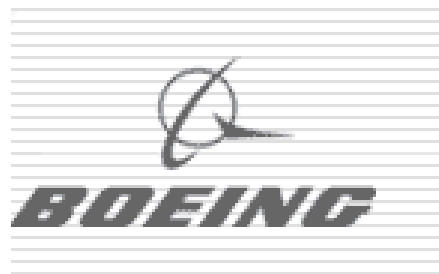

Strategic Report



Lead Partner: Sam Glick
Consulting Partners: J.R. Hall
Jason Yoo

PAConsulting
Perception ■ Analysis ■ Communication

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Background

History

The modern Boeing began on July 15, 1916, when Yale engineering college graduate William Boeing incorporated his airplane manufacturing business as Pacific Aero Products Company. A year later, he changed the name to Boeing Airplane Company. In 1917, Boeing produced its first production airplane: the Model C seaplane. The United States Navy ordered fifty of these aircraft for use in World War I. During the 1920s, Boeing produced several different models of fighter, mail, and passenger planes, with its largest customers being the United States Navy and the Post Office. Boeing also played a critical role in World War II, producing fighters and bombers in coordination with competing companies Douglas Aircraft Company, Lockheed Aircraft Corporation, Bell Aircraft Company, and Glenn L. Martin Company. After World War II, though, the absence of military orders forced Boeing to close several of its factories and lay off 70,000 employees.

This sudden decrease in orders drove Boeing to explore the burgeoning commercial aircraft industry. After several unsuccessful attempts, the company finally produced the world's first commercial trans-Atlantic jetliner: the Boeing 707. The 707 positioned Boeing as the leading producer of commercial jets and led to the production of the 727, 737, 747, 767, and other 7-series jets.

During the 1960s, Boeing reaped great benefit from the space race, and it did a booming aerospace business through contracts with NASA and the U.S. military. This decreased significantly in 1970, though, and the company cut over 40,000 jobs between 1970 and 1971. In response, Boeing entered other related and unrelated businesses, including computer products, housing project management, water treatment, and light rail vehicles. Most of these ventures saw limited success and were short-lived. In 1996, The Boeing Company merged with Rockwell International Corporation's aerospace and defense units in order to bolster its defense equipment production abilities. Boeing's defense business now operates as a wholly-owned subsidiary, Boeing North American. In 1997, The Boeing Company merged with McDonnell Douglas Corporation, a competing manufacturer of both commercial and defense aircraft. As a result of this merger, Boeing chief executive officer Phillip Condit retained his position and became chairman of the new board of directors, and former McDonnell Douglas president Harry Stonecipher became president and chief operating officer. In 2000, Boeing purchased Hughes Electronics Corporation's space and electronics business. Later that year the company purchased Jeppesen Sanderson, Inc., a leader provider of aeronautical charts, and the company's Boeing Australia subsidiary purchased Hawker de Havilland, an aircraft components manufacturer.

In 2001, The Boeing Company moved its headquarters from their longtime home in Seattle, Washington, to Chicago, Illinois. Boeing's commercial aircraft division, however, remained in Seattle. The company also merged its space, defense, government, intelligence, and communications divisions into a single business unit, Integrated Defense Systems (IDS). IDS is headquartered in St. Louis, Missouri.

Structure and Products

IDS's products include the F/A-18E/F Super Hornet, the F-15E Eagle, the AV-8B Harrier II Plus, the F/A-22 Raptor, the C-17 Globemaster III transport, the C-40A and C-32A transports, the T-45 training System, 767 tankers, and the AC-130U Gunship. Rotorcraft included the RAH-66 Comanche, the CH-47 Chinook, the AH-64D Apache Longbow, and the V-22 Osprey. Weapons programs include the Conventional Air-Launched Cruise Missile (CALCM), the Harpoon anti-ship missile, the Standoff Land Attack Missile Expanded Response (SLAM-ER), the Joint Direct Attack Munition (JDAM), the Joint Helmet Mounted Cueing System (JHMCS), and new technologies for Unmanned Aerial Vehicles (UAV) and Unmanned Combat Aerial Vehicles (UCAV). Space and communications products include AWACS, E-6 TACAMO, International Space Station, Sea Launch, space shuttle orbiters and their main engines, and next-generation Global Positioning System satellites.

Boeing Commercial Airplanes' (BCA) products include the 717, 737, 747, 757, 767 and 777 families of jetliners and the Boeing Business Jet. BCA sells its products mainly to major commercial airlines; this business has been hurt drastically by the recent decline in the travel industry. BCA's main competitor is European-based Airbus, which in 2002 sold more commercial airplanes than BCA for the first time ever. The Boeing Company also owns the Boeing Capital Corporation, which serves as its asset-based leasing and lending organization; Connexion by Boeing, a high speed data network and in-flight entertainment provider; and Boeing Air Traffic Management, an air traffic control and airport operations solution provider.

Current Issues

The Boeing Company currently faces three major challenges: the effects of the September 11, 2001, World Trade Center disaster on the commercial aviation market, significantly decreased spending in the commercial space market, and misconduct allegations that threaten the company's position as a defense contractor. These challenges are immense, and the company seems to recognize that the solutions to them must be long-term. Despite these challengers, though, the company is still the world's largest aircraft manufacturer and a major player in the space and defense contracting industries.

September 11, 2001, produced effects that rippled throughout the American economy. Major airlines were forced to cancel tens of thousands of flights, and many required financial assistance from the U.S. government. Even after receiving this assistance, several airlines filed for bankruptcy protection. BCA, a longtime leader in the production of commercial aircraft, suddenly saw orders for aircraft cancelled and new orders virtually disappeared. While the travel industry is slowly recovering, many analysts expect that it will be several years before business returns to its previous levels.

Perhaps more importantly, BCA has seen increased competition from its only major competitor, Airbus. In 2002, for the first time ever, Airbus received more orders for airplanes than Boeing did. As a company subsidized by European governments, Airbus is able to sell its planes at levels that are currently unattainable by Boeing. Additionally, Boeing's newest and largest aircraft, the 777 commercial jet, has not been as popular with airlines as the company suspected. Airlines are choosing Airbus's simple, reliable aircraft over Boeing's more feature-rich products.

The current sluggish commercial space market seems to be a result of both the down economy and market saturation- a company can only launch so many satellites! Boeing has wisely moved out of this market. The effects of this move, while expected to be positive, have yet to be seen.

Perhaps the most important issue currently facing Boeing is the alleged misconduct by its executives with regards to defense contracting. On November 24, 2003, Boeing chief financial officer Mike Sears was dismissed after the company discovered that he had improperly influenced a former U.S. Air Force official who had been hired by Boeing. Darleen Druyun, the deputy general manager of Boeing's missile defense business, negotiated a contract for the Air Force with Boeing for the leasing of the company's 767s as aerial refueling tankers. This occurred while Mr. Sears was negotiating with Ms. Druyun about her future job at Boeing, and her situation demonstrated a clear conflict of interest. Ms. Druyun was also fired by Boeing for her misconduct.

In September 2003, Ms. Druyun became the subject of a U.S. Department of Defense investigation for allegedly sharing proprietary bid information from Boeing's competitors with the company while she was employed by the Air Force. The Pentagon found the Ms. Druyun did behave improperly, and with the full knowledge of top Boeing officials. This incident has seriously jeopardized Boeing's ability to bid on future defense contracts, and the full impact may not be known for several years.

Financial Analysis

Basic Indicators

Despite its myriad ethical and demand issues, The Boeing Company (BA) remains a thriving company. During the fourth quarter of 2003, Boeing reported that revenue decreased by a modest four percent, and that net income decreased by just 2.5 percent to \$.50 per diluted share. Boeing attributes these decreases to declines in demand in the commercial aircraft market and the company's decision to move out of the commercial space market. Despite the company's ethical troubles with the Department of Defense, IDS posted a three percent sales gain during the fourth quarter of 2003 and an eight percent increase in operating profit, to \$603 million. Overall, during 2003 Boeing's operating margin decreased from 6.7 percent to 5.1 percent.

Despite the sluggish space and commercial aircraft markets, Boeing has managed to increase its efficiency as well as its margins. This is particularly true in commercial aviation. Boeing attributes this to engineering advances and structural changes within BCA. The cultural costs of these structural changes, however, remain to be seen.

Boeing's current share price of \$44.60 is near its 52-week high of \$46.00. The company's forward P/E ratio of 21.24 is a bit high for the aerospace industry. By comparison, Lockheed Martin's P/E ratio is 16.4, Northrop Grumman's is 16.1, and General Electric's is 18.4. Its current ratio is .93, and its total debt to total capital ratio is approximately 64%. Most of that debt, however, is finance-related from Boeing Capital Corporation. At the end of 2003, Boeing held \$4.6 billion in cash and investments, up from \$2.3 billion in 2002.

Both Argus and Standard and Poor's currently rate Boeing a HOLD.



BA Stock Price, May 2003- April 2004 (Source: Yahoo! Finance)

PERIOD ENDING	31-Dec-03	31-Dec-02	31-Dec-01
Total Revenue	50,485,000	54,069,000	58,198,000
Cost of Revenue	43,862,000	45,499,000	48,778,000
Gross Profit	6,623,000	8,570,000	9,420,000
Operating Expenses			
Research Development	1,651,000	1,639,000	1,936,000
Selling General and Administrative	3,224,000	2,981,000	2,767,000
Non Recurring	885,000	82,000	821,000
Others	(28,000)	-	-
Total Operating Expenses	5,732,000	-	-
Operating Income or Loss	891,000	3,868,000	3,896,000
Income from Continuing Operations			
Total Other Income/Expenses Net	459,000	42,000	318,000
Earnings Before Interest And Taxes	1,350,000	3,910,000	4,214,000
Interest Expense	800,000	730,000	650,000
Income Before Tax	550,000	3,180,000	3,564,000
Income Tax Expense	(168,000)	861,000	738,000
Minority Interest	-	-	-
Net Income From Continuing Ops	718,000	2,319,000	2,826,000
Non-recurring Events			
Discontinued Operations	-	-	-
Extraordinary Items	-	-	-
Effect Of Accounting Changes	-	(1,827,000)	1,000
Other Items	-	-	-
Net Income	718,000	492,000	2,827,000
Preferred Stock And Other Adjustments	-	-	-
Net Income Applicable To Common Shares	\$718,000	\$492,000	\$2,827,000

BA Income Statement, 2001-2003 (all figures in thousands of dollars; Source: Yahoo! Finance)

PERIOD ENDING	31-Dec-03	31-Dec-02	31-Dec-01
Assets			
Current Assets			
Cash And Cash Equivalents	4,633,000	2,333,000	633,000
Short Term Investments	857,000	1,289,000	-
Net Receivables	6,430,000	7,049,000	8,653,000
Inventory	5,338,000	6,184,000	6,920,000
Other Current Assets	-	-	-
Total Current Assets	17,258,000	16,855,000	16,206,000
Long Term Investments	12,094,000	10,922,000	9,345,000
Property Plant and Equipment	8,432,000	8,765,000	8,459,000
Goodwill	1,913,000	2,760,000	5,666,000
Intangible Assets	1,035,000	1,128,000	1,449,000
Accumulated Amortization	-	-	672,000
Other Assets	11,061,000	9,640,000	7,890,000
Deferred Long Term Asset Charges	1,242,000	2,272,000	-
Total Assets	53,035,000	52,342,000	48,343,000
Liabilities			
Current Liabilities			
Accounts Payable	17,304,000	17,996,000	19,087,000
Short/Current Long Term Debt	1,144,000	1,814,000	1,399,000
Other Current Liabilities	-	-	-
Total Current Liabilities	18,448,000	19,810,000	20,486,000
Long Term Debt	13,299,000	12,589,000	10,866,000
Other Liabilities	12,374,000	11,705,000	5,367,000
Deferred Long Term Liability Charges	775,000	542,000	799,000
Minority Interest	-	-	-
Negative Goodwill	-	-	-
Total Liabilities	44,896,000	44,646,000	37,518,000
Stockholders' Equity			
Misc Stocks Options Warrants	-	-	-
Redeemable Preferred Stock	-	-	-
Preferred Stock	-	-	-
Common Stock	5,059,000	5,059,000	5,059,000
Retained Earnings	14,407,000	14,262,000	14,340,000
Treasury Stock	(8,322,000)	(8,397,000)	(8,509,000)

Capital Surplus	2,880,000	2,141,000	1,975,000
Other Stockholder Equity	(5,885,000)	(5,369,000)	(2,040,000)
Total Stockholder Equity	8,139,000	7,696,000	10,825,000
Net Tangible Assets	\$5,191,000	\$3,808,000	\$3,710,000

BA Balance Sheet, 2001-2003 (all figures in thousands of dollars; Source: Yahoo! Finance)

PERIOD ENDING	31-Dec-03	31-Dec-02	31-Dec-01
Net Income	718,000	492,000	2,827,000
Operating Activities, Cash Flows Provided By or Used In			
Depreciation	1,468,000	1,509,000	1,750,000
Adjustments To Net Income	1,667,000	2,263,000	398,000
Changes In Accounts Receivables	357,000	(155,000)	342,000
Changes In Liabilities	505,000	(829,000)	1,366,000
Changes In Inventories	351,000	1,510,000	(19,000)
Changes In Other Operating Activities	(1,185,000)	(415,000)	(2,850,000)
Total Cash Flow From Operating Activities	3,881,000	4,375,000	3,814,000
Investing Activities, Cash Flows Provided By or Used In			
Capital Expenditures	(741,000)	(1,001,000)	(1,068,000)
Investments	(947,000)	(2,555,000)	-
Other Cashflows from Investing Activities	628,000	135,000	(3,646,000)
Total Cash Flows From Investing Activities	(1,060,000)	(3,421,000)	(4,714,000)
Financing Activities, Cash Flows Provided By or Used In			
Dividends Paid	(572,000)	(571,000)	(582,000)
Sale Purchase of Stock	33,000	67,000	(2,338,000)
Net Borrowings	18,000	1,250,000	3,443,000
Other Cash Flows from Financing Activities	-	-	-
Total Cash Flows From Financing Activities	(521,000)	746,000	523,000
Effect Of Exchange Rate Changes	-	-	-
Change In Cash and Cash Equivalents	\$2,300,000	\$1,700,000	(\$377,000)

BA Cash Flows, 2001-2003 (all figures in thousands of dollars; Source: Yahoo! Finance)

Porter's Five-Forces Analysis

Internal Rivalry

BCA operates in a distinct market dominated by two major firms: Airbus and Boeing itself. This greatly simplifies market analysis. As mentioned in the background section of this report, in 2002, for the first time ever, Airbus received more orders for airplanes than Boeing did. As a company once subsidized by European governments, Airbus has an advantage unavailable to Boeing. Additionally, Boeing's newest and largest aircraft, the 777 commercial jet, has not been as popular with airlines as the company had hoped. Airlines are choosing Airbus's simple, reliable aircraft over Boeing's more feature-rich products. The upcoming 77, however, may turn the tide in Boeing's favor.

Entry

The threat to incumbents' profits from entry in the airframe manufacturing industry is low. Entry into the commercial airframe manufacturing industry is extremely difficult, due mainly to high development costs and the experience-based advantages shared by the incumbents, Boeing and Airbus. Intensive capital is required to enter the market, as well as a great deal of knowledge for research and development. A startup manufacturer in the industry would likely face even higher development costs due to experience effects. It could also expect smaller margins, both because airlines are reluctant to purchase from startups and because entry would likely engender a price response by Airbus and Boeing. Entry by a newcomer in the super-jumbo segment would therefore be very risky.

Incumbents are also protected by the learning curve. With a doubling of experience, the number of personnel required to produce a plane would fall by 35 to 40 percent. This would make it extremely difficult for entrants without experience to generate profits and maintain a strong position in the industry. Experience effects are substantial, and help insulate the incumbents from competition by newcomers.

Also, the industry's consumers, airlines, tend to be extremely brand loyal and conscious of reputation. In this case, a new entrant in the airframe industry would have to invest heavily in order to establish a strong reputation and brand awareness. One positive note for entrants, however, is that access to key inputs such as raw materials and labor is not a significant barrier to entry.

Substitutes and Complements

Aircraft are distinct products, and there are few if any perfect or near substitutes for either commercial or military aircraft. This does not appear to be a major issue in the aircraft industry.

Complements for aircraft do exist, and include both components, such as engines and instrumentation, and more passenger-oriented products, such as onboard video and Internet access. Boeing has either purchased or has good relationships with its component suppliers, as described in the Buyer Power section below. Boeing is just beginning to product passenger-oriented complements, and has invested approximately five billion dollars in developing an onboard Internet access system. Lufthansa recently signed a contract with Boeing to be the first major airline to offer the product to its passengers, and Boeing is currently negotiating contracts with four other commercial airlines. Projected revenue figures should be available in the near future.

Supplier Power

Boeing faces relatively little supplier power due to its acquisitions of component parts manufacturers. It produces many smaller necessary inputs in-house, rather than outsourcing. Thus, the risk of prices rising at the top of the supply chain remains relatively low. Boeing recently acquired an electronic component manufacturer as well as instrumentation manufacturers to ensure limited supplier power. Relative to other companies in the industry, Boeing faces the same low level, if not less, of supplier power.

Buyer Power

The aerospace industry is unlike any other because of the incredibly high price tags placed on companies' products. In this market where volume is low and costs astronomically high, one might expect price elasticity to be quite inelastic as consumers likely must accept the price they are given. However, it is precisely this low volume and high pricing coupled with the low number of firms that creates an auction of sorts for enormous long-term contracts. Boeing is no exception, as it competes with Airbus for commercial airliner contracts, as well as Lockheed Martin, Honeywell, and several other smaller players for coveted government military contracts. A typical situation would involve the government shopping for someone to design and manufacture a new jet fighter. They ask for presentations from a couple companies, and then make their decision. In such a format, with firms competing head-to-head for clients' business, buyers have an incredible amount of power. Thus, firms in this industry must cater to the demands of the potential client in order to ensure continuous production long-term income flow.

Recently, Boeing decided to exit the commercial space business and hence focus more on government-related contracts. As a result, Integrated Defense Systems (IDS) made up 60% of sales in 2003, as opposed to the year before, when IDS and commercial aviation split sales evenly. This added emphasis gives the government even more buyer power, as Boeing starts to rely heavily on long-term defense contracts. The government's redirection of business from Boeing to Lockheed serves as an example of this extreme buyer power. Due to ethical misbehavior by Boeing, the Air Force switched contractors and sent \$1 billion to Lockheed Martin to produce a desired Evolved Expendable Launch Vehicle (EELV). Boeing's bid-rigging scandal caused the government to suspend full status as a permitted bidder for future contracts, and opened the door for renegotiations on existing contracts.

Boeing currently has a contract to produce tanker planes for the government that are capable of refueling fighters mid-flight. However, the Pentagon is debating whether to open up the bidding process to other companies for the remaining 80 (of 100 contracted) tankers. Boeing would be permitted to bid for the remaining planes, but it would face heavy competition all over again. Even if Boeing were to win such a re-bidding process, it would likely have to slash prices to make amends for its behavior. With a tarnished image, Boeing's profit margins have fallen far below its competitors. In an industry with low volume, margins must remain as high as possible. Due to the heavy buyer power in this market, Boeing must protect its image and offer premier customer service if it wishes to turn steady profits.

Evaluation of Key Issues

Cultural Issues

Boeing's history has led it to have a culture that emphasizes quality and technical excellence, both of which are vital to the company's success. The company culture is one dominated by engineers who have long believed that their sole job is to design the best aircraft in the world. Traditionally, top engineers have been promoted to executive positions, and have retained the priorities that resulted from their engineering backgrounds. These sorts of priorities, however, must not come at the expense of efficiently designing and manufacturing products that provide value to customers, particularly given current trends in the airline industry. The engineering culture at Boeing must be supplemented by business-minded value consciousness.

This is by no means an easy task, and conflicts have already arisen as Boeing has attempted to add management-trained individuals to its workforce at all levels. As one might expect, engineers with long tenures at the company have been reluctant to embrace the ideas of people whom they see as disconnected from the engineering community. Boeing engineers are well-trained individuals who represent an enormous stock of human capital, however, and it would be unwise for the company not to harness their talents as it tries to design more value-oriented products. Instead, Boeing should structure its compensation plans to encourage engineers to come up with cost-saving ideas. Employees should be encouraged, through company promotional materials, contests, and staff meetings, to share innovative cost-saving ideas with management. A more bottom-up approach to increased efficiency will give employees a greater stake in the success of the company. Incentives should be offered to employees whose concepts lead to cost savings for the company. Additionally, Boeing may wish to consider a greater emphasis on compensation schemes such as profit sharing and stock options for employees at all levels in order to allow lower-level employees to internalize the importance of the company's profitability.

Improved incentive-based compensation schemes may also serve to improve morale among Boeing employees. During the past decade, the company has laid off almost half of its workforce, contributing to low morale as employees saw their colleagues forced to leave the company. With profit sharing in place, for example, employee morale is likely to improve as the company's financial performance improves.

As part of this cultural shift, in order to remain competitive, Boeing must offer its customer products that provide not only cutting-edge features, but also longer ranges, increased fuel economy, and lighter gross weights. The 77, scheduled for initial delivery in 2008, should be a model for future

Boeing aircraft. The 77 reduces the time to economic obsolescence of Boeing's aircraft, driving up demand from airlines for new aircraft. Top management should encourage the development of products like the 77, designed for value as much as for features. The future of Boeing, and BCA in particular, may very well lie with products such as the 77.

Structural Issues

Boeing has a long history with its labor unions, and, practically since their inception, its labor contracts have provided employees with seniority significant job protection during periods of layoffs. While this forces Boeing to retain its most experienced employees, it also severely limits the company's ability to recruit and retain younger, more value-conscious engineers who may help to shape Boeing's culture. During its next labor contract renegotiation, Boeing should seriously consider the possibility of negotiating with union leaders to reduce the importance of tenure in layoff decisions. Such a system could instead be replaced with performance-based job protection, where employees are let go from the company based on performance rankings rather than job tenure.

Boeing's current accounting structure has the company creating a new division in BCA for the development of each major commercial aircraft product. The 77, for example, will remain in its own division until at least 2008, when the first product deliveries are made. The company may wish to evaluate whether or not this is an effective cost accounting technique. Forcing the division responsible for sales of existing commercial aircraft to list new aircraft research and development costs on its profit and loss statement would encourage greater responsibility for controlling product development costs. This, in turn, would force management to seek out more ways to improve efficiency in the development of new aircraft.

Conclusions

Boeing, and BCA in particular, currently faces two major challenges it must overcome if it is to become once again the undisputed leader in commercial aircraft sales. First, it must work to change its culture to emphasize value rather than cutting-edge technology. Boeing's greatest asset is its employees, and it must work with them to emphasize the importance of efficiently creating products designed around providing value to Boeing's customers. This can be achieved through employee motivational tools and redesigned compensation schemes. Secondly, Boeing must work with its labor unions to reduce the importance of seniority in hiring and firing. This will allow "new blood" to enter the company workforce securely. Boeing also may want to reevaluate its current structure of creating a separate division for the development of each new commercial aircraft. By forcing new aircraft design onto the profit and loss statement of the division responsible for commercial aircraft sales, the company should be able to measure more easily the cost of each new product and to provide incentives for management to reduce these costs.