Finance 510-B

Problem Set 4

Work on individually. Due via e-mail on Saturday, February 13, at 6:00 pm Tucson time.
Submit on a spreadsheet whose name includes your name.

As the management of PurposeBuilt Brands is preparing for its initial public offering, it has approached Illinois Tool Works' CEO, Scott Santi with an intriguing proposition: the sale of its Goo-Gone product line. Scott thinks this would be a nice addition to ITW's Polymers and Fluids business segment. He asked ITW's CFO, Mike Larsen to run the numbers, and Mr. Larsen has passed this on to you.

Goo-Gone is the number one brand of adhesive removers based on sales, and it carries the EPA's Safer Choice label. PurposeBuilt has offered to sell the brand name, trademark, the patents needed to make the product and market it exclusively, and the manufacturing plant at which it makes Goo-Gone, to ITW for $105 million. Goo-Gone provided $24 million in revenues for PurposeBuilt in the calendar year 2020 at an average price of $6 per 12 oz. ITW believes that its marketing network can increase this revenue by 10% per year for the next 6 years, and then growth would flatten out at 1% thereafter. ITW believes that it can manufacture Goo-Gone for $3 per 12 oz, and that the administrative and marketing costs would be $8 million in the first year, and grow at 1% per year thereafter. The patent expires in 16 years, after which ITW would abandon the project. Salvage value of the plant and intellectual property at that point is estimated to be worth 0.

At the $105 million price, ITW would record $45 million in amortizable goodwill (which is amortized on a 15-year basis according to MACRS), and $55 million in property, plant, and equipment, which is depreciated on a 7-year MACRS schedule. $5 million of the purchase price is for land, which is not depreciable. ITW believes that it can recover this value of the land net of clean-up costs upon project termination.

ITW's project manager notes that the operation of the facility will require maintaining inventory on hand: $1 million in finished goods inventory, and $2 million in materials and work in process during the life of the project.

Illinois Tool Works is a Fortune 200 diversified manufacturing firm based in the northern suburbs of Chicago. It has a beta of 1.23. For our base case analysis, the risk free rate is 2.2% and the market risk premium is 4%. ITW has 20-year bonds outstanding that have a yield to maturity of 2.7%. The yield to maturity on the 20-year Treasury bond is 1.71%. The market capitalization of ITW's equity is $62,449 million. The book value of its outstanding debt is $8 billion. Its marginal tax rate is 22%.

How would you advise Mike Larsen in this case?