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Ginny's Restaurant: An Introduction to Capital Investment Valuation

Virginia will receive $2 million today and $3 million one year from today. Virginia does not have any other assets. There are no transaction costs or taxes, and all potential creditors and investors have all relevant information about investment payoffs. All these assumptions together are sometimes summarized by saying the capital markets are "perfect." In addition, assume that all future cash flows are known with certainty. For simplicity, assume that Virginia lives in a world that lasts only one year, and the rate of interest is 6 percent.

1. What is Virginia's current wealth (equivalently, what is the present value of her assets)? How much money can she spend and consume today? How much of the money can she spend and consume one year from today if she consumes nothing today?

Suppose that instead of having a two-period endowment, Virginia has an initial endowment of $4 million. She decides to invest part of the $4 million in Ginny's Restaurant which she will build and manage. The data below indicates the future cash flows (end of the year) that will result from an investment today. All payoffs are completely certain and known to all.

Investment (today)	Future Cash Flow (end of year)
1.0 million	1.8 million
2.0	3.3
3.0	4.4
4.0	5.4

2. How much of the $4 million should Virginia invest in the restaurant? What happens to Virginia's wealth when she makes the investment in Ginny's Restaurant?

3. Suppose that Virginia has a strong preference for current versus future consumption, and would like to consume at least $3.8 million immediately. Is this consumption possible, in light of the planned investment in Ginny's Restaurant?

4. Assume that Virginia does not have the $4 million endowment to begin with, but still has the necessary skills to develop and operate Ginny's Restaurant. Should she still make the

investment in the restaurant, and if so, how much? Assume that the only source of financing is a bank loan.

5. Individuals are of two types, savers and spenders. While all individuals prefer current consumption to future consumption, all other things equal, spenders have a relatively higher preference for current consumption. What if Virginia shares her ownership interest in the Virginia Corporation (cash of $4 million) with a widely-diffuse group of investors, savers and spenders? How much of the $4 million will the savers want to invest in the restaurant, and how much will the spenders want to invest (assume whatever is not invested will be paid out as a dividend to investors). Will they reach a compromise, and if so what will it be?

6. The Virginia Corporation now consists of cash (remaining after the investment in Ginny's) and Ginny's Restaurant. Assume that Virginia is contemplating another investment, namely to sell smoked hams via the internet. This project will require a $2.5 million investment and will yield a future cash flow of $3.4 million. Should she undertake this investment? Assume that she does not want to use internal cash to finance the investment, nor does she want to use debt financing. There are currently 200,000 shares outstanding in the Virginia Corporation.