

### SS7 Portfolio Management for Institutional Investors

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Zola provides the following additional information:

- The company has enjoyed steadily rising earnings for the past 10 years and expects this trend to continue.
- The company has a ratio of debt to total assets of approximately 10%.
- The company would like to discuss the possibility of modifying the current pension plan by offering an early-retirement provision allowing for lump-sum distributions.

1 Based on information provided by Zola, a higher risk tolerance for CGI Products' pension plan is least likely supported by:

- A. Zola's proposed modification to the current pension plan.
- B. the ratio of debt to total assets.
- C. earnings expectations for the company.

Solution: A.

Zola would like CGI to introduce an early retirement provision that allows for lump-sum distributions. This increases immediate liquidity requirements and reduces the level of risk tolerance. In contrast, the company's expected growth in earnings and the low debt to total asset ratio imply a higher risk tolerance.

The following data describe the portfolio:

#### Exhibit. Hannibal Insurance Portfolio Data

	Four Years Ago	Last Year
Assets (reserves and surplus portfolio)	\$450 million	\$500 million
Duration of assets	6.0 years	6.0 years
Liabilities	\$390 million	\$470 million
Estimated duration of liabilities	5.5 years	4.0 years

The company attributes the decline in the duration of its liabilities to increases in interest rates and the passage of time.

Hannibal's chief financial officer (CFO) has instructed the portfolio manager as follows: "The rapidly increasing popularity of our two-year fixed rate GIC product has increased our asset base

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substantially during the last year. Interest rates have been rising and will probably rise another 100 basis points this year. You should continue to take advantage of this situation by investing in higher-yielding, investment-grade, longer-duration bonds in order to maximize our spread and maintain a constant duration of the assets. This strategy will ensure the delivery of a competitive return to our customers.”

- 2 Judge the appropriateness of Hannibal’s investment strategy as stated by the CFO. Prepare two arguments that support your position.

Solution:

The investment strategy of Hannibal Insurance Company is inappropriate, because the company is ignoring interest rate risk and the strategy threatens both the surplus and policyholder reserves.

Hannibal’s investment strategy has three key negative consequences. First, the company faces major interest rate risk, as evidenced by the duration mismatch. Second, a focus on short-duration products will accelerate the mismatch. Finally, the company has not generated sufficient reserves and surplus relative to liabilities, given the risks it faces; thus it is increasing its risk of insolvency.

The real danger lies in another direction—namely the potential forced sale of assets, with sizable losses resulting from interest rate increases, to pay off short-duration liabilities.

The company has a relatively small surplus portfolio. Surplus is an indicator of an insurance company’s financial health and is vital to expansion of the business. If interest rates continue to rise as expected, the market value of the portfolio assets will decline, which may wipe out the surplus and a portion of policyholder reserves. With the company unable to expand or meet its obligations, its viability becomes questionable.