Creating a Web-based Model for Financial Planning

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***Abstract*—Ever changing economic conditions are driving companies and businesses to become increasingly cautious about the future, creating the need to focus on improving flexibility to dynamically account for the change. This is in turn shifting focus away from budget accuracy, putting companies at risk of falling short of shareholder expectations. Hence giving rise to a need for efficient planning, budgeting, and forecasting for improved agility, accuracy, and corporate performance. This project seeks to comprehend the concepts of financial planning, budgeting and financial forecasting. Furthermore, his project seeks to present a simple web-based model to get rid of the errors and tedium of manual planning and forecasting.Through this model it would be viable for anyone to begin a business or make necessary changes to an already existing business with the least amount of effort.**

***Keywords*—financial planning, financial forecasting, budgeting, web-based model**

I. Introduction

Constantly changing monetary conditions are causing companies and businesses to become progressively cautious about the future, generating the need to emphasize on improving the flexibility to dynamically account for the change. This is in turn shifting focus away from budget exactitude, placing companies at jeopardy of falling short of shareholder expectations. Hence giving rise to a need for efficient planning, budgeting, and forecasting for improved agility, accuracy, and corporate performance.

A *financial plan* is a sequence of steps that are carried out, or objectives that are accomplished, that relate to an individual's or a business's financial undertakings. It evaluates the economics behind the strategy and operations. It is the process of attaining goals and objectives by means of the proper management of finances. The output from a financial plan takes the form of a budget.

Budgeting is the key to financial management. A *budget* is an organizational plan stated in terms of money. It affords a distinct comprehension of the past financial performance to help predict the future financial performance.

Extending former trends and fine-tuning for what is expected is a common approach to preparing a forecast. *Forecasting* is the process of making statements and recommendations about events whose actual outcomes (typically) have not yet been observed. It is a key constituent in determining future procedures, glitches, and opportunities. For the forecast to be as accurate as possible, all the known data must be up to date. In short, a financial forecast is the best guess of the financial outcome of a business, over a period of time.

Many a times the term forecasting is used interchangeably with planning but it must be noted that the two are distinctly different – Forecasting is predicting what the future *will* look like, whereas planning is predicting what the future *should* look like.

II. Objectives

Objectives of this paper include:

- To understand the various parameters of financial planning and forecasting and how they are affected by the current market trends and demands
- To create a prototype of a web-based model for financial planning and forecasting

III. financial planning

Financial planning is a continuous process of directing and allocating financial resources to meet strategic goals and objectives. It is the task of certifying how a business will manage to attain its strategic targets and destinations. Typically, an organization makes a Financial Plan as soon as the vision and targets have been set. A Financial Plan portrays all of the actions, assets, supplies and materials that are requested to actualize these goals, as well as the timelines included.

Financial planning can moreover be characterized as the course of action by which a business records and conveys its strategic goals in financial terms. A financial planning exercise ordinarily holds point by point plans and budgets, as well as analysis abilities to indicate how the targets are to be grasped.

IV. Business Plan

In business, a financial plan can refer to the three primary financial statements (namely, balance sheet, income statement, and cash flow statement) created within a business plan. It can be interpreted in two ways: by stage of development, and by target reader.

TABLE I. WAYS OF LOOKING AT A BUSINESS PLAN

Stage of Development	Existing business	Loan or Investment	Strategic Plan
	Start up	Loan Proposal	Operational Start-up
		External	Internal
		Target Reader	

V. Strategic Planning

Strategic planning is a formal procedure for building targets and goals over the long run. It includes improving a “mission comment” that captures why the organization exists and strategizes how the conglomeration could thrive in the future. Strategic objectives and corresponding goals are developed on the basis of a very exhaustive assessment of the organization and the external environment. Finally, strategic plans are implemented by developing an Operating or Action Plan. This includes a complete set of financial plans or budgets.

Financial Plans (Budgets) ⇒ Operating Plan ⇒ Strategic Plan

VI. Sales Forecast

In order to develop budgets, one must begin with a forecast of what energizes most of the financial activity; like sales. Hence, the first forecast to prepare is the ‘Sales Forecast’. Sales forecasts are generally based on the analysis of old data. An precise sale forecast is critical to the firm’s profitability

VII. Budgeting

The yield from financial planning takes the structure of budgets. The most broadly utilized type of budgets is Pro Forma or Budgeted Financial Statemets. The group for Budgeted Financial Statement is Detail Budgets. Detail Budgets combine sales forecasts, processing forecasts, and different evaluates in backing of the Financial Plan. Collectively, all of these budgets are known as the Master Budget.

A. *Kinds of Budgets*

- A survival budget - This is the minimum required in order for the organization or project to survive and do useful work.
- A guaranteed budget - This is based on the income guaranteed at the time the budget is planned.
- An optimal budget. - This covers what you would like to do if you can raise additional money. Once extra money comes in or is promised, it becomes part of your working budget.

B. *Techniques for Budget Calculation*

The two main techniques for budgeting are incremental budgeting and zero based budgeting.

- Incremental budgets are budgets in which the figures are based on those of the actual expenditure for the previous year, with a percentage added for an inflationary increase for the New Year**.**
- In zero based budgets, past figures are not used as the starting point. The budgeting process starts from “scratch” with the proposed activities for the year. Though this technique is extremely tedious it is detailed and accurate.

C. *Budgeted Financial Statements*

Based on the detail budgets prepared, the budgets can be finalized in the form of a Budgeted Income Statement. Once a Budgeted Income Statement has been drawn up, a Budgeted Balance Sheet can be chalked up from it. The Budgeted Balance Sheet will provide us with an estimate of how much external financing is required to support our estimated sales.

D. *Cash Budgets*

The Cash Budget is a good instance of short-term financial planning. It gauges the inflows and outflows of future cash. They are regularly combined with the Budgeted Balance Sheet. Previous forecasts can be used to aid in the preparation of a Cash Budget.

VIII. Financial Forecasting

Financial Forecasting is a process by which businesses conform to future anticipations dependent upon familiar true appearance bringing about the handling of a redesigned forecast record. This can (but makes a point not to regularly) incorporate acclimations to the budget. Forecasting, re-forecasting, or “rolling-forecasting” can happen numerous times in the midst of a budget period, and can span time from one financial period to the following.

Financial Forecasting is a nexus segment in confirming future operations, situations, and chances. It is a gauge of several key future financial results for a business – imagined income and liabilities. It is the handle of assessing future business exhibition (sales, costs, earnings). Financial forecasts are used to develop the projections of profit and loss statements, balance sheets and, most critically, the cash flow forecast.

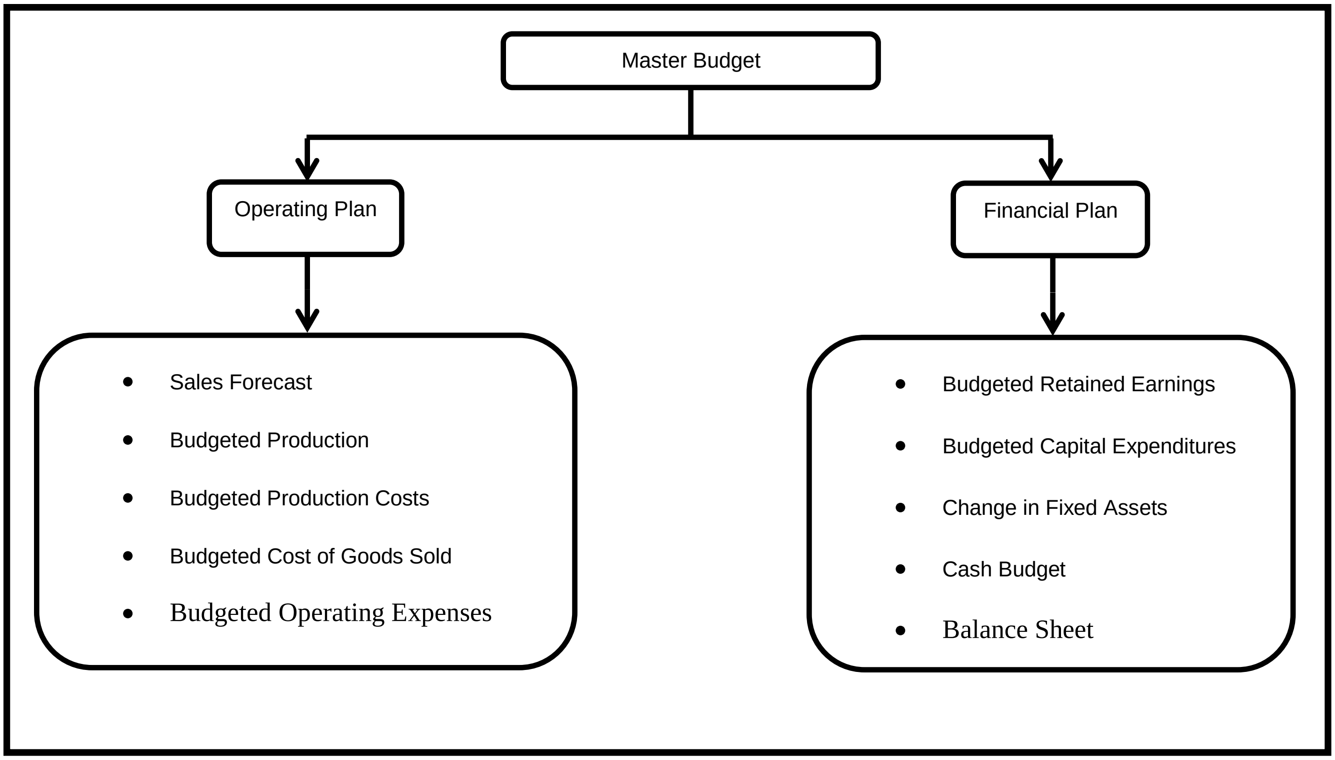

Figure 1. Budgeting in a Nutshell

A. *Fundamentals of Financial Forecasting*

- Forecasting is reliant on past connections and existing authentic data. An alteration in these relationships causes forecasting to become progressively imprecise.
- On the grounds that forecasting might be erroneous owing to lack of certainty, one should regard advancing numerous forecasts under contrasting situations. Each scenario can be assigned a probability and the expected forecast can be arrived at.
- Prolonged planning periods result in erroneous forecasts; in fact, they are directly proportional to each other. To expand reliability in forecasting, a more limited planning period should be recognized. The planning period is subject to how frequently existing plans should be assessed. This relies on stability in deals, business peril, financial conditions, and so forth.
- Forecasting of large inter-related items is more accurate than forecasting a specific itemized amount. When a large group of items are forecast together, errors within the group tend to cancel out. For example, an overall economic forecast will be more accurate than an industry specific forecast.[7]

B. *Techniques of Financial Forecasting*

Quantitative or qualitative methods, or a combination of both, can be used to develop forecasts.

- Qualitative method uses the judgment and opinions of knowledgeable people to predict outcomes. This is a more intuitive technique and is typically used when precise data is limited or hard to find. It depends on the following types of information:
  - *Judgmental* – Based on "good sense" or a decision made through discerning and evaluating.
  - *Consensus* – Based on collective opinion or general accord.
  - *Expert* – Based on the advice of an expert.

- Quantitative method applies a set of mathematical rules to a series of past data to predict outcomes. This technique is preferred when sufficient hard data is available. It includes any of the following types of information:
  - *Trend Analysis* – Compares historical information to forecast percentage changes.

- *Multiple Regression Analysis* – Uses chosen factors to determine the forecasted percentage change.
- *Time-Series Analysis* – Uses the average percentage change during specific time periods.

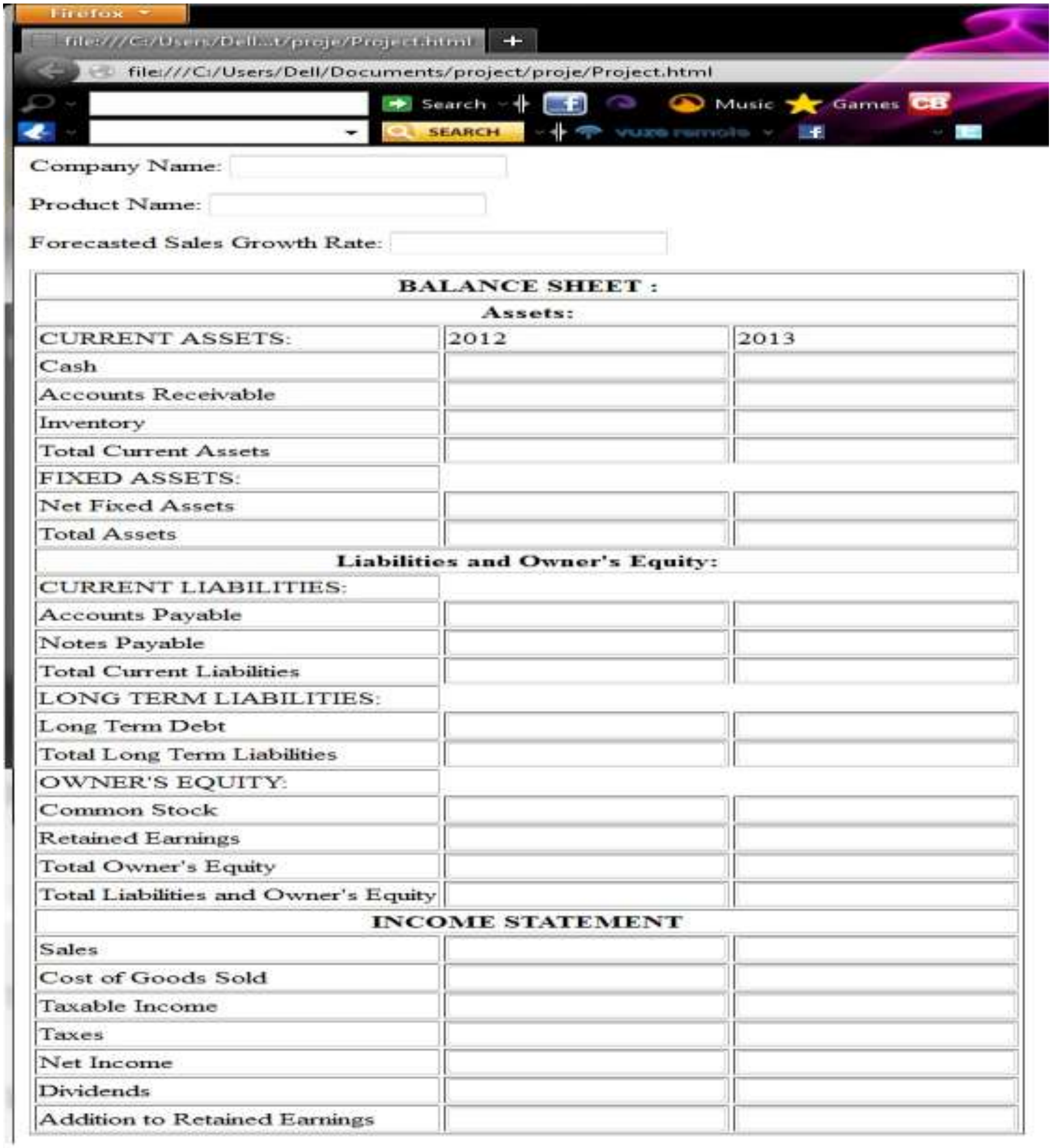

Figure 2. First Table (Empty)

IX. Test Scenario

By inputting the documented values to a few of the fields the user can draw up the complete budget using this web-based model. The user is provided with two tables. One which displays the budget without accounting for the *Additional Financing Needed(AFN)* and the other wherein the AFN is accounted for. The model is even capable of maintaining a database of the company records as required by the user. Based on the records saved it can further predict the *Forecasted Sales Growth* which in helps with the further calculations. However, if no prior records exist for a user then they must enter an approximated amount for the *Forecasted Sales Growth* themselves.

As the user enters the docuemtned values to a few of the required fields the first table begins calculations and displays the tentative or rough Budgeted Balance Sheet, potraying the current year's budget along with a rough forecast for the following year. The output provided by this table is dubbed rough because the calculations that underwent in the creation of this table do not account for the AFN. Based on the outputs and results of the first table the model goes on to calculate the AFN. The AFN calculated is then used by the model to perform further calculations and provide a second table. The second table is the final Budgeted Balanced Sheet, potraying the current year's budget along with the forecast for the following year. The output provided by this table is final as it accounts for any and all descrepancies that appear in the first table, by taking into consideration the AFN.

The fields that must be carefully documented and inputted by the user include:

- Company Name (Only if no record exists for the user)
- Product Name (Only if no record exists for the user)
- Forecasted Sales Growth (Only if no record exists for the user)
- Cash (for the current year)
- Accounts Recievable and Accounts Payable (both for the current year)
- Inventory (for the current year)
- Net Fixed Assets (for the current year)
- Notes Payable (for the current year)
- Long Term Debt (for the current year)
- Common Stock (for the current year)
- Retained Earnings (for the current year)
- Sales (for the current year)
- Cost of Goods Sold (for the current year)
- Taxes (for the current year)
- Dividends (for the current year)

Based on the values entered in the fields listed above the model will calculate the *Rough Budgeted Balance Sheet*, the *AFN* and the *Final Budgeted Balance Sheet* and display the desired output.

X. Conclusion

A sound financial plan is the vehicle which plainly states strategic business targets in financial terms. An overall-ready budget shapes the foundation for choice-making throughout the financial year. Nonetheless it is the forecast which permits the business to modify future anticipations on the basis of recent actual performance. No one discipline leads to success, but rather a consolidation of each of the three should be integrated to provide the visibility essential to align strategy with company performance.

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