



Corporate Marketing — Periodicals Division

SECTOR TALK — GLOBAL COMMERCIAL AEROSPACE GLOBAL DEFENSE

Clearly, the crisis gripping the **Global Commercial Aerospace and Defense** sector exceeds any previous blow the industry has suffered. Both Aerospace and Defense were profoundly affected by the terrorist attacks of September 11, 2001, but in different ways. While **Commercial Aerospace** headed into a cyclical downturn, the **Defense** sector has reached its spending bottom, with substantial increases in the U.S. budget. The **Commercial Aerospace** supply-and-demand fundamentals look unfavorable until at least 2003. But the **Defense** sector is well positioned for growth, and may present strong buying opportunities for its stocks. Analysts expect a similar pattern in 2002, although an air traffic recovery later in the year could benefit **Commercial Aerospace** suppliers.

Because our portfolios include securities from all sectors, including Aerospace and Defense, we want to give you the TIAA-CREF perspective on this universe of stocks.

We spoke with John Hsin, our Aerospace and Defense analyst, to find out how the terrorist attacks affected these sectors. For two hours, he shared his passion for these industries, and his perspective on their prospects. By sharing his deep knowledge and long experience in Aerospace and Defense, he helped us grasp the sector's complexities.

John Hsin got his start by assisting Scott Evans in running CREF's Growth Fund, while earning his MBA at New York University's Stern School of Business in the evenings. He has been a full analyst at CREF Investments since 1997, when the CREF research team assigned him to the Airline sector. In 1999, he took over coverage of the Aerospace and Defense sector from Nancy Walton. John adapted well to the volatile nature of these cyclical industries, and thrives on their challenges. Switching from the airlines to Aerospace and Defense was a natural. "My timing was good," John says, "because I picked up coverage of the industry when the whole sector was really beat up, since many companies had missed their earnings numbers. These were companies that were supposed to have solid earnings and high predictability, excluding Commercial Aerospace companies of course."

Q: *The research analyst plays a complex role in the world of financial services—one that varies somewhat, depending on whether the analyst works for an investment bank, an insurance company, or an asset management firm. In every case, though, the analyst is critical to the stock picking process. How would you describe the research analysts' role here at TIAA-CREF?*

A: Research analysts at CREF are engaged in doing primary, fundamental analysis of industries and companies. Because we do not have to publish or market our research like our counterparts on the sell side, we can spend 100% of our time engaged in understanding the critical variables of industries and companies. This effort is totally directed toward helping our portfolio management team select stocks for the portfolios we manage.

CREF is a very team-oriented organization. Analysts build strong relationships with portfolio managers, traveling together to visit companies and meet management. Often, we engage in intense discussions to ascertain companies' business plans and assess their viability. We may visit factories, stores, distribution centers, engage in channel checking, or whatever it takes to gain an information edge that gives us insight into a company's position in its industry, its outlook, and whether its shares are attractive.

Our job is to value stocks, looking for opportunities the Market has not yet fully realized. CREF has a disciplined valuation methodology. Analysts spend considerable time developing models that reflect a company's financial outlook. We also use various valuation methods to pick stocks that expect high returns. All ideas are fully vetted with the portfolio group. These meetings give us a chance to present our work. So, the analyst, along with the portfolio team, drills down into the work to really understand the drivers and risks a company faces. In this way, all ideas are given a full hearing before being put in a portfolio.

Q: *When we speak of Commercial Aerospace and Global Defense, what are we really talking about? What types of companies comprise these sectors?*

A: First, these two distinct sectors affect each other integrally in complex ways. The **Commercial Aerospace** sector essentially consists of original equipment manufacturers of aircraft, engines and other components. Their largest customers are the airlines. The Global Defense sector is composed of companies that provide equipment and software for the federal government, the military and space programs. It includes a broad scope of products related to warplanes and other federal defense needs, such as tanks, ships and bombs; air transport systems; maintenance; satellite manufacturing and satellite launch; airport security equipment; and other related industries.

Q: *Approximately, when did you begin to notice the downtrend in Aerospace?*

A: The first sign was in March 2001, when Airline industry revenues began to slump after posting a strong prior year. It's important to remember that even before September 11, the Airline industry was suffering from slowing sales—particularly from business travelers, who tend to pay full fare and contribute an unusually large percentage of profits—and from the downturn in the U.S. economy. Analysts expected commercial airline companies to lose billions of dollars. The attacks accelerated and exaggerated the loss.

We knew the foundation of the Airline sector was shaky. Signs included the labor problems that many of the major airlines were experiencing. Wages kept driving costs up like crazy, and the price of fuel was really high. With rising costs, the slowing economy and the Airlines still spending heavily on new aircraft, it was inevitable that they were going to lose money. That is why I was generally negative on the Airline industry and TIAA-CREF did not load up on Airline stocks. This, in turn, led me to not hold the major Aerospace names, because if airlines are losing money, they won't be ordering planes, and therefore the stocks will underperform.

Q: *What were some of the other conditions that ripened the fall of Commercial Aerospace?*

A: You can compare the Airlines' downfall to the recent technology boom. Think of the industry as a big bubble filling with the hot air of corporate travel. Everyone traveled last minute and they paid ridiculously high fares, because the airlines grew capacity at a disciplined pace. As late as February the airlines were still optimistic about demand. I knew that something had to happen soon, so we sold in January in anticipation of a drop in demand. The Paris Air Show is a major annual industry event, where airlines announce big orders. I attended the event, and saw that many companies were still cautiously optimistic about orders until the bad news hit. One of the industry's heaviest hitters got only one aircraft order. That's when Commercial Aerospace stocks started to tumble from their peak. Again, we were correct, although early, in not investing in these stocks. Then, on September 11, the bubble burst.

Q: *After the September 11 attacks, what was the government's initial response?*

A: After the attacks, the U.S. government immediately ordered all aircraft in American airspace to land at the nearest airport and allowed no planes to fly for the next few days, which only compounded the problems for the carriers. The entire U.S. airline industry was closed down temporarily, and it took several days to get operations back to normal. During that period, the industry's revenues essentially fell to zero, while expenses were largely

unchanged. But the federal government stepped in quickly and promised \$5 billion in subsidies to help offset the losses incurred when the Airline industry was shut down; and it also promised loan guarantees to carriers that needed financial support. When flying resumed however, the public was wary of returning to the air, and traffic fell even further.

Q: How did the Airlines, themselves, respond?

The Airlines acted swiftly to reduce schedules and cut costs, wherever possible, initiating massive layoffs and salary cuts. This caused capacity to drop by more than 15%. But even so, they still had high capital expenditures. And, with business down and ticket prices much lower, the carriers continue to lose large amounts of money. When fourth-quarter corporate earnings came in, the effects were clear. The Airlines were deeply in the red. Airlines were not profitable even when the economy was just weak, not yet in a recession. Of course, this red ink means that airlines deferred or cancelled aircraft orders, driving Commercial Aerospace stocks down even further.

Q: What did the Defense sector look like before September 11?

A: It had been in a downcycle for the past decade, ever since the end of the Reagan defense spending buildup. The sector had lost vital employees—professionals who wrote software for ships, airplanes and so forth—to the Dot-com boom. Moreover, the Clinton administration had greatly reduced Defense spending starting around 1992, after the Gulf War ended. The industry had to consolidate, since there was not enough business to go around. Toward the end of the decade, however, Clinton started to increase Defense spending in an effort to support the industry. The decade long economic growth created budget surpluses that made funds available for higher defense spending.

Q: But then Came the Bush Administration. President Bush already had begun to re-build Defense spending. Did this help to re-position the sector after the attacks?

A: Yes, because Bush increased spending in security and defense, Defense fared somewhat better than the Airlines. After the attacks, of course, the government pumped even more money into the industry, since homeland protection became an issue. Now, it seems that the war on terrorism will boost Defense spending even further. Defense contractors should receive a fresh injection of funding for procurement and research and development, although it is not yet finalized for fiscal years 2002 and 2003. Another boon for the industry is that people don't want to be against Defense right now. After September 11, that's un-American. Politicians want to be re-elected. So, in the end, the military should get more money.

Q: *What is the near-term outlook for the Aerospace and Defense industry?*

A: Unless there is a large fundamental increase in the revenue environment, most of the major airlines will be hard-pressed to make any money in 2002. Therefore, Commercial Aerospace companies will continue to suffer. Recovery might come in 2004, since airlines could start to make some money in 2003, and begin ordering more planes for delivery in 2004. Consolidation might and should happen, but because of large losses and weak balance sheets, there is no appetite to do so right now.

Amid this current downturn, September 11 aside, it is important to remember that Commercial Aerospace has always been a long and late cyclical sector—with three- to four-year downturns—and its earnings are extremely volatile in a downturn. For example, during the last recession in 1990-91, the total of new planes ordered for 1993 dropped to just 2% of peak levels reached in 1989. Aircraft deliveries in 1995 dropped to only 50% of peak levels reached in 1991. It will take a few years before orders and deliveries reach peak levels again.

Q: *Looking out further, what is the prognosis? Is there hope for the Airline industry?*

A: Most definitely, yes! The United States and the rest of the world need a viable air transportation system, and one way or another there will be a strong airline industry. In the longer term, the industry's health will depend on more people flying and probably higher ticket prices. People will fly when the economy starts to expand again, which economists think is likely by the middle of 2002. They also will fly as they grow more confident about the safety of flying. No one can say when that will be, but I expect that the new safety measures in use now will build confidence fairly quickly. That is another reason to think that business will be on the mend by the middle of 2002. But because the average age of these carriers' airplanes is now very young, they can afford not to buy new planes for a few years.

Q: *Most people agree that the U.S. economy is at risk right now. How do you think the economic environment affects the Aerospace and Defense sector?*

A: Aerospace is a very economically sensitive sector, but the Defense area is not. In the aftermath of the attacks, Aerospace companies' revenues likely will come under pressure. An analyst must always think within the context of the economy, especially for economically sensitive sectors. If you can't make a call on the economy, then you can't really have the confidence to invest. Some people argue this is going to be a soft landing instead of a steep downcycle. But with cyclical industries like Aerospace, "soft landings" never really happen.

When it goes down, it goes down hard. So I would still stay away from Aerospace stocks, since they will take a few years to recover.

Defense stocks do well when the economy is weak, so in the short term they look good. However, if we see more signs that the economy is recovering, these stocks would underperform as funds shift money to cyclicals such as Airlines and Technology.

Q: How have the CREF stock portfolios fared relative to Airline stocks? And what advice can you give to investors?

A: The bottom line is that CREF accounts generally did not have much exposure to the sector when it went down. Essentially, you have to make up your mind about whether you're pessimistic or optimistic on the economy. If you're an optimist, you buy Airlines. But if you're pessimistic, you might do Defense. Right now, I guess I am more of a pessimist than an optimist on the economy. This, of course could change.

Views expressed are the individual views of John Hsin as of November 7, 2001 and are subject to change based on market and other conditions. The discussion is for informational purposes only and shall not be used or construed as a recommendation for any security or sector, and may not be representative of any funds of Accounts current of future investments.