

# **Toward a Framework of Financial Planning in New Venture Creation**

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## **Abstract**

Empirical studies across different industrial countries have shown a positive correlation between planning intensity and the success of a business venture. Nevertheless, financial planning is typically regarded as a major obstacle in the process of new venture creation. Analytical techniques for large-scale and international enterprises are not fully appropriate for dealing with start-up planning. However, the existing literature which focuses on business ventures lacks a clear theoretical approach.

In this article, we develop a coherent comprehensive framework that draws out interdependencies among the financial planning components, elements, and individual items. We also determine a starting point of the planning process, show the linkage to other functional areas of business planning, and emphasize the structure, interdependence, and adjustment of elements within an iterative planning process. This provides the firm founder with a fundamental decision-making instrument, which supports the evaluation and exploitation of entrepreneurial opportunities, as well as the formulation and implementation of the corporate strategy.

The framework comprises five financial planning elements concerning sales, related expenses, investments, capital requirements, and financing, which results in three components: planning of income statement, balance sheet, and cash flow statement. We demonstrate how the robustness of the financial plan can be tested by employing sensitivity analysis, scenario analysis, and simulation. The quantitative result of this process is a consistent financial plan. The components of our approach are fully consistent with generally accepted accounting principles (IAS and U.S. GAAP).

## **1. Introduction**

Financial planning is one of the most important but also difficult hurdles to overcome when planning a new venture. This topic has been discussed in several articles (Gumpert & Stancill, 1986; Hayen, 1982; Hergert, 1987; McGrath & MacMillan, 1995; Pettit & Singer, 1985; Wilkinson, 1987). Yet, there exists no generally accepted guideline for aligning financial planning with the creation process of a start-up. A coherent comprehensive framework which draws out interdependencies among the planning components, elements, and items is still lacking. The importance of planning in new venture creation is supported by recent research which has detected a positive correlation between planning intensity and the success of new

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ventures (Stewart, Watson, Carland, & Carland, 1999). Delmar and Shane (2003) argue that planning is a significant precursor to action in start-ups. There also exists a significant positive relationship between formal planning by small firms and financial performance (see, for example Bracker & Pearson, 1986; Schwenk & Shrader, 1993).

Our starting point is the framework suggested by Shane and Venkataraman (Shane & Venkataraman, 2000; Venkataraman, 1997). They view entrepreneurship as a nexus of enterprising individuals and valuable opportunities which constitute the process of existence, discovery, and exploitation of entrepreneurial opportunities. Once the opportunity is discovered, its exploitation requires the investment of limited resources. The expected value is determined by four groups of factors: the characteristics of the opportunity itself, psychological factors (such as motivation, core self-evaluation, cognitive properties, risk taking, extraversion), non-psychological factors (as for instance education, career experience, age, social position, opportunity cost) (Shane, 2003; Shane & Venkataraman, 2000), and the entrepreneur's personal characteristics. Together, this leads to significant deviations in the estimation of the expected value of an opportunity and the resulting financial planning process.

As this perspective reveals, the profitable exploitation of opportunities is related to the task of systematic planning and the calculation of costs and revenues. We define *financial planning* as the process of systematic and quantitative forecasting of all cash in and outflows relevant for the exploitation of entrepreneurial opportunities, in order to support financial decisions within the future planning period. The essence is based on the notional anticipation of future outcomes and the application of an appropriate decision making mechanism. Financial planning, viewed in this light, serves as a mechanism for dealing with uncertainties. Distinct from the definition of financial planning, the pro forma *financial plan*, composed of income statement, balance sheet, and cash flow statement, is the numerical result of the financial planning process.

## **2. Conceptual Framework of Financial Planning for Decision Making in New Venture Creation**

The financial planning process, regarded as a set of decision making instruments, includes three core components:

- (i) planning of the income statement,
- (ii) planning of the balance sheet,
- (iii) planning of the cash flow statement,

By definition, the numerical results of the financial planning process are three appropriate pro forma statements. The triad suggested here relies on the internationally accepted accounting principles. If the venture is financed with venture capital or considerable changes in equity are expected, a fourth component, viz. the "statement of stockholders' equity", would provide a better understanding of the equity events and transactions (refer to SFAC 5, IAS 1). A key supplementary instrument, the "footnotes", contains information on principles, assumptions, details, connections, schedules, and methods used to produce the components, elements, and items of the statements. This provides the groundwork for the planning process. The core components require the (monthly or periodically) planning of five elements, defined as financial planning elements:

- (i) planning of revenues;

- (ii) planning of related expenses;
- (iii) planning of investments (all nonrecurring investments);
- (iv) planning of capital requirements (both all nonrecurring investments and recurring expenses);
- (v) planning of financing.

Figure 1 serves as a comprehensive overview for the following discussion. Although the components of balance sheet and income statement planning are simplifications, they are for the present purpose.

### **3. Planning of Financial Elements**

A crucial issue arising with any conceptual framework is the determination of the starting point. This is of particular importance for our purposes, because of the connections between the elements. The planning of sales is a recommended starting point due to existence of interdependencies with other functional areas. An estimate of the sales volume and price can be extracted from the preceding market analysis and estimated market needs, as well as from a written justification of sales forecasting. In contrast to Gumpert and Stancill (1986), we suggest here that the estimation of sales should be divided into two parts: price and volume. Both are based on several factors, e.g. target market, market boundaries, forecasted development of the target market, customer pattern and taste, competitors, marketing mix. The relationship between these two variables characterizes market demand. How many products and services are customers willing to purchase at different price levels? How does this relationship change over time? Subsequently, the entrepreneur is able to calculate the most likely revenues from the expected sales volume and the target price, which provide the input data for further technical methods. Again, both sales volume and target price have to be supplemented with supporting information and detailed explanations in the footnotes, since this provides the basis for further planning elements and should, therefore, be reviewed continuously.

After assessing the planning revenues, the level of sales volume determines two planning elements. Related expenses starting with the cost of goods sold (labor, material, overhead, etc.; except depreciation) can be calculated. Furthermore, a derived production plan specifies the required level of capacity of production and service which ascertains the needs of nonrecurring investments. In order to obtain a clear picture separate schedules for the production plans are recommended. Based on the production level, the entrepreneur calculates the remaining expenses – general and administrative, selling, research and development, and other expenses – to complete the element “planning of expenses”. It is inappropriate to classify these items as percentages of sales. Instead, each item requires a detailed schedule (Gumpert & Stancill, 1986). This is particularly necessary for other expenses that should not be treated as a “pool for residual items”. After finishing the investment plan, the entrepreneur prepares a depreciation plan to include depreciation in cost of goods sold. Once more, all items should be supplemented with detailed information in the footnotes. At this point, however, we cannot yet specify the amount of interest and tax expenses of the income statement.

All cash outflows identified up to this point are aggregated in order to calculate the capital requirements which include nonrecurring investments and recurring expenses. Up to this point,

the revenues and expenses are accounted for in the income statement. Sales and expenses do not always result in cash flows, e.g. invoices are paid and payments are received from customers at a later point in time. Thus, the firm founder has to estimate the percentage of revenues and expenses that are collected this month, the next, and in later months. From this computation, accounts receivable and payable are extracted. For this, a separate schedule is appropriate. The next step is to plan financing. The objective of an optimal capital structure is to minimize the weighted average costs of capital. Based on the financing plan, interest expenses are given. This poses a challenge to the entrepreneur since the whole project depends significantly on the available funds. After finishing the financing and restatement of all other elements, the entrepreneur calculates interest expenses and includes this item in the income statement in order to determine taxes.

#### **4. Planning of the Income Statement**

Overall, the income statement planning is based on the following financial planning elements: planning of revenues, planning of related expenses, a depreciation plan extracted from the planning of investments, and interest payments calculated from the planning of financing. Depending on the opportunity, the simplified income statement of figure 1 can be exhibited in a more detailed plan. Deducting the cost of goods sold from sales results in gross margin. Subtracting further the operating expenses yields operating income. Operating expenses may be broken down into general and administrative expenses, selling expenses, research and development, as well as other expenses. In subsequent steps, the entrepreneur deducts interest and tax expenses. In addition, there are four different methods to account for revenues: completed contract, percentage-of-completion, installment, and cost recovery method. Revenues are included in both the income statement (revenues) and the balance sheet (account receivables), depending on the credit policy. This is important for the estimation of cash flows, because high credit sales, all else being equal, lead to later cash inflows and, thus, to greater capital requirements. When calculating expenses, fixed costs should be separated from variable costs. Consequently, a (cash flow) breakeven analysis can be conducted to find the point where revenues are high enough to cover cash outflows and maintain the level of operations.

#### **5. Planning of the Balance Sheet**

As in the income statement, items in the balance sheet depend on the nature of the entrepreneurial opportunity and should be consistent with accounting standards. Given the planning of investments, capital requirements, and financing, the entrepreneur generates the information necessary for the preparation of the projected balance sheet. Starting with the investment plan, the entrepreneur determines the amount of fixed assets (property, plant, and equipment) required for the production of the desired level of output. This represents the nonrecurring investments. In case the contractor of the PP&E offers financing, this would be recognized in the financing plan. Sources of financing which are particularly interesting for new ventures, due to limited funds, are leases or so called off-balance-sheet financing

As already discussed in section 3, the entrepreneur calculates a separate schedule of what percentage of sales is collected in each month. Accounts receivable and payable are stated in the balance sheet. It is often the case that new companies will not receive credit in order to purchase

raw material, which ultimately requires more committed funds. A more sophisticated task is determining inventories before they are recognized as cost of goods sold. For example, the inventory of a manufacturing company consists of raw material, work-in-process, and finished-goods, whereas a retailer or wholesaler shows unsold goods as merchandise inventory in the balance sheet. They are calculated separately in accordance with the production schedule. In addition, three alternative accounting methods are applicable for inventory and cost of goods sold: last-in, first-out; first-in, first-out; and average cost. For simplification, the average cost method is recommended. Moreover, a fast growing venture must consider a higher requirement of working capital, which will probably not be able to finance all of the growth from internal funds. The planning and management of account receivables, payables, and inventory is a critical task for start-ups. After determining the capital requirements, the most crucial element is the planning of financing which specifies the source of funds available to the enterprise. Typically, the start-up faces considerable difficulties in acquiring funds. As a result, the obtained capital actually narrows not only the other planning elements but also the entire corporate strategy.

## **6. Planning of the Cash Flow Statement**

As figure 1 illustrates, cash flow planning is derived from all other planning components and elements. It strives to identify the optimal amount of cash flows. Most important is maintaining liquidity, since unprofitable firms with positive cash flows may still operate, but profitable ventures with a lack of cash will become insolvent. In addition, a surplus of liquidity is undesirable because this would counteract profitability. International accounting standards provide a structural classification of cash flows in terms of operating, investing, and financing activities. This separation is recommended for business ventures as well, because the amount of cash flows contains little information by itself, whereas the categorization is informative and consistent with generally accepted accounting principles (for an opposing view, see Gumpert & Stancill, 1986; Hayen, 1982). After planning cash flows from operating activities (CFO), available cash flows for investment (CFI) and financing (CFF) are determined. For strict accounting purposes, SFAS 95 and IAS 7 govern the preparation of cash flow statements and permit both the direct and indirect method. However, the Financial Accounting Standards Board and the International Accounting Standards Board encourage use of the direct method (SFAS 95.27, IAS 7.19). Nevertheless, the most widely-used is the indirect method.

## **7. Applied Technical Methods**

Since financial planning is future oriented, all future cash flows have to be estimated in advance: a process that can be accomplished by a variety of forecasting methods. The data reliability heavily depends on the accuracy of the forecasting process. Methods generally fall into three major groups:

- (i) Judgmental methods are non-quantitative, based on individual experience and intuition. Forecasted values are ascertained by individual and group decision making processes.
- (ii) In contrast, extrapolation or series methods are quantitative in nature and typically based on observations made in the past in order to forecast future values. Thus, by investigating past data, we search for underlying patterns and relationships in order to extrapolate historical patterns into future forecasts.
- (iii) Causal methods are based on logical cause and effect relationships by means of linear and non-linear regressions.

Judgmental methods are generally applicable to new venture creation but their judgmental diversity results in a lack of accuracy and is subject to biases, e.g. optimism and overconfidence (Kahneman, Tversky, & Slovic, 1982). However, judgmental methods can be improved considerably by integrating expert opinions using methods for forecasting from “intentions data” (MacGregor, 2001; Morwitz, 2001; Rowe & Wright, 2001). The second approach is inappropriate in the context of startup financing since historical values are unavailable. Furthermore, causal methods can only be employed when the logical cause and effect relationships are not based on past data. In case the null hypothesis of the cause and effect relationship can be approved, the forecasted value will occur at a specific confidence level. In general, there is a significant difference between existing firms and new ventures: in the latter case, input data from past events are not available for the planning process, and there is no controlling system to rely on. Supplemental comments on assumed forecasting relationships are especially imperative for causal methods.

## **8. Decision Making**

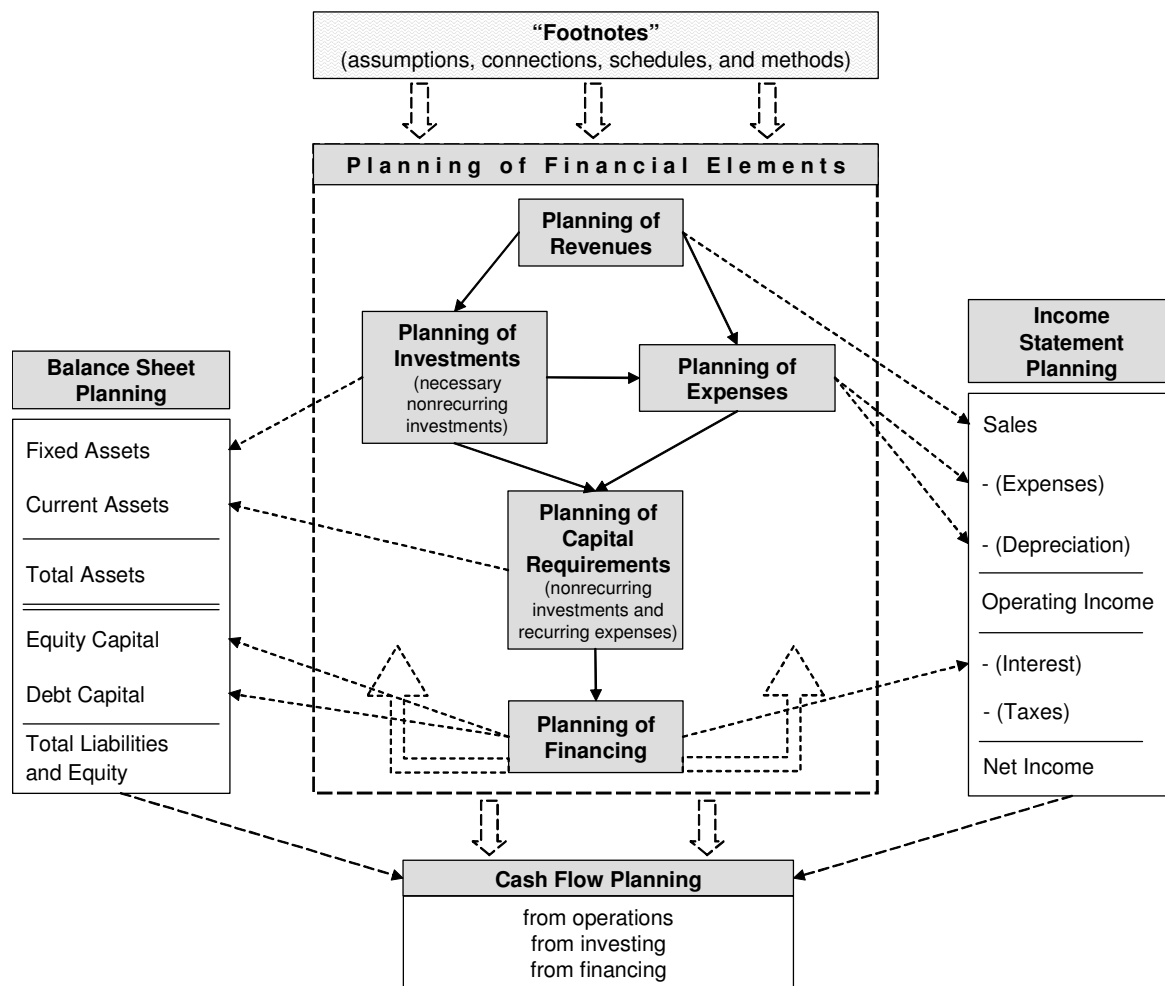
The issue that needs to be addressed is which approach should guide the entrepreneur in her future decisions. Besides factors such as intuition, feeling, and experience, other important methods include systematic planning and forecasting. Relying on intuition (Allinson, Chell, & Hayes, 2000; Bird, 1988; Bird & Jelinek, 1988) contradicts the fact that planning takes place before taking human action (Locke, Latham, Smith, & Wood, 1990). Simply speaking, the entrepreneur can examine her fundamental assumptions and estimations before investing in tangible or intangible assets. By forecasting the timing of cash flows, the firm founder anticipates bottlenecks and financial slacks which enhance the allocation of scarce resources. A decision made today creates a set of subsequent decisions and alternatives tomorrow (Hammond, Keeney, & Raiffa, 2002). The framework supports the firm founder to turn her vision and goals into concrete stepwise activities as well as to make decisions faster based on numerical values than with slower trial-and-error learning (Delmar & Shane, 2003). Planning also reduces uncertainties in the process of decision making. Castrogiovanni (1996) defines this as a direct learning benefit by means of “proactive learning” which is generally incorporated in the planning process. The firm founder attempts to identify potential scenarios and causal relationships. Thus, uncertainty may stimulate planning and planning results in “proactive learning” (Castrogiovanni, 1996). Consequently, nascent entrepreneurs should conduct their own planning process to accomplish the most learning benefits (Castrogiovanni, 1996).

## **9. Conclusion**

In this article, we develop a coherent, theoretically grounded comprehensive framework for financial planning in new venture creation. Before starting with any quantitative projection, the entrepreneur gathers and analyses information concerning the new venture, conducts a thorough market analysis to specify market needs, evaluate relevant external threats and opportunities, as well as internal strength and weaknesses. This leads to assumptions and connections which build up the foundation of the whole financial planning process. Thus, the sales volume and price can be extracted from the preceding analyses and written justification. The revenues determines related expenses and a derived production plan specifies the needs of capital investments. By

aggregation, the entrepreneur calculates capital requirements. The next step is the planning of financing which initiates an adjustment mechanism due to financial “bottlenecks” that leads to an iterative planning process. The described process defines the five financial planning elements: planning of revenues, planning of related expenses, planning of investments, planning of capital requirements (all nonrecurring investments and recurring expenses), and planning of financing. Finally, the robustness of the financial plan can be tested by employing sensitivity analysis, scenario analysis, and simulation. These methods are applied to financial planning elements and components. Because all cash flows have to be estimated in advance, appropriate forecasting methods must be employed.

**Figure 1: Conceptual framework of financial planning in new venture creation**



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