Financial Planning and Forecasting

Topics

- Financial Planning
- Forecasting

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What is Financial Planning?

- It formulates the method by which financial goals are to be achieved.
- There are two dimensions:
  - A Time Frame
    - Short run is probably anything less than a year.
    - Long run is anything over that; usually taken to be a two-year to five-year period.
  - A Level of Aggregation
    - Each division and operational unit should have a plan.
    - As the capital-budgeting analyses of each of the firm's divisions are added up, the firm aggregates these small projects as a big project.

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Financial Planning Process

- **Set up a system of projected financial statements** which can be used to analyze the effects of the operating plans.
  - Rapid awareness of deviations from plans is essential to a good control system.
- **Determine financing needs**: Capital expenditures, working capital investments, R&D investments, and major marketing expenses.
- **Forecast funds availability**: Internal and external
- **Establish and maintain a system of controls** governing the allocation and use of funds
- **Develop procedures for adjusting** the basic plan if the economic forecasts upon which the plan was based do not materialize: Feedback + modifications

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Components of Financial Planning

1. Sales forecast
2. Pro forma statements
3. Asset requirements
4. Financial requirements
5. Plug
6. Economic assumptions

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Sales Forecast

- All financial plans require a sales forecast.
- Perfect foreknowledge is impossible since sales depend on the uncertain future state of the economy.
- Businesses that specialize in macroeconomic and industry projects can be help in estimating sales.

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Pro Forma Statements

- The financial plan will have a forecast balance sheet, a forecast income statement, and a forecast sources-and-uses-of-cash statement.
- These are called **pro forma statements** or **pro formas**.

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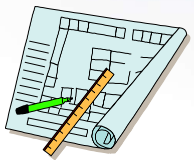
Asset Requirements

- The financial plan will describe projected capital spending.
- In addition, it will the discuss the proposed uses of net working capital.



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Financial Requirements

- The plan will include a section on financing arrangements.
- Dividend policy and capital structure policy should be addressed.
- If new funds are to be raised, the plan should consider what kinds of securities must be sold and what methods of issuance are most appropriate.

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Plug

- Compatibility across various growth targets will usually require adjustment in a third variable.
- Suppose a financial planner assumes that sales, costs, and net income will rise at g_1. Further, suppose that the planner desires assets and liabilities to grow at a different rate, g_2. These two rates may be incompatible unless a third variable is adjusted. For example, compatibility may only be reached is outstanding stock grows at a third rate, g_3.

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Example

- Current data

Income Statement

Sales	1,200
Costs	1,000
Net Income	200

Balance Sheet

Assets	2,000	Debt	800
		Equity	1,200
Total	2,000	Total	2,000

- Pro forma

Income Statement

Sales	1,320
Costs	1,100
Net Income	220

Balance Sheet

Assets	2,200	Debt	880
		Equity	1,320
Total	2,200	Total	2,200

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Example

- Current data

Income Statement

Sales	1,200
Costs	1,000
Net Income	200

Balance Sheet

Assets	2,000	Debt	800
		Equity	1,200
Total	2,000	Total	2,000

- Pro forma w/ $180 dividend

Income Statement

Sales	1,320
Costs	1,100
Net Income	220

Balance Sheet

Assets	2,200	Debt	960
		Equity	1,240
Total	2,200	Total	2,200

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Economic Assumptions

- The plan must explicitly state the economic environment in which the firm expects to reside over the life of the plan.
- Interest rate forecasts are part of the plan.

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Sales Forecasting - Steps

- Independent divisional forecast are made on the basis of historical growth, then combined to produce a “first approximation” corporate sales forecast.
- The level of economic activity and the overall demand are forecasted.
- Estimate a firm’s market share for each product line in each market, considering overall demand and competition.
- Consider impacts from exchange rate, trade agreements, governmental policies and etc.
- Estimate inflation and determine pricing tactics.
- Factor in advertising, promotional discounts, credit terms and the like.

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Sales Forecasting

- Accurate sales forecast is critical to the well-being of the firm.
- If the sales forecast is off, the consequences can be deadly serious.
  - If the market grows faster than the company has geared up for, the company will not be able to meet demand.
  - Overly optimistic forecasts leave the company with too much plant, equipment and inventory.
  - If the company had financed an unnecessary expansion with debt, its problems would be compounded.

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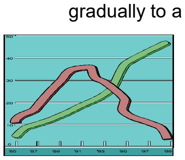
Growth Patterns

- A key assumption in all financial planning models is the period of high growth, and the pattern of growth during that period
  1. No high growth: Firm is already in stable growth.
  2. 2-stage: High growth for a period, then it will drop to the stable growth rate.
  3. 3-stage: High growth for a period, then it will decline gradually to a stable growth rate.



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Estimating Growth Rate

- Historical Growth?
  - Arithmetic vs. Geometric
  - Simple vs. Regression Models
  - Historical growth rates can be sensitive to the period used in the estimation.
- Sustainable Growth Rate: Steady rate at which a firm can grow.

  g = ROE × Retention ratio = ROE × (1- Payout ratio)
  - A commercial lender would want to compare a potential borrower's actual growth rate with their sustainable growth rate.
  - If the actual growth rate is much higher than the sustainable growth rate, the borrower runs the risk of "growing broke" and any lending must be viewed as a down payment on a much more comprehensive lending arrangement than just one round of financing.

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Determinants of Growth Patterns

- The growth rate of a firm is driven by its fundamentals – how much it reinvests and how high project returns are.
  1. Size of the firm
  2. Current growth rate
  3. Barriers to entry
  4. Differential advantages

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Financial Stmt. Forecasting Methods

1. Constant Sales Ratio Method: Assumes that
   a. each asset item must grow at the same rate as sales,
   b. designated liability accounts also grow at the same rate as sales, and
   c. the profit margin and dividend payout are constant.
2. Regression: Linear, curvilinear, or multiple regression
3. Time series forecasting: Moving averages, exponential smoothing, and ARIMA (Box-Jenkins)
4. Other computerized models

➔ The costs of using more refined techniques must be balanced against the benefits of increased accuracy.

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Beware

- Financial planning models do not indicate which financial polices are the best.
- They are as good as their underlying assumptions which often simplifies real economic conditions, and you can never fully account for unexpected events.
- Without adequate financial planning, the firm may find itself moving toward the future under zero visibility.

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Summary

- Financial planning forces the firm to think about and forecast the future.
- It involves
  - Building a corporate financial model,
  - Making different assumptions about future operating environment,
  - Constructing pro forma financial statements, and
  - Evaluating the financial implications of strategic plans.
- Financial planning is not an end itself. Rather, it is a process toward achieving corporate goals.

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