Boeing 777 case

In October 1990, Boeing announced its plans of developing a new aircraft Boeing 777. In light of (Boeing's CEO) Frank Shrotz's goal of improving Boeing's ROE, whether this new project would help him pursue his objective is a key issue. Sustained success demands willingness to gamble regularly; however the pertinent question is whether the financial success of this gamble would prove to be spectacular or fatal. Given the huge cost outlays, it is imperative to assess the present worth of the investment before deciding to go ahead with the 777 project. The basic intuition is to accept the project if the IRR is more than WACC or reject it if IRR is less than WACC. The defense division of Boeing was relatively more stable and was thriving during gulf war whereas commercial aircraft business became volatile. Therefore β for commercial division is more appropriate for calculating WACC for evaluating the commercial 777 jet project. NYSE composite index presents a better portfolio than S&P 500 and βBoeing is analyzed for both short term (60 days) and long term impact (58 months) of gulf war. As the gulf war was projected not to extend beyond 6 months, it made sense to evaluate the WACC for both the time horizons. Average of unlevered βs of Grumman, Northrop and Lockheed corporations, with higher percentages of revenues from defense, helps in calculating the βdefense for Boeing. This in turn gives the βcommercial for both short and long term periods using the following expression. βBoeing = Weightcommercial * βcommercial + Weightdefense * βdefense Using these, cost of equity is calculated for both short and long term periods. Cost of debt can be calculated from the bonds data in exhibit 2. With βcommercial for long and short term impact being 1. 015 and 2. 307, the corresponding WACC rates are 14. 16% and 21. 01%. As the expected internal rate of return is 18. 9%, the project should be rejected in the short term as WACC (21. 01%) is higher. Gulf war, increased fuel prices, cancelled orders etc made the short term prospects highly volatile as is reflected in the higher β and WACC. However, the project seems to be attractive in the long term as WACC (14. 16%) is lower than IRR (18. 9%). As gulf war was expected to have only a short term impact, Frank Shrotz should accept the project. The pessimistic IRR perspective in the sensitivity analysis factors the pressure on pricing along with increased GS&A and R&D costs. In addition, with enhanced competition, the price of 777 is projected to scale down to $100 from $130 million which could affect the earnings. So Frank should ensure that GS&A and R&D costs are kept low; be flexible to accommodate any contingencies; analyze Airbus and MD to preempt any better competitive offering; streamline internal processes and explore areas unaffected by Gulf war such as the Asia- Pacific markets.