The UNIVERSITY of VERMONT

Notes – Chapter 9

Budgeting

I.   Nature of Budgeting
a.   About ½ of all accounting comes down to budgeting
b.   A budget is simply a plan expressed in quantitative terms.
c.   Has a temporal dimension – within what frame of time should the plan be executed?
d.   Describes how resources will be acquired and used
II. Types of Budget
a.   Strategic
     i.   Multi-year time horizon
     ii. Long-range
     iii. Where do we want to be…?
b.   Operational
     i.   Short-term
     ii. Monthly, Quarterly
     iii. Could even do a budget by the hour if it would help.
     iv. Will often have a continuous / rolling budget
          1.   After one month ends, another is added to the end
          2.   Budget always covers the same length of time that way.
c.   Zero-Based
     i.   Other types used data from the last period to determine the budget for the next period.
     ii. Zero-based demands that every dollar in the budget be justified every period. Nothing is included to start.
     iii. This technique is uncommon in industry, but is slightly more popular in government.
     iv. Industry has a lot of fixed costs that shouldn't be rationalized constantly.
     v.   It helps keep slack out of budgets, but it's VERY time-consuming.
III. Benefits
a.   Plan, Control, Coordinate, Allocate Resources, Evaluate Performance
b.   Planning vs. Control
     i.   The budget is the link between planning and control.
     ii. You first define your objectives, then define a plan (in the form of a budget) that will allow you to execute them.
     iii. Then, as you execute the plan you can refer to the budget to gauge your progress.
c.   Organizing for Budgeting
     i.   Differs from one firm to another.
     ii. Generally have a standing committee
     iii. Functional VPs are usually involved.
     iv. Control would usually be in charge of the overall process.
IV. Process
a.   Dictatorial Approach
     i.   President dictates some expectations without regard to information from individual departments.
     ii. Budget will then be expected to meet those expectations.
     iii. Becomes somewhat of a game of how to meet the expectations rather than a drive toward the best plan.
b.   Participative Budgeting
     i.   Let each department contribute their information and use that to derive the budget.
     ii. It's possible to be *too* participative though, where everybody focuses too much on their own needs.

     iii. Give everyone the opportunity to give input about their functional arenas.
  c. Good Budget Process Traits
     i. Participation makes people "buy in" more, so use it!
     ii. Political gamesmanship should be minimized.
     iii. The budget needs to reflect reality.
     iv. It needs to have utility
        1. Don't create an attractive shelf-filler
        2. People should be able to use it as a control device throughout the period.
  d. Bad Budget Process Traits
     i. If you have a dictated budget, nobody believes it – the wheels fall off.
     ii. Don't pad the numbers.
     iii. Don't make it unrealistic.
     iv. The budget shouldn't be a "club."
        1. If somebody misses a number, investigate and find a solution.
        2. Don't use it to threaten people, or you'll bring about padding next period!
  e. Activity Based Budgeting
     i. Reverse of Activity Based Costing
     ii. Start with forecasts of where you want to be.
     iii. Work upward to get starting product production schedules.
     iv. (ABC would start with production and work down toward the bottom line.)

V. Master Budget
  a. Components
     i. Define operational focus; use to derive budgeted financial statements.
     ii. Start with forecasts of demand (and thus sales).
     iii. Forecast the need for Direct Material, Direct Labor, Overhead, and SG&A based on the sales forecasts.
     iv. Identify assumptions that were made, risks, etc. That makes the data easier to interpret correctly later.
  b. Alternate Perspective
     i. Start with sales budget
     ii. That determines production budget
     iii. That, with EI Budget and Capital Budget, determines Direct Labor, Direct Material, Overhead, and SG&A.
     iv. Finally, those determine the cash budget.
     v. Everything ultimately flows into the financial statements.
  c. Forecasting Demand
     i. Everything starts with a demand forecast, so an accurate prediction here becomes the key to an accurate budget.
     ii. Start with what you did last period.
        1. May not be accurate for the future
        2. At least poses a good starting point.
     iii. Consider general state of the economy
     iv. Consider industry-specific factors
        1. Are there factors that will raise and lower demand in the industry independent of the rest of the economy?
        2. Ex: Telecom industry has taken a massive hit, so until there's improvement they need to weigh that into their forecasts.
  d. Consider political / legal events.
  e. What advertising promotions are planned?
  f. What can competitors and major customers be expected to do?
  g. Consider product introductions and discontinuations.

VI. Production Planning Approaches
  a. Once the basic budget is established, what orders need to be placed for materials, and when do they need to be placed?

b. MRP, MRP I, MRP II
  i. Most broadly used planning system today.
  ii. MRP
      1. Material Requirements Planning
      2. Developed circa 1960s
  iii. MRP I
      1. Material Resource Planning
      2. Includes labor
  iv. MRP II
      1. Material Resource Planning
      2. Adds financial functions
  v. In essence, it's a big simulation.
  vi. The Idea
      1. From the revenue plan, develop a production plan.
      2. That generates material requirements plan.
      3. (That much covers MRP)
      4. Then add capacity requirements and a realism check
          a. If we order a billion pounds of material, will the factory be able to handle it all?
          b. Space the material orders out not just for the ideal production schedule, but for a realistic one.
  vii. Questions Asked & Answered
      1. What will we make?
      2. What's required to do that?
      3. What do we already have?
      4. Based on all that, what do we need to order?
  viii. Components
      1. Master Production Schedule
          a. Accounts for existing backlog
          b. Adds forecasted demand
      2. That feeds into the MRP program
          a. Looks at Bills of Materials (BOMs)
          b. If it takes 1 B, 2 Cs, and 3 Ds to make an A, what do we need to order to make x As?
          c. So from the predicted demand, we can calculate the need for orders.
  ix. Considerations
      1. Software accounts for what materials are already on hand.
      2. It also accounts for sub-levels.
          a. If 1 B is needed to make an A, what's needed to make a B?
          b. Is it ordered as a unit, or is it made from other parts?
          c. Order whatever parts are needed for that too.
  x. Result is a schedule for purchase orders that gets material through the system at (hopefully) exactly the right pace.
  xi. The alternative is to plan on a quarterly basic, which is just plain inaccurate.
c. ERP
  i. Enterprise Resource Planning
  ii. A natural extension of MRP
  iii. Enterprise-wide accounting system that merges existing systems together.
  iv. Existing Systems
      1. Financial Accounting
      2. Purchase Orders
      3. Et cetera.
      4. (Consider the example of the military with its 157 independent accounting systems).
      5. Individual components can't naturally talk to each other.

      v. ERP mixes everything together so the data is all in one place.
      vi. That takes away the inefficiency associated with maintaining so many separate systems.
      vii. Who's Involved?
           1. Oracle, SAP, JD Edwards.
           2. Integration by EDX, IBM
      viii. Further integration with the supply chain is beginning to develop too, but it's still in the early stages.
      ix. Risks
           1. It's expensive! (as much as $100 million to implement)
           2. It's inflexible. Everything is to closely related to change the system.
               a. It's designed to have some flexibility, but within limits.
               b. The process can end up adapting to the software, instead of the software adapting to the process.
           3. The switchover is not necessarily easy.
               a. By its very nature, ERP cannot be implemented incrementally.
               b. Consider the Hershey example where the ERP system "crashed and burned" when first turned on.

VII. Push vs. Pull
  a. Push
      i. Driven by a forecast
      ii. Define a production plan to drive manufacturing.
      iii. Plan for x units, manufacture x units, and push them through the system.
      iv. If production exceeds demand, inventory accumulates unnecessarily.
      v. Postponement
           1. Wait until the last minute to start pushing through the system.
           2. It gives more flexibility.
           3. The problem is some components may have long lead times, and can't be pushed through if enough time isn't reserved.
      vi. Safety stock. Keep a buffer.
  b. Pull
      i. This is the solution of the forecasting problems of a push system.
      ii. Build to order, but with a twist.
      iii. Driven by demand; demand pulls inventory through the system.
      iv. Don't manufacture anything until a signal is received from down the line.
      v. Conbon system. (Toyota's example; conbon means car).
      vi. Not much inventory will be in the system at any one time.
      vii. The twist is building the capability into the system to respond to those pulls of demand.
  c. JIT
      i. Just in Time.
      ii. It's not a production planning system per se, but a philosophy about how to approach production.
      iii. Based on the pull system.
      iv. Chief concern is eliminating waste
           1. Biggest potential waste is inventory.
           2. Inventory can be a crutch.
           3. Drain it away to expose other problems (draining the pond example).
      v. Velocity refers to the ability to move product through the system.
      vi. Requirements.
           1. Small lot size. Be able to produce small amounts at once.
           2. Employee participation. Need to be involved in providing and reacting to information.
           3. Always work toward improvement (continuously)
           4. Quality Control

a. Need reliable material from suppliers.
b. Can't be wasting time doing quality inspections at the outset.
vii. Assumptions
1. Stability.
a. Need a stable production environment to implement JIT.
b. Perhaps unrealistic?
c. Shorter product life cycles may disrupt this.
2. Upstream supply chain must also use JIT
a. Firms with enough power can just force their suppliers to adopt JIT.
b. Or just deal with some inefficiency at that end of the production line and have some incoming buffer.
viii. JIT is an asymptotic ideal – you can never really get there completely.
ix. JIT vs MRP
1. MRP is built on forecasts, so is push-based.
2. Some hybridization is occurring, where JIT is used on the floor, but MRP is used from the office.
x. This creates some challenges for traditional managerial accounting.
1. Material can flow through the system faster than you can analyze the information associated with it.
2. That goes well beyond the scope of this course.
3. Be aware that many models we study are changing as a result of JIT and related topics.