

Financial Portfolio Strategy: An application to the College of SouthWest

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## Financial Portfolio Strategy

Creating value in the organization is the cornerstone of business activity. Value-creation is a concept that has evolved for the past fifty years, stimulating the generation of theories, techniques, models and institutions (Slater and Zwirlein, 1996). Financial markets have developed in response to the dynamic corporate activity, providing different options of financing and investment.

Financial decision-making at the executive level becomes critical in the creation of wealth in the organization, and the financial strategies designed by the Top Management Team (TMT) are expected to seek beyond profit maximization (Lankau et al, 2007; Myers, 2001). However, there are a large number of endogenous and exogenous factors that affect the performance of the firm that need to be taken into consideration when defining those strategies (Dagiliene, 2007).

This document is based on the review of an extensive body of theory around value creation and financial strategies. This research uses the work of Bhalla (2004), Dagiliene (2007) and Slater and Zwirlein (1996) for the preparation of the portfolio; and the works of Jensen (2001), Myers (2004), Fama and French (1965), Miller and Modigliani (1958), and Merton (2004) for the pertinent theories. To set the background of the study, the researcher includes brief information about the institution at the beginning of the document, and an elaboration of the strategies and specific portfolio in the last section of this paper.

The purpose of this research is to determine an optimal portfolio that responds to financial strategies defined by a higher-education institution for the upcoming year, based on assumptions that will be explained in the body of the document.

### Background of the institution

For the purposes of this document the institution subject to analysis is the College of Southwest, a higher-educations institution with the following characteristics:

1. State college founded 10 years ago
2. Industry: Higher-education, four-year degree offerings
3. Enrollment: 10,000 students with projections of growth of 20% annually for the next 5 years
4. Faculty members: 500
5. A large infusion of free cash flow for \$10 M has been obtained as proceeds of stock operations

The core values of College of Southwest CoS are the drivers of the organization and they are summarized in the iTeach philosophy that stands for innovation, teaching, economic development, assessment, customer service and heritage. All the members of CoS perform their activities as faculty, administrative staff, and administrative faculty under the leadership of the President and the Provost of the college. Each one of the four schools: Education, Liberal Arts, Nursing and Applied Sciences have a Dean and departmental Chairs. Some four-degree programs are hosted by the existing schools but are autonomous degree-grantors: Business Program and Visual Media Program. The culture of the organization responds to the REMM theory for the resourceful character of the Top management Team (Jensen, 2001).

### The Creation of Value

The value of a firm has been traditionally associated with earnings and size of the assets, in other words, with an accounting-valuation of the firm (Stewart, 2001) rather than the overall

performance of the organization. The germinal theory of corporate finance proposed by Miller and Modigliani (1958) argues that “the value of a firm is independent of its capital structure” (Miller, 2001) and that leverage increases stockholders’ value; Kang, Morris, and Snell (2007) define value as the difference between the benefits and the costs of a business activity.

Every organization has value systems that relate to their organizational culture (Hofstede, 1985), expressed in knowledge resources that set the organization apart from competitors (Haas & Hansen, 2001). A successful business strategy is one that focuses on satisfying the needs of all the stakeholders of the organization: shareholders, customers, suppliers, employees, vendors and the general public who become –at the same time- “valuation subjects” of the business decisions firms make based on a strategic plan (Dagiliene, 2007).

Managers and practitioners of the finance fields use different valuation methods depending on pre-set goals or aims. Dagiliene (2007) suggests a classification of methods in two based on valuation aims: Investment-aimed and decision-making aims. If the aim is to value an investment opportunity, acquisition or new project they may use Economic Value Added EVA, Discounted Cash Flows DCF (Net Present Value, Internal rate of return, Adjusted present Value), payback criterion, as the most frequent (Dagiliene, 2007; Bhalla, 2004; Brounen et al, 2004).

If the aim of the valuation is measuring effectiveness of a strategy or performance the use of accounting-like indicators, such as growth, margins, market share, EBITDA, dividend/earnings is the most frequent (Bhalla, 2004). However, these methods tend to measure the performance of managers based on budgetary goals that are unrelated to shareholder value. What is even worse, it seems that managers have difficulty in measuring the actual value that

they create, because of the inconsistency of the methods used. (Jensen and Meckling, 2001; Myers, 2001).

*EVA as generator of value in the organization*

EVA® is an alternative for valuation, decision-making, determination of shareholders' value and performance evaluation an even stock price valuation (Hatfield, 2002; Stern, Stewart III and Chew 1996). It measures the true economic performance of a firm, "the amount by which earnings exceed or fall of the required minimum rate of return that shareholders and lenders could get by investing in other securities of comparable risk" (Bhalla, 2004). A simple formula expresses EVA (Hatfield, 2002)

$$EVA = NOPAT - CC \quad (1)$$

Where:

NOPAT= Net operating profit after taxes

CC= cost of capital x economic capital (opportunity cost)

If EVA is positive, the firm is generating wealth; however, if it is negative, it does not mean that a firm should stop operations, it just means that there was a misallocation of resources in the past that needs to be resolved now (Bhalla, 2007, p. 23).

While some authors deem necessary the use of EVA as a substitute for the other accounting measures (Bhalla, 2004; Stern, Stewart III and Chew 1996), others argue that EVA is a financially inoperable fiction in inefficient markets (Chen & Dodd, 2002). What is common to all the theorists is that the application of EVA requires the involvement and change of culture of all the members of the organization.

EVA facilitates the alignment of finance theories with the goal of maximization of wealth of shareholders in the organization. When managers are evaluated for their efforts in increasing

EVA the firms obtain two results at once: Maximization of shareholders' wealth and increase of the value of the firm in the market (Bhalla, 2007, p. 20)

### Financial Strategy and Strategic Planning

The creation of value is a core goal of the corporate strategy that is expressed through an efficient structure of financial strategies. There are three major interrelated decisions that are part of this structure: Investment decisions, financing decisions and dividend decisions (Slater and Zwirleini, 1996).

Investment decisions relate to the valuation of the best opportunities of investments of corporate capital, e.g. starting a new project, expanding markets or products, investing in research and development and marketing, acquiring and/or merging with other firms. Financing decisions have to do with the definition of a target structure of equity/debt, e.g. raising funds by issuing stock, issuing bonds, issuing convertibles, taking a bank loan, or using own *free cash flow* as funding. Dividend decisions have to do with the policy to efficiently distribute earnings to the shareholders, e.g. policies for dividend pay-outs, dividends in arrears, or accumulation of retained earnings (Slater & Zwirlein, 2004)

The interaction among these three decisions occurs naturally. A firm that wants to increase shareholder's value will have to make the investment decision of expanding, maintaining its actual share of the market or contracting. In any of these cases the firm will require funding, whether external or internal, which in turn would affect the dividend policy, if the firm decides to use internal funding instead of debt (Slater & Zwirlein, 2004).

Myers (2004) cautions practitioners in the financial fields about the proper application of finance theories in the design of financial strategies. The best option to bridge the gap between

theory and practice would be to align the three decisions to the availability of investment opportunities (Slater and Zwirlein, 2004).

### *A Model of Financial Strategies*

Based on the premise that investment decisions drive both financing and dividend decisions in a financial strategy structure, Slater and Zwirlein (2004) propose a simple matrix of seven financial archetypes that explain all the possible combinations of firms clustered by their high, medium, low and inexistent growth opportunities. (See table 1).

Slater and Zwirlein (2004) conducted this study to explain the uses of finance theory in financial strategy decisions at the corporate level, with firms ranked in the S&P 400 Industrial Index for 1986 through 1989. Evidence of the effect of different strategies such as high leverage, stock offerings, use of internal resources, on shareholder value was the main contribution of this study. The researcher will use this model as the basis of the portfolio strategy for the higher-education institution subject of this study.

### Application of the Financial Strategy Cluster Model

This section will apply the Financial Strategy Cluster Model (Slater & Zwirlein, 2004) in the preparation of a portfolio strategy that aligns financing and investing decisions to increase the wealth of shareholders, based on the concepts studied in finance theory.

#### *Investing Decisions*

The recruitment efforts have been targeted to match the demographics of the city and state, accounting for more than 22% of Hispanic population and fairly similar percentage of Black and Native American populations (Bureau of Labor Statistics, 2007).

The major project handled by CoS is the construction of a new campus in the suburbs of a large metropolis. The size of the new campus is 500 acres and is designed with an urban

concept that includes not only classrooms and dormitories, but also retail shops and public services in a district-type village format conceived as a project of interest for the community.

*Table 1*  
*Characteristics of Financial Strategy Clusters*

Cluster	Investment decisions	Financing decisions	Dividend decisions
1. Stable maintainers	Stable portfolio of business opportunities. Low spending in R&D	Intensive use of Free Cash Flow FCF (Jensen, 2001) Low need of capital Reduced agency costs	High dividend pay-out
2. Wasteful agents	High investment in current assets Low capital intensity Poor management in the short-term	Low use of debt, only necessary to boost ROE High use of current assets for funding Waste of Shareholders' resources	Relatively low dividend-payout
3. Financial risk avoiders	Aggressive investment in R&D and current assets High ROA but poor performance in the market	No use of debt Use of cash generated internally High agency costs Candidate to takeover	High dividend pay-out to avoid monitoring
4. Textbook managers	Low rate of investment Restructuring asset base Reduction capital intensity	Use of retained earnings Pecking-order theory High ROE for shareholders	Low dividend payout
5. Leverage Strategists	Modest investments and expenditures in R&D	High levels of debts (Miller and Modigliani, 1958) Low ROA and average ROE	Low dividend pay-out
6. Equity strategists	Substantial investment in current assets, fixed assets and R&D High risk (high Beta)	Funding from external and internal equity funds No debt is used High ROA and low ROE and low market return	Low dividend pay-out Agents seem to be in control over shareholders
7. Sinking ships	No growth, low profitability	Financial distress	High dividend pay-out

Poor investment decisions in the past	Substantial amounts of debts	but flat
Low reinvestment and low R&D	Low ROE	Policy misleading given low profitability

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Source: Slater and Zwirlein (2004)

### *Financing decisions*

Funding for the project comes from the Legislature –through a special formula - from students’ tuitions, auto-financing and endowment funds. The funds allocated by the Legislature respond to the performance of the college in the last two years in faculty recruitment, expansion of facilities and enrollment. College of Southwest has met the enrollment target every year since its creation, and has foreseen meeting the goals for this next semester.

The department of College Relations is in charge of attracting donors and endowments to finance the growth of CoS but the preparation of the biennial budget is in charge of a committee chaired by the Vice-president of Finance and comprised of faculty members, students and staff.

### *Dividend decisions*

Given that College of Southwest is not a for-profit organization there is not a formal dividend pay-out policy in place, however, the number of stakeholders or *valuation subjects* (Dagiliene, 2007) is significant, including the city itself, the tax-payers, students, faculty members, employees, and the community at large.

### *The Financial Problem*

The construction of the new campus requires creativity in the generation of funds not only from the Legislature, but through enrollment, attraction of new endowment funds, and participation in profitable investment decisions.

The definition of a portfolio strategy that allocates the infusion of ten million dollars into optimal investment opportunities, aligning the investment decision of construction of the new

campus with proper funding and increased shareholder value is the problem addressed by this paper.

#### *Identification of the Slater and Zwirlein's Cluster*

Using the characteristics noted above, College of Southwest meets some of the characteristics of Cluster 4 *textbook managers* and Cluster 6 *equity strategists*, with some gray areas regarding investing decisions.

From Cluster 4 Textbook managers: CoS funds investment needs through retained earnings; shows good profitability, maintains low dividend payout and uses debt only in minimal amounts. High ROE.

From Cluster 6 Equity Strategists: CoS shows substantial investment in current assets (working capital), fixed assets (new campus project) and R&D. Funding is obtained from external and internal equity funds, not debt. High ROA.

The overlapping is expected from the model, as Slater and Zwirlein (2004) suggested, these *archetypes* try to resemble the theory. In terms of design these results were extracted from cross-sectional data but further studies may be conducted to relate the clusters with changes in time, industry, stage of development, accounting methods and performance in the market (p. 264).

#### Structure of the CoS Portfolio Strategy

The portfolio designed for CoS has to respond to unique financing needs and be consistent with investment decisions already made. The construction of the new campus will take approximately five years and the influx of ten million dollars obtained this year from stock operations will have to align to these a priori decisions.

The College of Southwest has to also respond to a different set of stakeholders than corporations do; therefore investment portfolios are expected to be consistent with political correctness, avoiding any linkage with gambling, alcohol or tobacco industries.

Given the financial characteristics of cluster 4 and 6, and the pecking-order model followed by College of Southwest in the past, it follows that there is a high likelihood that the use of these ten million dollars will be allocated to sustain the new campus project. The investment portfolio should then contain a *laddering* strategy with allocations of funds in the short, medium and long term, to ensure liquidity, average returns and low risk (Mendez, 2006).

The role of a broker in the construction of the portfolio will ensure that CoS achieves an optimal combination of securities: stocks, bonds, convertibles and commercial papers (Smith, 2001; James and Wier, 2001). The broker will provide an asset valuation perspective that may respond to the three-factor model of Fama and French (1992, 1993) based on the value of assets in place and growth options”.

#### *Balancing return and risk*

In general the Fama and French model (1992, 1993) is considered a benchmark for long-run stock performance studies, where size and book-to-market ratio proxy for time-varying systematic risk. In a more contemporary approach, the volatility of bonds has been modeled with purposes of forecasting based on a benchmark of ten-year US Treasury bonds (Dunis & Francis, 2003, p. 198). The shortcoming of the investment in bonds is the fluctuation of interest rates that affects its price; this factor may increase the volatility of bonds and therefore increase the effect on prices (Dunis & Francis, 2003, p. 198).

Converts are another instrument that may be considered in the portfolio. These are a hybrid between bonds and stock, with the constant yield of interest rate, but the possibility to

convert them to equity (Myers, 2001). Convertibles also have the benefit of reducing agency costs, information costs and solving differences of opinions about the risk of the corporate activities. Theory seems to suggest that in order to protecting from risk, a natural recommendation is to replace stocks by bonds as a less volatile investment instrument (Arshanapalli et al, 2006).

Based on the considerations of return and risk, the structure of financing strategies of CoS and the responsibility to generate value for the stakeholders of the organization, a suggested structure of portfolio should correspond to the following (See table 2).

*Table 2*

*Simulated Portfolio Allocation*

Type of investment	Year 1
Stock investments	20%
Blended investments (converts)	40%
Bond investments	20%
Short-term investments	20%

Economic Outlook and Impact on Financial Planning

A good monitoring of risk and volatility will allow for reallocations of products, reallocation of maturities, and other modifications to the portfolio. The budget committee at CoS must require from the broker a report about volatility that reflects the impact of macroeconomic variables in the fluctuation of securities. Empirical evidence found by Arshanapalli et al (2006) suggests that bond volatility responds more closely to announcements of PPI (Producer's price index) and employment rates while stocks respond more closely to announcements of PPI, but the effect of the changes is offset immediately after the announcement.

For College of Southwest political issues will also be part of the macro-social factors that will affect the structure of the portfolio of investments, source of funds and operations.

### Conclusions

If markets behaved according to Fama (1965) theory of market efficiency the selection among investment decisions, financing decisions and dividend decisions would be rather simple; however, markets are not necessarily efficient and information is asymmetric (Brounen et al, 2004) therefore financial strategies are the result of a set of different decisions that may change with the age of the firm, the experience of the firm in the market, the experience of the top management team, the strategic goals and the core values of the organization.

This document has discussed the main finance theories that have influenced the practice of top management teams in corporations to extrapolate the findings to the definition of a portfolio strategy that sustains the growth of a higher-education institution in the Southwest. Considerations of risk and return, as well as the nature of non-for-profit organization of this institution impose additional restrictions to the construction of the portfolio. However, the profitability of the firm for the last ten years ensures that growth will continue to be supported by self-funding and Legislature allocation of resources.

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