%	708.71	375.28	41.86	(291.57)	(625.00)	(958.42)	(1,291.85)	(1,625.28)	(1,958.70)	(2,292.13)	(2,625.56)
5.600%	769.42	428.96	88.51	(251.95)	(592.41)	(932.87)	(1,273.32)	(1,613.78)	(1,954.24)	(2,294.70)	(2,635.16)
5.800%	833.70	485.80	137.90	(210.01)	(557.91)	(905.81)	(1,253.71)	(1,601.61)	(1,949.51)	(2,297.42)	(2,645.32)
6.000%	901.86	546.07	190.27	(165.52)	(521.32)	(877.12)	(1,232.91)	(1,588.71)	(1,944.50)	(2,300.30)	(2,656.09)
6.200%	974.28	610.10	245.91	(118.27)	(482.45)	(846.63)	(1,210.81)	(1,575.00)	(1,939.18)	(2,303.36)	(2,667.54)
6.400%	1,051.35	678.25	305.14	(67.97)	(441.08)	(814.19)	(1,187.30)	(1,560.40)	(1,933.51)	(2,306.62)	(2,679.73)
6.600%	1,133.56	750.93	368.30	(14.33)	(396.96)	(779.59)	(1,162.21)	(1,544.84)	(1,927.47)	(2,310.10)	(2,692.73)
6.800%	1,221.41	828.61	435.81	43.00	(349.80)	(742.60)	(1,135.41)	(1,528.21)	(1,921.01)	(2,313.81)	(2,706.62)
7.000%	1,315.53	911.83	508.12	104.42	(299.28)	(702.98)	(1,106.69)	(1,510.39)	(1,914.09)	(2,317.79)	(2,721.50)
7.200%	1,416.60	1,001.19	585.78	170.37	(245.03)	(660.44)	(1,075.85)	(1,491.25)	(1,906.66)	(2,322.07)	(2,737.48)
7.400%	1,525.42	1,097.41	669.40	241.39	(186.62)	(614.63)	(1,042.64)	(1,470.65)	(1,898.66)	(2,326.67)	(2,754.68)



DCF Model: Correlation with China GDP Growth

USD (Millions)

Correlation of Revenue to GDP	0.98
Tax Rate	0.15
Long Term Growth Rate	5.20%
Calculated Ratios	

Profit Before Taxes / Revenue

<i>Current</i>	2.58%		<i>Int'l Avg</i>	13.37%	
	2003	2004	2005	2006	2007
PBT/REV	4.7%	6.9%	9.1%	11.2%	13.4%

Depreciation & Amortization / Revenue

D&A/Rev	15.69%
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Capital Expenditures / Revenue

CapEx/Rev	12.42%
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Change in NWC / REV

Delta NWC / REV	7.04%
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China GDP Growth Rate	8.00%	7.60%	7.80%	7.90%	8.00%	8.00%
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	Base	2002	2003	2004	2005	2006	2007	
Revenue	1,468.10	1,585.55	1,706.05	1,839.12	1,984.41	2,143.17	2,314.62	
PBT			81.11	127.06	179.85	240.40	309.50	
Tax								
D&A	230.29		12.17	19.06	26.98	36.06	46.42	
OCF			267.62	288.49	311.28	336.19	363.08	
CapEx			336.56	396.49	464.15	540.53	626.16	
NWC			211.85	228.37	246.41	266.13	287.42	
CF			120.13	129.50	139.73	150.91	162.98	Terminal Value
			4.59	38.62	78.01	123.49	2,546.22	2,370.46
NPV	\$1,571.73							
Total Debt	\$ 1,855.74							
Value of Equity	\$ (284.02)							



Sensitivity (LT g (column) vs. Delta NWC(row))

	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%
4.200%	(208.87)	(430.39)	(651.91)	(873.43)	(1,094.95)	(1,316.47)	(1,538.00)	(1,759.52)	(1,981.04)	(2,202.56)	(2,424.08)
4.400%	(176.94)	(402.16)	(627.38)	(852.60)	(1,077.82)	(1,303.03)	(1,528.25)	(1,753.47)	(1,978.69)	(2,203.91)	(2,429.13)
4.600%	(143.42)	(372.52)	(601.62)	(830.72)	(1,059.82)	(1,288.92)	(1,518.03)	(1,747.13)	(1,976.23)	(2,205.33)	(2,434.43)
4.800%	(108.18)	(341.36)	(574.54)	(807.73)	(1,040.91)	(1,274.09)	(1,507.27)	(1,740.46)	(1,973.64)	(2,206.82)	(2,440.00)
5.000%	(71.09)	(308.57)	(546.05)	(783.52)	(1,021.00)	(1,258.48)	(1,495.96)	(1,733.43)	(1,970.91)	(2,208.39)	(2,445.87)
5.200%	(32.00)	(274.01)	(516.01)	(758.01)	(1,000.02)	(1,242.02)	(1,484.03)	(1,726.03)	(1,968.04)	(2,210.04)	(2,452.05)
5.400%	9.26	(237.53)	(484.31)	(731.09)	(977.87)	(1,224.66)	(1,471.44)	(1,718.22)	(1,965.00)	(2,211.79)	(2,458.57)
5.600%	52.86	(198.97)	(450.80)	(702.63)	(954.47)	(1,206.30)	(1,458.13)	(1,709.97)	(1,961.80)	(2,213.63)	(2,465.46)
5.800%	99.03	(158.15)	(415.33)	(672.51)	(929.69)	(1,186.87)	(1,444.04)	(1,701.22)	(1,958.40)	(2,215.58)	(2,472.76)
6.000%	147.99	(114.86)	(377.71)	(640.56)	(903.41)	(1,166.26)	(1,429.11)	(1,691.95)	(1,954.80)	(2,217.65)	(2,480.50)
6.200%	200.01	(68.87)	(337.74)	(606.61)	(875.49)	(1,144.36)	(1,413.23)	(1,682.11)	(1,950.98)	(2,219.85)	(2,488.73)
6.400%	255.37	(19.91)	(295.20)	(570.48)	(845.77)	(1,121.06)	(1,396.34)	(1,671.63)	(1,946.91)	(2,222.20)	(2,497.48)
6.600%	314.41	32.29	(249.83)	(531.95)	(814.08)	(1,096.20)	(1,378.32)	(1,660.45)	(1,942.57)	(2,224.69)	(2,506.82)
6.800%	377.52	88.09	(201.34)	(490.77)	(780.21)	(1,069.64)	(1,359.07)	(1,648.50)	(1,937.93)	(2,227.36)	(2,516.79)
7.000%	445.12	147.86	(149.40)	(446.66)	(743.92)	(1,041.18)	(1,338.44)	(1,635.70)	(1,932.96)	(2,230.22)	(2,527.48)
7.200%	517.72	212.05	(93.62)	(399.29)	(704.95)	(1,010.62)	(1,316.29)	(1,621.96)	(1,927.62)	(2,233.29)	(2,538.96)
7.400%	595.88	281.16	(33.56)	(348.28)	(663.00)	(977.72)	(1,292.44)	(1,607.16)	(1,921.88)	(2,236.60)	(2,551.32)



Singapore Airlines Financial Statements

Assets	Mar '02	Mar '01	Mar '00	Mar '99	Mar '98
Cash and Cash Equivalents	1,091,600.00	1,272,300.00	1,142,100.00	1,831,900.00	978,000.00
Receivables	1,344,900.00	1,244,800.00	1,178,100.00	1,149,400.00	1,348,400.00
Inventories	67,000.00	54,400.00	56,700.00	54,100.00	127,500.00
Short Term Investments	34,200.00	511,400.00	711,600.00	828,600.00	690,600.00
Other Current Assets	346,500.00	455,600.00	415,700.00	-	-
Total Current Assets	2,884,200.00	3,538,500.00	3,504,200.00	4,181,400.00	3,144,500.00
Long Term Investments	590,400.00	556,000.00	537,800.00	943,700.00	936,500.00
Tangible Fixed Assets	14,442,900.00	12,863,000.00	11,882,000.00	11,666,800.00	11,398,000.00
Other Non-Current Assets	662,900.00	954,400.00	493,900.00	375,800.00	228,300.00
Total Non-Current Assets	15,696,200.00	14,373,400.00	12,913,700.00	12,986,300.00	12,562,800.00
Total Assets	18,580,400.00	17,911,900.00	16,417,900.00	17,167,700.00	15,707,300.00

Liabilities & Shareholder's Equity

Borrowings	56,800.00	27,400.00	49,200.00	28,200.00	30,900.00
Accounts Payable	1,769,900.00	2,465,100.00	2,293,500.00	2,195,000.00	2,097,200.00
Current Portion Long Term Debt	263,900.00	600.00	15,600.00	1,100.00	1,200.00
Dividend Payable	-	-	186,300.00	169,400.00	142,400.00
Income Taxes Payable	145,000.00	276,000.00	376,600.00	266,900.00	277,900.00
Other Current Liabilities	1,032,700.00	1,129,700.00	1,349,000.00	1,145,700.00	1,041,900.00
Total Current Liabilities	3,123,300.00	3,622,800.00	3,707,300.00	3,370,000.00	3,171,200.00
Long Term Borrowings	1,928,900.00	795,500.00	566,500.00	565,600.00	523,300.00
Long Term Liabilities	5,381,800.00	4,112,000.00	1,733,500.00	1,591,000.00	1,141,900.00
Other Non-Current Liabilities	3,452,900.00	3,316,500.00	1,167,000.00	1,025,400.00	618,600.00
Deferred Taxes	-	-	-	-	-
Minority Interest(Liabilities)	228,700.00	184,500.00	19,600.00	18,300.00	14,100.00



Total Non-Current Liabilities	5,610,500.00	4,296,500.00	1,753,100.00	1,609,300.00	1,156,000.00
Total Liabilities	8,505,100.00	7,734,800.00	5,440,800.00	4,961,000.00	4,313,100.00

Shareholder's Equity

Common Stock (Par)	609,100.00	1,220,200.00	1,250,500.00	1,282,500.00	1,282,600.00
Reserves	9,237,500.00	8,772,400.00	9,707,000.00	10,905,900.00	10,097,500.00
Capital Surplus	6,900.00	6,900.00	6,900.00	6,300.00	-
Other Reserve	9,230,600.00	8,765,500.00	9,700,100.00	10,899,600.00	10,097,500.00
Total Shareholder's Equity	10,075,300.00	10,177,100.00	10,977,100.00	12,206,700.00	11,394,200.00

	Mar '02	Mar '01	Mar '00	Mar '99	Mar '98
Sales	9,447,800.00	9,951,300.00	9,018,800.00	7,795,900.00	7,723,900.00
Exceptional Items	(34,100.00)	305,500.00	171,300.00	-	-
Pretax Income	925,600.00	1,904,700.00	1,463,900.00	1,116,800.00	1,171,800.00
Income Taxes	233,800.00	242,400.00	296,500.00	80,300.00	130,900.00
Income After Tax	691,800.00	1,662,300.00	1,167,400.00	1,036,500.00	1,040,900.00
Minority Interest	(60,100.00)	(37,500.00)	(3,600.00)	(3,300.00)	(2,300.00)
Income Before Extraordinary Items	631,700.00	1,624,800.00	1,163,800.00	1,033,200.00	1,038,600.00
Dividends	-	-	295,500.00	240,600.00	213,600.00
Retained Earnings	631,700.00	1,624,800.00	868,300.00	792,600.00	821,100.00

Footnote

Equity Earnings	(45,700.00)	108,700.00	54,200.00	37,000.00	16,000.00
Interest Income	-	-	-	-	-
Interest Expense	44,000.00	37,500.00	-	-	-
Depreciation and Amortization	969,400.00	1,145,100.00	1,205,300.00	-	-
Directors' remuneration	2,600.00	2,200.00	1,600.00	1,600.00	1,600.00

	Mar '02	Mar '01	Mar '00	Mar '99	Mar '98
Cash Flow From Operating					
Investing & Finance Activities					



Net Income (Loss)	983,400.00	1,346,700.00	1,168,800.00	854,400.00	998,700.00
Depreciation/ Amortization & Depletion	853,300.00	1,044,300.00	1,129,800.00	1,131,000.00	1,063,900.00
Net Change from Assets/Liabilities	(345,200.00)	468,400.00	307,200.00	(79,900.00)	119,900.00
Other Operating Activities	(57,000.00)	(408,300.00)	(304,500.00)	(122,900.00)	(150,300.00)
Net Cash From Operating Activities	1,434,500.00	2,451,100.00	2,301,300.00	1,782,600.00	2,032,200.00
Sale of Fixed Assets	1,601,800.00	772,100.00	803,900.00	1,024,100.00	1,069,600.00
Purchase of Investments	(3,600.00)	(41,900.00)	(13,800.00)	-	(2,500.00)
Sale of Investments	32,900.00	576,900.00	589,100.00	-	-
Other Investing Activities	(3,538,300.00)	(3,002,000.00)	(3,593,200.00)	(1,779,600.00)	(2,122,900.00)
Net Cash from Investing Activities	(1,907,200.00)	(1,694,900.00)	(2,214,000.00)	(755,500.00)	(1,055,800.00)
Uses of Funds					

Issuance (Repurchase) of Capital Stock	(25,300.00)	(476,000.00)	-	-	-
Issuance (Repayment) of Debt	-	-	-	-	-
Increase (Decrease) Short-Term Debt	1,119,100.00	(16,300.00)	-	(1,700.00)	(83,300.00)
Payment of Dividends & Other Distributions	(227,800.00)	(329,200.00)	(278,600.00)	(213,600.00)	(284,800.00)
Other Financing Activities	(606,600.00)	206,300.00	(490,900.00)	9,000.00	5,300.00
Net Cash from Financing Activities	259,400.00	(615,200.00)	(769,500.00)	(206,300.00)	(362,800.00)
Net Change In Cash & Equivalents	(213,300.00)	141,000.00	(682,200.00)	820,800.00	613,600.00

Cash and Equivalents

Cash at Beginning of Period	1,244,900.00	1,092,900.00	1,803,700.00	947,100.00	353,300.00
Cash at End of Period	1,034,800.00	1,244,900.00	1,092,900.00	1,803,700.00	947,100.00

Source: [ISI Emerging Markets](#)



Malaysian Airlines Financial Statements

	Mar '02	Mar '01	Mar '00	Mar '99	Mar '98
Assets					
Cash and Cash Equivalents	416,376.00	335,950.00	965,426.00	543,663.00	804,763.00
Receivables	1,671,051.00	1,584,816.00	1,754,612.00	1,452,727.00	1,229,247.00
Inventories	352,127.00	346,345.00	336,743.00	312,913.00	268,606.00
Total Current Assets	2,439,554.00	2,267,111.00	3,056,781.00	2,309,303.00	2,302,616.00
Long Term Investments	156,594.00	175,310.00	201,905.00	75,017.00	82,813.00
Tangible Fixed Assets	12,043,892.00	11,430,739.00	12,311,144.00	14,231,647.00	14,189,315.00
Other Non-Current Assets	114,258.00	115,871.00	2,482,595.00	2,889,693.00	2,870,149.00
Total Non-Current Assets	12,314,744.00	11,721,920.00	14,995,644.00	17,196,357.00	17,142,277.00
Total Assets	14,754,298.00	13,989,031.00	18,052,425.00	19,505,660.00	19,444,893.00

Liabilities & Shareholder's Equity

Borrowings	4,287,720.00	1,321,002.00	388,331.00	559,188.00	83,871.00
Accounts Payable	3,485,824.00	2,479,325.00	2,377,190.00	2,077,438.00	1,612,406.00
Current Portion Long Term Debt	-	-	-	1,006,664.00	1,042,561.00
Dividend Payable	-	-	15,400.00	15,400.00	15,400.00
Income Taxes Payable	45,459.00	83,695.00	73,994.00	100,024.00	81,751.00
Other Current Liabilities	720,976.00	660,449.00	2,145,942.00	1,451,653.00	1,108,826.00
Total Current Liabilities	8,494,520.00	4,460,776.00	4,911,463.00	5,094,943.00	3,847,664.00
Long Term Borrowings	4,680,289.00	7,829,873.00	4,633,110.00	10,295,987.00	10,653,290.00
Long Term Liabilities	5,030,709.00	8,263,760.00	9,907,575.00	10,905,258.00	11,379,799.00
Other Non-Current Liabilities	347,733.00	431,752.00	5,273,032.00	607,615.00	724,098.00
Deferred Taxes	2,687.00	2,135.00	1,433.00	1,656.00	2,411.00
Minority Interest(Liabilities)	13,779.00	12,347.00	11,111.00	9,209.00	5,729.00
Total Non-Current Liabilities	5,044,488.00	8,276,107.00	9,918,686.00	10,914,467.00	11,385,528.00
Total Liabilities	13,525,229.00	12,724,536.00	14,819,038.00	16,000,201.00	15,227,463.00



Shareholder's Equity

Common Stock (Par)	-	770,000.00	770,000.00	770,000.00	770,000.00
Reserves	437,290.00	482,148.00	2,452,276.00	2,726,250.00	3,441,701.00
Retained Earnings	-	-	25,532.00	99,506.00	314,957.00
Other Reserve	437,290.00	482,148.00	2,426,744.00	2,626,744.00	3,126,744.00
Total Shareholder's Equity	1,229,069.00	1,264,495.00	3,233,387.00	3,505,459.00	4,217,430.00

	Mar '02	Mar '01	Mar '00	Mar '99	Mar '98
Sales	8,377,901.00	8,956,145.00	8,160,737.00	7,471,861.00	7,051,326.00
Exceptional Items	-	-	100,422.00	62,729.00	-
Pretax Income	(846,493.00)	(386,635.00)	(236,890.00)	(669,735.00)	(225,362.00)
Income Taxes	(14,898.00)	26,683.00	18,813.00	26,961.00	31,277.00
Income After Tax	(831,595.00)	(413,318.00)	(255,703.00)	(696,696.00)	(256,639.00)
Minority Interest	(3,968.00)	(4,109.00)	(2,871.00)	(3,355.00)	(3,212.00)
Income Before Extraordinary Items	(835,563.00)	(417,427.00)	(258,574.00)	(700,051.00)	(259,851.00)
Dividends	-	-	-	15,400.00	15,400.00
Retained Earnings	(835,563.00)	(417,427.00)	(258,574.00)	(715,451.00)	(275,251.00)

Footnote

Equity Earnings	6,751.00	2,268.00	(9,509.00)	(16,618.00)	(7,593.00)
Interest Income	-	-	-	-	-
Interest Expense	414,872.00	582,342.00	-	-	-
Depreciation and Amortization	1,108,105.00	-	-	-	-
Directors' remuneration	-	724.00	1,186.00	1,511.00	1,930.00

Mar '02 Mar '01 Mar '00 Mar '99 Mar '98

Cash Flow From Operating Investing & Finance Activities

Net Income (Loss)	(846,493.00)	(386,635.00)	(236,890.00)	(669,735.00)	(225,362.00)
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Depreciation/ Amortization & Depletion	1,024,085.00	983,241.00	1,648,044.00	1,616,006.00	528,365.00
Net Change from Assets/Liabilities	1,243,521.00	63,874.00	278,794.00	262,139.00	522,204.00
Other Operating Activities	(273,216.00)	(694,912.00)	(1,254,274.00)	(207,852.00)	886,167.00
Net Cash From Operating Activities	1,147,897.00	(34,432.00)	435,674.00	1,000,558.00	1,711,374.00
Purchase of Fixed Assets	(1,786,916.00)	(1,130,729.00)	(1,663,689.00)	(1,759,666.00)	(3,811,183.00)
Sale of Fixed Assets	61,913.00	1,013,108.00	3,387,602.00	964,145.00	1,576,755.00
Purchase of Investments	(7,007.00)	(2,190.00)	(133,202.00)	(8,572.00)	-
Sale of Investments	25,723.00	28,786.00	103,696.00	78,534.00	-
Other Investing Activities	822,911.00	413,785.00	24,661.00	24,234.00	12,120.00
Net Cash from Investing Activities	(883,376.00)	322,760.00	1,719,068.00	(701,325.00)	(2,222,308.00)

Uses of Funds

Issuance (Repurchase) of Capital Stock	-	-	-	-	-
Issuance (Repayment) of Debt	-	-	-	-	-
Increase (Decrease) Short-Term Debt	377,544.00	(337,901.00)	(1,004,090.00)	(19,582.00)	1,317,542.00
Payment of Dividends & Other Distributions	(2,536.00)	(18,273.00)	(16,369.00)	(17,546.00)	(79,436.00)
Other Financing Activities	(558,285.00)	(562,726.00)	(712,520.00)	(510,343.00)	(220,771.00)
Net Cash from Financing Activities	(183,277.00)	(918,900.00)	(1,732,979.00)	(547,471.00)	1,017,335.00
Net Change In Cash & Equivalents	81,244.00	(630,572.00)	421,763.00	(248,238.00)	506,401.00

Cash and Equivalents

Cash at Beginning of Period	335,950.00	966,522.00	543,663.00	791,901.00	285,500.00
Cash at End of Period	417,194.00	335,950.00	965,426.00	543,663.00	791,901.00

Source: [ISI Emerging Markets](#)



Thai Airways Financial Statements

	Sept '02	Sept '01	Sept '00	Sept '99	Sept '98	Sept '97
Assets						
Cash and Cash Equivalents	20,117,224	6,444,071	9,358,887	4,828,419	3,808,430	3,229,871
Receivables	18,662,033	11,186,729	12,057,962	10,570,958	10,237,703	11,696,168
Inventories	3,530,548	3,609,693	3,490,188	3,760,594	4,406,102	3,988,137
Short Term Investments	781,862	2,715,564	3,978,038	2,695,472	3,549,142	1,180,722
Other Current Assets	292,179	10,993,410	11,939,686	14,296,325	5,448,567	108,551
Total Current Assets	43,383,845	34,949,467	40,824,761	36,151,768	27,449,944	20,203,449
Long Term Investments	100,831	1,233,318	1,126,284	1,141,706	1,153,394	321,894
Tangible Fixed Assets	114,167,513	121,796,177	118,142,919	103,767,652	116,729,769	107,455,914
Intangibles	260,184	1,251,034	5,998,117	9,478,198	18,274,236	3,981,677
Other Non-Current Assets	20,497,872	13,502,529	1,532,467	(5,729,339)	(13,022,089)	5,591,040
Total Non-Current Assets	135,026,400	137,783,058	126,799,787	108,658,217	123,135,310	117,350,525
Total Assets	178,410,244	172,732,525	167,624,548	144,809,985	150,585,254	137,553,974

Liabilities & Shareholder's Equity

Borrowings	21,877,171	9,715,526	7,031,570	5,666,290	3,992,025	5,438,625
Accounts Payable	15,317,997	3,080,268	2,206,277	2,276,492	1,954,351	9,293,004
Current Portion Long Term Debt	10,926,105	20,770,976	11,968,545	19,492,962	12,113,247	5,637,413
Dividend Payable	26,871	26,946	27,064	27,268	27,925	23,780
Income Taxes Payable	1,799,940	41,762	57,555	15,696	230,001	326,498
Other Current Liabilities	19,130,106	29,102,448	28,242,275	21,348,572	20,941,810	9,440,630
Total Current Liabilities	67,251,380	62,669,218	49,448,667	43,118,026	35,009,408	29,809,671
Long Term Borrowings	78,975,709	94,128,957	100,374,877	83,650,064	94,271,122	101,982,938
Long Term Liabilities	82,804,797	97,535,790	108,629,435	91,732,334	111,166,087	104,930,785
Other Non-Current Liabilities	3,829,088	3,406,833	8,254,558	8,082,270	16,894,965	2,947,847
Minority Interest(Liabilities)	125,067	101,891	-	-	-	-
Total Non-Current Liabilities	82,929,864	97,637,681	108,629,435	91,732,334	111,166,087	104,930,785



Total Liabilities	150,056,177	160,205,008	158,078,102	134,850,360	146,175,495	134,740,456
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Shareholder's Equity

Common Stock (Par)	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000
Reserves	14,229,001	(6,222,483)	(9,203,554)	(8,790,375)	(14,340,241)	(11,186,482)
Retained Earnings	9,340,602	(6,222,483)	(9,203,554)	(8,790,375)	(14,340,241)	(15,936,482)
Other Reserve	4,888,398	-	-	-	-	4,750,000
Total Shareholder's Equity	28,354,067	12,527,517	9,546,446	9,959,625	4,409,759	2,813,518

	Sept '02	Sept '01	Sept '00	Sept '99	Sept '98	Sept '97
Sales	129,015,493	130,330,858	123,160,071	112,011,448	109,504,191	87,576,124
Cost Of Goods	-	99,097,718	90,567,848	75,928,731	77,993,399	-
Gross Profit	-	31,233,140	32,592,223	36,082,717	31,502,950	-
Exceptional Items	-	-	-	-	-	-
Pretax Income	14,415,963	1,124,354	4,820,262	6,392,698	5,268,234	(25,202,588)
Income Taxes	4,204,122	832,186	103,433	1,080,128	1,571,993	-
Income After Tax	10,211,841	292,168	4,716,829	5,312,570	3,696,241	(25,202,588)
Minority Interest	(29,926)	(52,044)	-	-	-	-
Income Before Extraordinary Items	10,181,916	292,168	4,716,829	5,312,570	3,696,241	(25,202,588)
Extraordinary Items	-	1,636,353	-	-	-	-
Retained Earnings	10,181,916	1,928,521	4,716,829	5,312,570	3,696,241	(25,202,588)

Footnote

Equity Earnings	171,089	-	-	-	-	-
Interest Income	319,542	-	-	-	-	-
Interest Expense	5,776,258	15,197,439	13,675,336	12,785,588	15,718,106	6,180,777
Depreciation and Amortization	10,379,127	9,769,942	9,121,976	7,676,713	10,662,678	10,904,431

Source: [ISI Emerging Markets](#)



CEA ADR Stock Returns vs. S&P500 & 0670.HK vs. Hang Seng Index

Feb-03	0.51%	-1.70%	-6.42%	-2.19%
Jan-03	4.80%	-2.74%	14.74%	-0.80%
Dec-02	-2.12%	-6.03%	-5.88%	-7.78%
Nov-02	3.09%	5.71%	5.10%	6.36%
Oct-02	6.33%	8.64%	6.45%	2.32%
Sep-02	-11.10%	-11.00%	-13.33%	-9.64%
Aug-02	-21.02%	0.49%	-21.80%	-1.96%
Jul-02	2.70%	-7.90%	2.31%	-2.32%
Jun-02	-6.49%	-7.25%	-7.75%	-6.53%
May-02	9.49%	-0.91%	12.80%	-2.38%
Apr-02	13.87%	-6.14%	13.89%	4.22%
Mar-02	-0.07%	3.67%	-4.46%	5.54%
Feb-02	3.18%	-2.08%	2.75%	-2.62%
Jan-02	11.75%	-1.56%	15.96%	-5.65%
Dec-01	-6.23%	0.76%	-6.93%	1.27%
Nov-01	10.50%	7.52%	12.22%	11.56%
Oct-01	14.49%	1.81%	10.00%	0.79%
Sep-01	-16.95%	-8.17%	-18.75%	-10.02%
Aug-01	-5.82%	-6.41%	-5.05%	-10.39%
Jul-01	-18.85%	-1.08%	-19.35%	-5.75%
Jun-01	-3.97%	-2.50%	-5.38%	-1.52%
May-01	16.11%	0.51%	10.17%	-3.10%
Apr-01	0.43%	7.68%	1.82%	4.99%
Mar-01	-12.59%	-6.42%	-9.68%	-13.17%
Feb-01	2.81%	-9.23%	5.93%	-7.90%
Jan-01	1.59%	3.46%	-2.44%	6.71%
Dec-00	8.54%	0.41%	17.14%	7.62%
Nov-00	-1.79%	-8.01%	-9.48%	-6.42%
Oct-00	-8.77%	-0.50%	-6.61%	-4.43%
Sep-00	-7.39%	-5.35%	-4.58%	-9.07%
Aug-00	-13.82%	6.07%	-14.47%	0.49%
Jul-00	51.23%	-1.63%	50.00%	4.10%
Jun-00	9.42%	2.39%	19.28%	10.26%
May-00	2.94%	-2.19%	8.86%	-6.58%
Apr-00	11.35%	-3.08%	2.60%	-11.04%
Mar-00	1.31%	9.67%	2.67%	0.81%
Feb-00	-10.78%	-2.01%	-12.79%	10.06%
Jan-00	-8.68%	-5.09%	-7.61%	-8.94%
Dec-99	-15.94%	5.78%	-14.81%	11.03%
Nov-99	20.28%	1.91%	29.76%	15.54%
Oct-99	-4.39%	6.25%	-6.67%	4.13%
Sep-99	-3.59%	-2.86%	-9.09%	-6.10%
Aug-99	0.00%	-0.63%	7.78%	2.12%
Jul-99	-12.93%	-3.20%	-14.42%	-4.85%
Jun-99	61.47%	5.44%	60.94%	11.47%



May-99	-5.20%	-2.50%	0.00%	-8.65%
Apr-99	25.04%	3.79%	36.17%	21.02%
Mar-99	14.31%	3.88%	14.63%	9.96%
Feb-99	-4.49%	-3.23%	0.00%	3.93%
Jan-99	-10.05%	4.10%	-19.61%	-4.76%
Dec-98	-13.78%	5.64%	-9.09%	-2.04%
Nov-98	-1.60%	5.91%	3.45%	1.81%
Oct-98	20.72%	8.03%	30.23%	32.71%
Sep-98	47.06%	6.24%	51.61%	12.01%
Aug-98	-36.85%	-14.58%	-34.55%	-6.34%
Jul-98	-19.03%	-1.16%	-25.00%	-10.27%
Jun-98	-7.11%	3.94%	-17.72%	-5.60%
May-98	-15.70%	-1.88%	-19.57%	-15.22%
Apr-98	-16.98%	0.91%	-19.64%	-9.64%
Mar-98	-1.68%	4.99%	-7.50%	0.28%
Feb-98	11.73%	7.04%	36.59%	17.15%
Jan-98	-27.31%	1.02%	-42.06%	-13.88%
Dec-97	-8.76%	1.57%	-1.52%	2.02%
Nov-97	-25.14%	4.46%	-22.78%	-3.44%
Oct-97	-22.50%	-3.45%	-26.36%	-29.80%
Sep-97	-6.84%	5.32%	-20.00%	6.64%
Aug-97	33.81%	-5.74%	29.81%	-13.94%
Jul-97	1.43%	7.81%	-4.65%	6.64%
Jun-97	-12.20%	4.35%	-17.83%	3.12%
May-97	-4.07%	5.86%	-7.02%	14.47%
Apr-97	7.32%	5.84%	7.46%	5.50%
Mar-97	31.45%	-4.26%	40.72%	-6.64%
Feb-97	20.68%	0.59%	21.01%	0.43%
Beta		0.69		1.09

Source: Yahoo!Finance

