



2. Torre Inc. is a small, sporting goods firm, with 20 million shares outstanding, trading at \$ 4 a share, and \$ 20 million in debt (market value); the firm's current cost of capital is 10%. The firm is planning to recapitalize by borrowing an additional \$30 million and buying back shares, thus lowering its cost of capital to 9%.
  - a. Assuming no growth in savings over time, estimate the change in firm value from moving to the new debt ratio. (1 point)

b. Now assume that the firm does buy back shares at \$5/share. Estimate the increase in value per share for the remaining shares. (3 points)

3. Drew Enterprises is a manufacturing firm in two businesses - technology and telecommunications, with very different characteristics:

Business	Estimated value	Typical asset duration
Technology	\$ 5 billion	2 years
Telecommunication	\$ 15 billion	10 years

The firm currently has \$ 5 billion in debt with a duration matched up the existing asset duration. The firm is considering a management-led buyout, where it will

- i. Sell half of the telecommunications business for \$7.5 billion
- ii. Borrow an additional \$5 billion in zero-coupon bonds
- iii. Buy back stock with the proceeds (from the asset sale and the bond issue)

If Drew plans to match up the duration of its assets to that of its debt after this transaction, estimate the maturity of the new zero coupon bonds. (3 points)