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Structuring Corporate Financial Policy: Diagnosis of Problems and Evaluation of Strategies

This note outlines a diagnostic and prescriptive way of thinking about corporate financial policy. Successful diagnosis and prescription depend heavily on thoughtful creativity and careful judgment, so the note presents no cookie-cutter solutions. Rather, it discusses the elements of good *process* and offers three basic stages in that process:

Description: The ability to describe a firm's financial policies (which have been chosen either explicitly or by default) is an essential foundation of diagnosis and prescription. Part I of this note defines "financial structure" and discusses the design elements by which a senior financial officer must make choices. This section illustrates the complexity of a firm's financial policies.

Diagnosis: You develop a financial policy relative to the world around you, represented by three "benchmark" perspectives. You compare the financial policy for your firm to the benchmarks and look for opportunities for improvement. Part II of this note is an overview of three benchmarks by which you can diagnose problems and opportunities: (1) the expectations of investors, (2) the policies and behavior of competitors, and (3) the internal goals and motivations of corporate management itself. Other perspectives may also exist. Parts III, IV, and V discuss in detail the estimation and application of the three benchmarks. These sections emphasize artful homework and economy of effort by focusing on key considerations, questions, and information. The goal is to derive insights unique to each benchmark, rather than to churn data endlessly.

Prescription: Action recommendations should spring from the insights gained in description and diagnosis. Rarely, however, do unique solutions or ideas exist; rather, the typical chief financial officer (CFO) must have a *view* about competing suggestions. Part VI addresses the task of comparing competing proposals. Part VII presents the conclusion.

Part I: Identifying Corporate Financial Policy: The Elements of Its Design

> *You can observe a lot just by watching.*
> —Yogi Berra

The first task for financial advisers and decision makers is to understand the firm's *current* financial policy. Doing so is a necessary foundation for diagnosing problems and prescribing remedies. This section presents an approach for identifying the firm's financial policy, based on a careful analysis of the *tactics* by which that policy is implemented.

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The concept of corporate financial policy

The notion that firms *have* a distinct financial policy is startling to some analysts and executives. Occasionally, a CFO will say, "All I do is get the best deal I can whenever we need funds." Almost no CFO would admit otherwise. In all probability, however, the firm has a more substantive policy than the CFO admits to. Even a management style of myopia or opportunism is, after all, a policy.

Some executives will argue that calling financing a "policy" is too fancy. They say that financing is reactive: it happens after all investment and operational decisions have been made. How can reaction be a policy? At other times, one hears an executive say, "Our financial policy is simple." Attempts to characterize a financial structure as reactive or simplistic overlook the considerable richness of choice that confronts the financial manager.

Finally, some analysts make the mistake of "one-size-fits-all" thinking; that is, they assume that financial policy is mainly driven by the economics of a certain industry, and they overlook the firm-specific nature of financial policy. Firms in the same, well-defined industry can have very different financial policies. The reason is that financial policy is a matter of *managerial choice.*

"Corporate financial policy" is a set of broad *guidelines* or a preferred *style* to guide the raising of capital and the distribution of value. Policies should be set to support the mission and strategy of the firm. As the environment changes, policies should adapt.

The analyst of financial policy must come to terms with its ambiguity. Policies are guidelines; they are imprecise. Policies are products of managerial choice rather than the dictates of an economic model. Policies change over time. Nevertheless, the framework in this note can help the analyst define a firm's corporate financial policy with enough focus to identify potential problems, prescribe remedies, and make decisions.

The elements of financial policy

Every financial structure reveals underlying financial policies through the following seven elements of financial-structure design:[1]

1. *Mix* of classes of capital (such as debt versus equity, or common stock versus retained earnings): *How heavily does the firm rely on different classes of capital? Is the reliance on debt reasonable in light of the risks the firm faces and the nature of its industry and technology?* Mix may be analyzed through capitalization ratios, debt-service coverage ratios, and the firm's sources-and-uses-of-funds statement (where the analyst should look for the origins of the new additions to capital in the recent past). Many firms exhibit a pecking order of financing: they seek to fulfill their funding needs through the retention of profits, then through debt, and, finally, through the issuance of new shares. *Does the firm observe a particular pecking order in its acquisition of new capital?*
2. *Maturity structure of the firm's capital*: To describe the choices made about the maturity of outstanding securities is to be able to infer the judgments the firm made about its priorities—for example, future financing requirements and opportunities or relative preference for refinancing risk[2] versus

[1] For economy, this note will restrict its scope to these seven items. One can, however, imagine dimensions other than the ones listed here.

[2] Refinancing risk exists where the life of the firm's assets is *more* than the life of the firm's liabilities. In other words, the firm will need to replace (or "roll over") the capital originally obtained to buy the asset. The refinancing risk is the chance that the firm will be unable to obtain funds on advantageous terms (or at all) at the rollover date.

reinvestment risk.[3] A risk-neutral position with respect to maturity would be where the life of the firm's assets equals the life of the firm's liabilities. Most firms accept an inequality in one direction or the other. This might be due to ignorance or to sophistication: managers might have a strong internal "view" about their ability to reinvest or refinance. Ultimately, we want managers to maximize value, not minimize risk. The absence of a perfect maturity hedge might reflect managers' better-informed bets about the future of the firm and markets. Measuring the maturity structure of the firm's capital can yield insights into the bets that the firm's managers are apparently making. The standard measures of maturity are term to maturity, average life, and duration. *Are the lives of the firm's assets and liabilities roughly matched? If not, what gamble is the firm taking (i.e., is it showing an appetite for refunding risk or interest-rate risk)?*

3. *Basis of the firm's coupon and dividend payments*: In simplest terms, basis addresses the firm's preference for fixed or floating rates of payment and is a useful tool in fathoming management's judgment regarding the future course of interest rates. Interest-rate derivatives provide the financial officer with choices conditioned by caps, floors, and other structured options. Understanding management's basis choices can reveal some of the fundamental bets management is placing, even when it has decided to "do nothing." *What is the firm's relative preference for fixed or floating interest rates? Are the firm's operating returns fixed or floating?*

4. *Currency* addresses the global aspect of a firm's financial opportunities. These opportunities are expressed in two ways: (a) management of the firm's exposure to fluctuation in foreign exchange rate, and (b) exploitation of unusual financing possibilities in global capital markets. Exchange rate exposure arises when a firm earns income (or pays expenses) in a variety of currencies. Whether and how a firm hedges this exposure can reveal the "bets" that management is making regarding the future movement of exchange rates and the future currency mix of the firm's cash flows. The financial policy analyst should look for foreign-denominated securities in the firm's capital and for swap, option, futures, and forward contracts—all of which can be used to manage the firm's foreign-exchange exposure. The other way that currency matters to the financial policy analyst is as an indication of management's willingness to source its capital "offshore." This is an indication of sophistication and of having a view about the parity of exchange rates with security returns around the world. In a perfectly integrated global capital market, the theory of interest rate parity would posit the futility of finding bargain financing offshore. But global capital markets are not perfectly integrated, and interest rate parity rarely holds true everywhere. Experience suggests that financing bargains may exist temporarily. Offshore financing may suggest an interest in finding and exploiting such bargains. *Is the currency denomination of the firm's capital consistent with the currency denomination of the firm's operating cash flows? Do the balance sheet footnotes show evidence of foreign-exchange hedging? Also, is the company, in effect, sourcing capital on a global basis or is it focusing narrowly on the domestic capital markets?*

5. *Exotica*: Every firm faces a spectrum of financing alternatives, ranging from plain-vanilla bonds and stocks to hybrids and one-of-a-kind, highly tailored securities.[4] This element considers management's relative preference for financial innovation. Where a firm positions itself on this spectrum can shed light on management's openness to new ideas, intellectual originality, and, possibly, opportunistic tendencies. As a general matter, option-linked securities often appear in corporate finance where there is some disagreement between issuers and investors about a firm's prospects. For instance, managers of high-growth firms will foresee rapid expansion and vaulting stock prices. Bond investors, not having the benefit of inside information, might see only high risk—issuing a convertible bond might be a way

[3] Reinvestment risk exists where the life of the firm's assets is *less* than the life of the firm's liabilities. In other words, the firm will need to replace, or roll over, the investment that the capital originally financed. Reinvestment risk is the chance that the firm will be unable to reinvest the capital on advantageous terms at the rollover date.

[4] Examples of highly tailored securities include exchangeable and convertible bonds, hybrid classes of common stock, and contingent securities, such as a dividend-paying equity issued in connection with an acquisition.

to allow the bond investors to capitalize the risk[5] and to enjoy the creation of value through growth in return for accepting a lower current yield. Also, the circumstances under which exotic securities were issued are often fascinating episodes in a company's history. *Based on past financings, what is the firm's appetite for issuing exotic securities? Why have the firm's exotic securities been tailored as they are?*

6. *External control*: Any management team probably prefers little outside control. One must recognize that, in any financial structure, management has made choices about subtle control trade-offs, including *who* might exercise control (for example, creditors, existing shareholders, new shareholders, or a raider) and the control *trigger* (for example, default on a loan covenant, passing a preferred stock dividend, or a shareholder vote). How management structures control triggers (for example, the tightness of loan covenants) or forestall discipline (perhaps through the adoption of poison pills and other takeover defenses) can reveal insights into management's fears and expectations. Clues about external control choices may be found in credit covenants, collateral pledges, the terms of preferred shares, the profile of the firm's equity holders, the voting rights of common stock, corporate bylaws, and antitakeover defenses. *In what ways has management defended against or yielded to external control?*

7. *Distribution*: seeks to determine any patterns in (a) the way the firm markets its securities (i.e., acquires capital), and (b) the way the firm delivers value to its investors (i.e., returns capital). Regarding marketing, insights emerge from knowing where a firm's securities are listed for trading, how often the shares are sold, and who advises the sale of securities (the adviser that a firm attracts is one indication of its sophistication). Regarding the delivery of value, the two generic strategies involve dividends or capital gains. Some companies will pay low or no dividends and force their shareholders to take returns in the form of capital gains. Other companies will pay material dividends, even borrowing to do so. Still others will repurchase shares, split shares, and declare extraordinary dividends. Managers' choices about delivering value yield clues about management's beliefs regarding investors and the company's ability to satisfy investors' needs. *How have managers chosen to deliver value to shareholders, and with whose assistance have they issued securities?*

A comparative illustration

The value of looking at a firm's financial structure through these seven design elements is that the insights they provide can become a basis for developing a broad, detailed picture of the firm's financial policies. Also, the seven elements become an organizational framework for the wealth of financial information on publicly owned companies.

Consider the examples of FedEx Corporation (FedEx) and United Parcel Service, Inc. (UPS), both leading firms in the express-delivery industry. Sources such as Factset, Yahoo! Finance, and the Value Line Investment Survey distill information from annual reports and regulatory filings and permit the analyst to draw conclusions about the seven elements of each firm's financial policy. Drawing on the latest financial results as of 2016, analysts could glean the insights about the policies of FedEx and UPS from **Table 1**.

[5] In general, the call options embedded in a convertible bond will be more valuable depending on the greater the volatility of the underlying asset.

Table 1. Financial policies for FedEx Corporation and United Parcel Service, Inc.

Elements of Financial Policy	FedEx Corporation	United Parcel Service, Inc.
Mix	**Moderate debt** • Debt/assets = 30% • Debt/capital = 50% • Operating income/interest = 9.8 • Sold equity in none of previous three years. • Credit rating: BBB (S&P) and Baa2 reduced from Baa1 (Moody's) • Acquisitions financed with combinations of cash and debt.	**Equity orientation** • Debt/assets = 36% • Debt/capital = 85% • Operating income/interest = 23.5 • Sold equity in none of previous three years. • Credit rating: A+ (S&P) and A1 reduced from Aa3 (Moody's) • Acquisition financing is undisclosed, most likely cash and debt.
Maturity	**Medium to long** • Average life = 17.8 years • 16% from 0 to 4 years • 20% from 5 to 15 years • 63% more than 15 years	**More balanced: Short to long** • Average life = 12 years • 43% from 0 to 4 years • 20% from 5 to 15 years • 37% more than 15 years
Basis	**Fixed rates** • 75% of debt is at a fixed rate	**Fixed rates** • 69% of debt is at a fixed rate
Currency	**Blend: US dollars and euros** • 75% Dollar-based financing • 25% Euro-based financing	**Blend: Dollars, euros, pounds (UK)** • 80% Dollar-based financing • 20% Euro- and pound-based
Exotica	**Leases** • 0.5% capital leases/total debt • 129% projected operating lease payments/total debt	**Leases** • 3.4% capital leases/total debt • 9.2% projected operating lease payments/total debt
Control	**Favors large stockholders** • Debt unsecured and callable • Dispersed share ownership	**Significant controlling structure** • Debt unsecured and callable • Classified share structure. "A" shares have 10 votes/share; "B" shares have 1 vote/share.
Distribution	**Steady dividends** • Average payout: 15% **Share repurchases** • Active program: 150% of net income.	**Large dividends** • Average payout: 55% **Share repurchases** • Active program: 40% of net income.

Source: Created by author.

As **Table 1** shows, available standard information on public companies yields important contrasts in their financial policies. Note that the insights are *informed guesses*: neither of those firms explicitly describes its financial policies. Nonetheless, with practice and good information, the validity of the guesses can be high.

FedEx and UPS present different policy profiles. FedEx relies somewhat more on debt financing, with a longer maturity, greater commitment to operating leases, and a more aggressive program of returning cash to

shareholders through dividends and share repurchases. UPS is somewhat more conservative (as reflected in its higher debt rating): a higher times-interest-earned ratio, a more balanced maturity structure, more reliance on capital leases and less on operating leases, larger return to shareholders through dividend payments, and a distinctive classified common equity structure that gives strong control rights to the holders of the "A" shares. The UPS "A" shares are held "primarily by UPS employees and retirees, as well as trusts and descendants of the Company's founders."[6]

Part II: General Framework for Diagnosing Financial-Policy Opportunities and Problems

Having parsed the choices embedded in the firm's financial structure, one must ask, "Were these the *right* choices?" What is "right" is a matter of the context and the clientele to which management must respond. A firm has many potential claimants.[7] The discussion that follows will focus on the perspectives of competitors, investors, and senior corporate managers.

1. *Does the financial policy create value?*

   From the standpoint of investors, the best financial structure will (a) maximize shareholder wealth, (b) maximize the value of the entire firm (i.e., the market value of assets), and (c) minimize the firm's weighted-average cost of capital (WACC). When those conditions occur, the firm makes the best trade-offs among the choices on each of the seven dimensions of financial policy. This analysis is all within the context of the *market* conditions.

2. *Does the financial policy create a competitive advantage?*

   Competitors should matter in the design of corporate financial policy. Financial structure can enhance or constrain competitive advantage mainly by opening or foreclosing avenues of competitive response over time. Thus, a manager should critically assess the strategic options created or destroyed by a particular financial structure. Also, assuming that they are reasonably well managed, competitors' financial structures are probably an indicator of good financial policy in a particular industry. Thus a manager should want to know how his or her firm's financial structure compares with the peer group. In short, this line of thinking seeks to evaluate the relative position of the firm in its competitive environment on the basis of financial structure.

3. *Does the financial policy sustain senior management's vision?*

   The internal perspective tests the appropriateness of a capital structure from the standpoint of the expectations and capacities of the corporate organization itself. The analyst begins with an assessment of corporate strategy and the resulting stream of cash requirements and resources anticipated in the future. The realism of the plan should be tested against expected macroeconomic variations, as well as against possible but unexpected financial strains. A good financial structure meets the classic maxim of corporate finance, "Don't run out of cash": in other words, the ideal financial structure adequately funds the growth goals and dividend payouts of the firm without severely diluting the firm's current equity owners. The concept of self-sustainable growth provides a straightforward test of this ideal.

[6] UPS annual report, 2015: 101.

[7] With a moment's reflection, the analyst will call up a number of claimants (stakeholders or clientele), whose interests the company might serve. Managers, customers, and investors are often the first to come to mind. Creditors (for example, bankers) often have interests that differ from those of the equity investors. Workers (and unions) often make tangible claims on the firm. Governments, through their taxing and regulatory powers, do so as well. One might extend the list to environmentalists and other social activists. The possibilities are almost limitless. For economy, this discussion treats only the three perspectives that yield the most insight about financial policy.

The next three sections will discuss these perspectives in more detail. All three perspectives are unlikely to offer a completely congruent assessment of financial structure. The investor's view looks at the *economic* consequences of a financial structure; the competitor's view considers *strategic* consequences; the internal view addresses the firm's *survival and ambitions*. The three views ask entirely different questions. An analyst should not be surprised when the answers diverge.

Rather like estimating the height of a distant mountain through the haze, the analyst develops a concept of the best financial structure by a process of *triangulation*. Triangulation involves weighing the importance of each of the perspectives as each one *complements* the other rather than as it substitutes for the other, identifying points of consistency, and making artful judgments where the perspectives diverge.

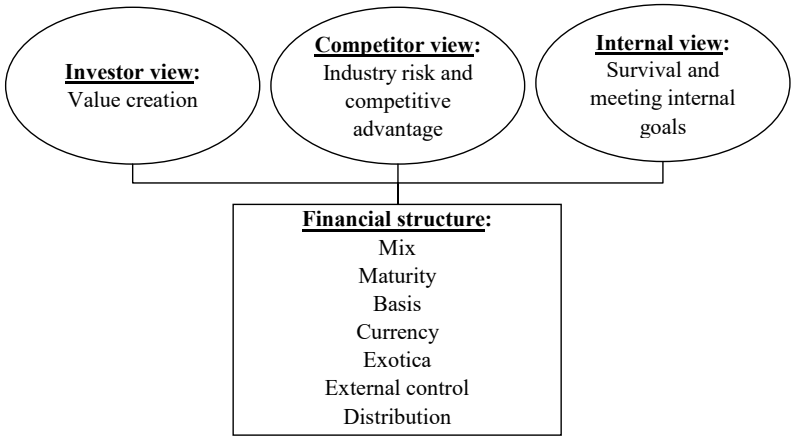
The goal of this analysis should be to articulate concretely the design of the firm's financial structure, preferably in terms of the seven elements discussed in Part I. This exercise entails developing notes, comments, and calculations for every one of the cells of this analytical grid:

Elements of Financial Structure	**Current Structure**	**Investor View**	**Competitor View**	**Internal View**	**Evaluation/ Comments**
1. Mix					
2. Maturity					
3. Basis					
4. Currency					
5. Exotica					
6. External control					
7. Distribution					

No chart can completely anticipate the difficulties, quirks, and exceptions that the analyst will undoubtedly encounter. What matters most, however, is the way of thinking about the financial-structure design problem that encourages both critical thinking and organized, efficient digestion of information.

Figure 1 summarizes the approach presented in this section. Good financial-structure analysis develops three complementary perspectives on financial structure, and then blends those perspectives into a prescription.

Figure 1. Overview of financial-structure analysis.



Source: Created by author.

Part III: Analyzing Financial Policy from the Investors' Viewpoint[8]

In finance theory, the investors' expectations should influence all managerial decisions. This theory follows the legal doctrine that firms should be managed in the interests of their owners. It also recognizes the economic idea that if investors' needs are satisfied after all other claims on the firm are settled, then the firm must be healthy. The investors' view also confronts the reality of capital market discipline. The best defense against a hostile takeover (or another type of intrusion) is a high stock price. In recent years, the threat of capital market discipline has done more than any academic theory to rivet the management's attention to *value creation*.

Academic theory, however, is extremely useful in identifying value-creating strategies. Economic value is held to be the present value of expected future cash flows discounted at a rate consistent with the risk of those cash flows. Considerable care must be given to the estimation of cash flows and discount rates (a review of discounted cash flow [DCF] valuation is beyond the scope of this note). Theory suggests that leverage can create value through the *benefits of debt tax shields* and can destroy value through the *costs of financial distress*. The balance of those costs and benefits depends upon specific capital market conditions, which are conveyed by the debt and equity costs that capital providers impose on the firm. Academic theory's bottom line is as follows:

> An efficient (i.e., value-optimizing) financial structure is one that simultaneously minimizes the weighted-average cost of capital and maximizes the share price and value of the enterprise.

The investors' perspective is a rigorous approach to evaluating financial structures: valuation analysis of the firm and its common stock under existing and alternative financial structures. The best structure will be one that creates the most value.

The phrase *alternative financial structures* is necessarily ambiguous, but should be interpreted to include a wide range of alternatives, including leveraged buyouts, leveraged recapitalizations, spin-offs, carve-outs, and even liquidations. However radical the latter alternatives may seem, the analyst must understand that investment bankers and corporate raiders routinely consider those alternatives. To anticipate the thinking of those agents of change, the analyst must replicate their homework.

Careful analysis does not rest with a final number, but rather considers a range of elements:

Cost of debt: The analysis focuses on yields to maturity and the spreads of those yields over the Treasury yield curve. Floating rates are always effective rates of interest.

Cost of equity: The assessment uses as many approaches as possible, including the capital asset pricing model, the dividend discount model, the financial leverage equation, the earnings/price model, and any other avenues that seem appropriate. Although it is fallible, the capital asset pricing model has the most rigor.

Debt/equity mix: The relative proportions of types of capital in the capital structure are important factors in computing the weighted-average cost of capital. All capital should be estimated on a *market value* basis.

Price/earnings ratio, market/book ratio, earnings before interest and taxes (EBIT) multiple: Comparing those values to the average levels of the entire capital market or to an industry group can provide an alternative check on the valuation of the firm.

[8] An excellent summary of the investors' orientation is found in Tim Koller, Marc Goedhart, and David Wessels, *Valuation: Measuring and Managing the Value of Companies*, 6th ed. (New York: Wiley, 2015).

Bond rating: The creditors' view of the firm is important. S&P and Moody's publish average financial ratios for bond-rating groups. Even for a firm with no publicly rated debt outstanding, a simple ratio analysis can reveal a firm's likely rating category and its current cost of debt.

Ownership: The relative mix of individual and institutional owners and the presence of block holders with potentially hostile intentions can help shed light on the current pricing of a firm's securities.

Short position: A large, short-sale position on the firm's stock can indicate that some traders believe a decline in share price is imminent.

To conclude, the first rule of financial policy analysis is: *Think like an investor*. The investors' view assesses the value of a firm's shares under alternative financial structures and the existence of any strongly positive or negative perceptions in the capital markets about the firm's securities.

Part IV: Analyzing Financial Policy from a Competitive Perspective

The competitive perspective matters to senior executives for two important reasons. First, it gives an indication about (1) standard practice in the industry, and (2) the strategic position of the firm relative to the competition. Second, it implies rightly that finance can be a strategic competitive instrument.

The competitive perspective may be the hardest of the three benchmarks to assess. There are few clear signposts in industry dynamics, and, as most industries become increasingly global, the comparisons become even more difficult to make. Despite the difficulty of this analysis, however, senior executives typically give an inordinate amount of attention to it. The well-versed analyst must be able to assess the ability of the current policy (and its alternatives) to maintain or improve its competitive position.

This analysis does not proceed scientifically, but rather evolves iteratively toward an accurate assessment of the situation.[9] The steps might be defined as follows:

1. Define the universe of competitors.
2. Spread the data and financial ratios on the firm and its competitors in comparative fashion.
3. Identify similarities and, more importantly, differences. Probe into anomalies. Question the data and the peer sample.
4. Add needed information, such as a foreign competitor, another ratio, or historical normalization.
5. Discuss or clarify the information with the CFO or industry expert.

As the information grows, the questions will become more probing. What is the historical growth pattern? Why did XYZ Company suddenly increase its leverage or keep a large cash balance? Did the acquisition of a new line actually provide access to new markets? Are the changes in debt mix and maturity or in the dividend policy related to the new products and markets?

Economy of effort demands that the analyst begin with a few ratios and data that can be easily obtained (from annual reports and other sources). If a company is in several industries and does not have pure competitors, choose group-divisional competitors and, to the extent possible, use segment information to

[9] An overview of industry and competitor analysis may be found in Michael Porter, *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (New York: Free Press, 1998). An excellent survey of possible information sources on firms is in Leonard M. Fuld, *The New Competitor Intelligence: The Complete Resource for Finding, Analyzing, and Using Information about Your Competitors*, 2nd ed. (New York: Wiley, 1994).

devise ratios that will be valid, which is to say, operating income to sales, rather than an after-tax equivalent. Do not forget information that may be outside the financial statements and may be critical to competitive survival, such as geographic diversification, research and development expenditures, and union activity. For some industries, other key ratios are available through trade groups, such as same-store sales and capacity analyses. Whatever the inadequacy of the data, the comparisons will provide direction for subsequent analysis.

The ratios and data to be used will depend on the course of analysis. An analyst could start with the following general types of measures with which to compare a competitor group:

1. *Size*: sales, market value, number of employees or countries, market share
2. *Asset productivity*: return on assets (ROA), return on invested capital, market to book value
3. *Shareholder wealth*: price/earnings (P/E), return on market value
4. *Predictability*: Beta, historical trends
5. *Growth*: 1- to 10-year compound growth of sales, profits, assets, and market value of equity
6. *Financial flexibility*: debt-to-capital, debt ratings, cash flow coverage, estimates of the cost of capital
7. *Other significant industry issues*: unfunded pension liabilities, postretirement medical benefit obligations, environmental liabilities, capacity, research and development expense to sales, percentage of insider control, etc.

One of the key issues to resolve in analyzing the comparative data is whether all the peer-group members display the same results and trends. Inevitably, they will not—which begs the question, why not? Trends in asset productivity and globalization have affected the competitors differently and elicited an assortment of strategic responses. These phenomena should stimulate further research.

The analyst should augment personal research efforts with the work of industry analysts. Securities analysts, consultants, academicians, and journalists—both through their written work and via telephone conversations—can provide valuable insights based on their extensive, personal contacts in the industry.

Analyzing competitors develops insights into the range of financial structures in the industry and the appropriateness of your firm's structure in comparison. Developing those insights is more a matter of qualitative judgment than of letting the numbers speak for themselves. For instance:

1. Suppose your firm is a highly leveraged computer manufacturer with an uneven record of financial performance. Should it unlever? You discover that the peer group of computer manufacturers is substantially equity financed, owing largely to the rapid rate of technological innovation and the predation of a few large players in the industry. The *strategic rationale* for low leverage is to survive the business and short product lifecycles. Yes, it might be good to unlever.
2. Suppose your firm is an airline that finances its equipment purchases with flotations of commercial paper. The average life of the firm's liabilities is 4 years, while the average life of the firm's assets is 15 years. Should the airline refinance its debt using securities with longer maturity? You discover that the peer group of airlines finances its assets with leases, equipment-trust certificates, and project-finance deals that almost exactly match the economic lives of assets and liabilities. The *strategic rationale* for lengthening the maturity structure of liabilities is to hedge against yield-curve changes that might adversely affect your firm's ability to refinance, yet still leave its peer competitors relatively unaffected.
3. Here is a trickier example. Your firm is the last nationwide supermarket chain that is publicly held. All other major supermarket chains have gone private in leveraged buyouts (LBO). Should your firm lever

up through a leveraged share repurchase? Competitor analysis reveals that other firms are struggling to meet debt service payments on already thin margins and that a major shift in customer patronage may be under way. You conclude that price competition in selected markets would trigger realignment in market shares in your firm's favor, because the competitors have little pricing flexibility. In that case, adjusting to the industry-average leverage would not be appropriate.

Part V: Diagnosing Financial Policy from an Internal Perspective

Internal analysis is the third major screen of a firm's financial structure. It accounts for the expected cash requirements and resources of a firm, and tests the consistency of a firm's financial structure with the profitability, growth, and dividend goals of the firm. The classic tools of internal analysis are the forecast cash flow, financial statements, and sources-and-uses-of-funds statements. The standard banker's credit analysis is consistent with this approach.

The essence of this approach is a concern for (1) the preservation of the firm's *financial flexibility*, (2) the *sustainability* of the firm's financial policies, and (3) the *feasibility* of the firm's strategic goals. For example, the firm's long-term goals may call for a doubling of sales in five years. The business plan for achieving that goal may call for the construction of a greenfield plant in year one, and then regional distribution systems in years two and three. Substantial working-capital investments will be necessary in years two through five. How this growth is to be financed has huge implications for the firm's financial structure *today*. Typically, an analyst addresses this problem by forecasting the financial performance of the firm, experimenting with different financing sequences and choosing the best one, then determining the structure that makes the best foundation for that financing sequence. This analysis implies the need to maintain future financial flexibility.

Financial flexibility

Financial flexibility is easily measured as the excess cash and unused debt capacity on which the firm might call. In addition, there may be other reserves, such as unused land or excess stocks of raw materials, that could be liquidated. All reserves that could be mobilized should be reflected in an analysis of financial flexibility. Illustrating with the narrower definition (cash and unused debt capacity), one can measure financial flexibility as follows:

1. Select a target minimum debt rating that is acceptable to the firm. Many CFOs will have a target minimum in mind, such as the BBB/Baa rating.
2. Determine the book value[10] debt/equity mix consistent with the minimum rating. Standard & Poor's, for instance, publishes average financial ratios, including debt/equity, that are associated with each debt-rating category.[11]
3. Determine the book value of debt consistent with the debt/equity ratio from step 2. This gives the amount of debt that would be outstanding, if the firm moved to the minimum acceptable bond rating.
4. Estimate financial flexibility using the following formula:

   Financial flexibility = Excess cash + (debt at minimum rating − current debt outstanding).

[10] Ideally, one would work with market values rather than book values, but the rating agencies compute their financial ratios only on a book-value basis. Because this analysis, in effect, mimics the perspective of the rating agencies, the analyst must work with book values.

[11] See *CreditWeek*, published by Standard & Poor's.

The amount estimated by this formula indicates the financial reserves on which the firm can call to exploit unusual or surprising opportunities (for example, the chance to acquire a competitor) or to defend against unusual threats (for example, a price war, sudden product obsolescence, or a labor strike).

Self-sustainable growth

A shorthand test for sustainability and internal consistency is the self-sustainable growth model. This model is based on one key assumption: over the forecast period, the firm sells no new shares of stock (this assumption is entirely consistent with the actual behavior of firms over the long run).[12] As long as the firm does not change its mix of debt and equity, the self-sustainable model implies that assets can grow only as fast as equity grows. Thus, the issue of sustainability is significantly determined by the firm's return on equity (ROE) and dividend payout ratio (DPO):

$$\text{Self-sustainable growth rate of assets} = \text{ROE} \times (1 - \text{DPO})$$

The test of feasibility of any long-term plan involves comparing the growth rate implied by this formula and the *targeted* growth rate dictated by management's plan. If the targeted growth rate equals the implied rate, then the firm's financial policies are in balance. If the implied rate exceeds the targeted rate, the firm will gradually become more liquid, creating an asset deployment opportunity. If the targeted rate exceeds the implied rate, the firm must raise more capital by selling stock, levering up, or reducing the dividend payout.

Management policies can be modeled finely by recognizing that ROE can be decomposed into various factors using two classic formulas:

DuPont system of ratios: $ROE = P/S \times S/A \times A/E$

P/S = profit divided by sales or net margin; a measure of profitability
S/A = sales divided by assets; a measure of asset productivity
A/E = assets divided by equity; a measure of financial leverage

Financial-leverage equation:[13] $ROE = ROTC + [(ROTC - K_d) \times (D/E)]$

$ROTC$ = return on total capital
K_d = cost of debt
D/E = debt divided by equity; a measure of leverage

Inserting either of those formulas into the equation for the self-sustainable growth rate gives a richer model of the drivers of self-sustainability. One sees, in particular, the importance of internal operations. The self-sustainable growth model can be expanded to reflect explicitly measures of a firm's operating and financial policies.

The self-sustainable growth model tests the internal consistency of a firm's operating and financial policies. *This model, however, provides no guarantee that a strategy will maximize value.* Value creation does not begin with growth targets; growth per se does not necessarily lead to value creation, as the growth-by-acquisition strategies of the 1960s and '70s abundantly illustrated. Also, the adoption of growth targets may foreclose other, more profitable strategies. Those targets may invite managers to undertake investments yielding less than the cost of capital.

[12] From 1950 to 2015, only a very small percentage of the growth of the US economy's business sector was financed by the sale of new common stock. The most significant sources were short-term liabilities, long-term liabilities, and retained earnings, in that order.

[13] This is the classic expression for the cost of equity, as originally presented in the work of the Nobel Prize laureates Franco Modigliani and Merton Miller.

Meeting sales or asset growth targets can destroy value. Thus, any sustainable growth analysis must be augmented by questions about the value-creation potential of a given set of corporate policies. These questions include: (1) What are the magnitude and duration of investment returns as compared with the firm's cost of capital? and (2) With what alternative set of policies is the firm's share price maximized? With questions such as those, the investor orientation discussed in Part III is turned inward to double-check the appropriateness of any inferences drawn from financial forecasts of the sources-and-uses-of-funds statements and from the analysis of the self-sustainable growth model.

Part VI: What Is Best?

Any financial structure evaluated against the perspectives of investors, competitors, and internal goals will probably show opportunities for improvement. Most often, CFOs choose to make changes at the margin rather than tinkering radically with a financial structure. For changes large and small, however, the analyst must develop a framework for judgment and prescription.

The following framework is a way of identifying the trade-offs among "good" and "bad," rather than finding the right answer. Having identified the trade-offs implicit in any alternative structure, it remains for the CFO and the adviser to choose the structure with the most attractive trade-offs.

The key elements of evaluation are as follows:

Flexibility: the ability to meet unforeseen financing requirements as they arise. Those requirements may be favorable (for example, a sudden acquisition opportunity) or unfavorable (such as the Source Perrier and the benzene scare). Flexibility may involve liquidating assets or tapping the capital markets in adverse market environments or both. Flexibility can be measured by bond ratings, coverage ratios, capitalization ratios, liquidity ratios, and the identification of salable assets.

Risk: the predictable variability in the firm's business. Such variability may be due to both macroeconomic factors (such as consumer demand) and industry- or firm-specific factors (such as product lifecycles, or strikes before wage negotiations). To some extent, past experience may indicate the future range of variability in EBIT and cash flow. High leverage tends to amplify those predictable business swings. The risk associated with any given financial structure can be assessed by EBIT–EPS (earnings per share) analysis, break-even analysis, the standard deviation of EBIT, and beta. In theory, beta should vary directly with leverage.[14]

Income: This compares financial structures on the basis of value creation. Measures such as DCF value, projected ROE, EPS, and the cost of capital indicate the comparative value effects of alternative financial structures.

Control: Alternative financial structures may imply changes in control or different control constraints on the firm as indicated by the percentage distribution of share ownership and by the structure of debt covenants.

Timing: asks whether the current capital-market environment is the right moment to implement any alternative financial structure, and what the implications for future financing will be if the proposed structure is adopted. The current market environment can be assessed by examining the Treasury yield curve, the trend in the movement of interest rates, the existence of any windows in the market for new issues of securities, P/E multiple trends, and so on. Sequencing considerations are implicitly captured in the assumptions underlying the

[14] This relationship is illustrated by the formula for estimating a firm's levered beta:

$$B_l = B_u \times [1 + (1 - t) \times D/E]$$

where B_l = levered beta; B_u = unlevered beta; t = firm's marginal tax rate; and D/E = the firm's market value, debt-to-equity ratio.

alternative DCF value estimates, and can be explicitly examined by looking at annual EPS and ROE streams under alternative financing sequences.

This framework of flexibility, risk, income, control, and timing (FRICT) can be used to assess the relative strengths and weaknesses of alternative financing plans. To use a simple example, suppose that your firm is considering two financial structures: (1) 60% debt and 40% equity (i.e., debt will be issued), and (2) 40% debt and 60% equity (i.e., equity will be issued). Also suppose that your analysis of the two structures under the investor, competitor, and internal-analysis screens leads you to make this basic comparison:

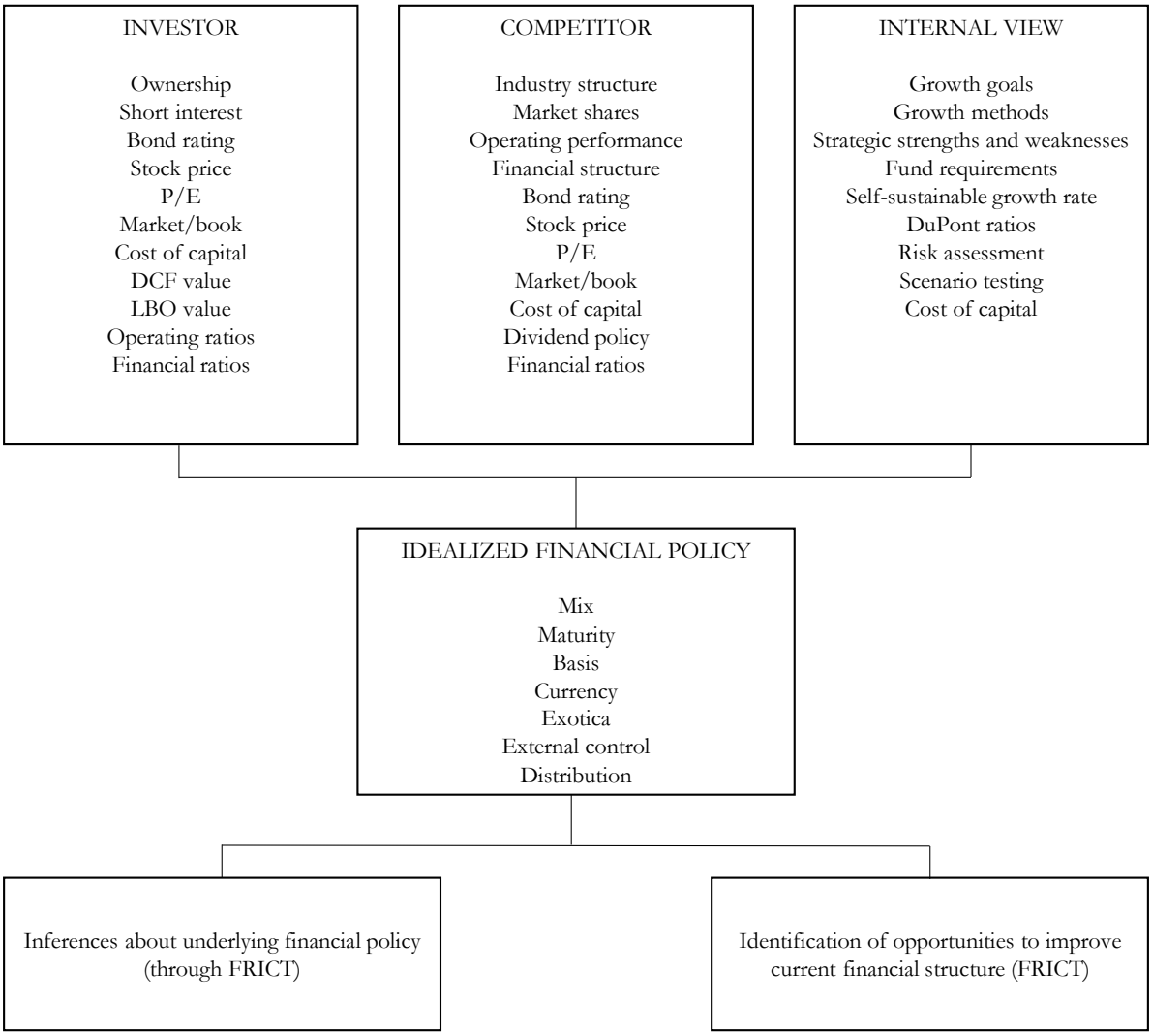
	60% Debt	40% Debt
Flexibility	A little low, not bad	High
	BBB debt rating	AA debt rating
	$50 million in reserves	$300 million in reserves
Risk	High	Medium
	EBIT coverage = 1.5	EBIT coverage = 3.0
Income	Good-to-high	Mediocre
	DCF value = $20/share	DCF value = $12/share (dilutive)
Control	Covenants tight	Covenants not restrictive
	No voting dilution	10% voting dilution
Timing	Interest rates low today	Equity multiples low today
	Risky sequence	Low-risk sequence for future

The 60% debt structure is favored on the grounds of income, control, and today's market conditions. The 40% debt structure is favored on the grounds of flexibility, risk, and long-term financial sequencing. This example boils down to a decision between "eating well" and "sleeping well." It remains up to senior management to make the difficult choice between the two alternatives, while giving careful attention to the views of the investors, competitors, and managers.

Part VII: Conclusion

Description, diagnosis, and prescription in financial structuring form an iterative process. It is quite likely that the CFO in the eat-well/sleep-well example would send the analyst back to do more research and test alternative structures. **Figure 2** presents an expanded view of the basic cycle of analysis and suggests more about the complexity of the financial-structuring problem. With time and experience, the analyst develops an intuition for efficient information sources and modes of analysis. In the long run, this intuition makes the cycle of analysis manageable.

Figure 2. An expanded illustration of the process of developing a financial policy.



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