

# VALUE ADDED™

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## Corporate Finance in 30 Minutes



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## A Guide for Directors and Shareholders

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### Introduction

The purpose of this short review of basic finance principles is twofold: (1) to assist corporate directors in discharging their fiduciary duty of oversight, and (2) to provide shareholders with a conceptual framework and vocabulary for communicating their financial needs and preferences to the board. While directors and shareholders ultimately have myriad concerns, the scope of this guide is limited to the three inter-connected financial decisions of capital budgeting, capital structure, and distribution policy. Our goal is to enable directors and shareholders to understand the manner in which these decisions are linked together and how they interact with corporate strategy to generate shareholder returns and value.

We start with a brief overview of return and risk, the two basic building blocks of corporate finance. Having laid that foundation, we proceed to address the three big financial questions facing corporate directors. Following a quick overview of the key finance concepts relating to each decision, we offer a list of related discussion topics for boards. We conclude by reviewing how each of the three questions relate to, and depend upon, each other.

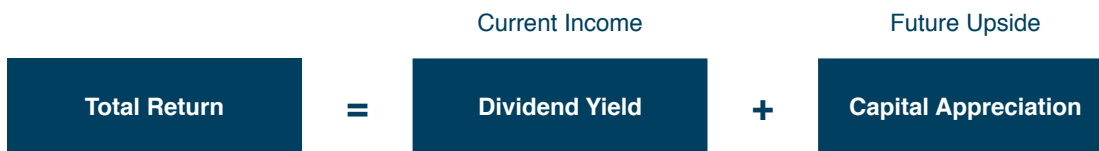
### Finance Fundamentals

The first fundamental axiom of corporate finance is the time value of money: a dollar today is worth more than a dollar tomorrow. In other words, the passage of time has a corrosive effect on wealth. The essence of investing is deferral; one elects to defer consumption today in hopes of having more tomorrow. As stewards of shareholder resources, corporate managers are engaged in a race against the clock, knowing that their stewardship will be evaluated by the degree to which their efforts to enhance shareholder wealth outpace the corrosive effect of the passage of time.

The standardized measure of investment performance for a given unit of time is return. Investment returns have two components. The first, yield, measures the current income (interest or distributions) generated by an investment. Capital appreciation, the second component, measures the increase in value during the period. As shown in Exhibit 1, total return is the sum of yield and capital appreciation. There are no other sources of financial return to investors. There is an inherent tradeoff at work in this relationship – higher current income limits future upside, and faster growth usually comes at the expense of current income.

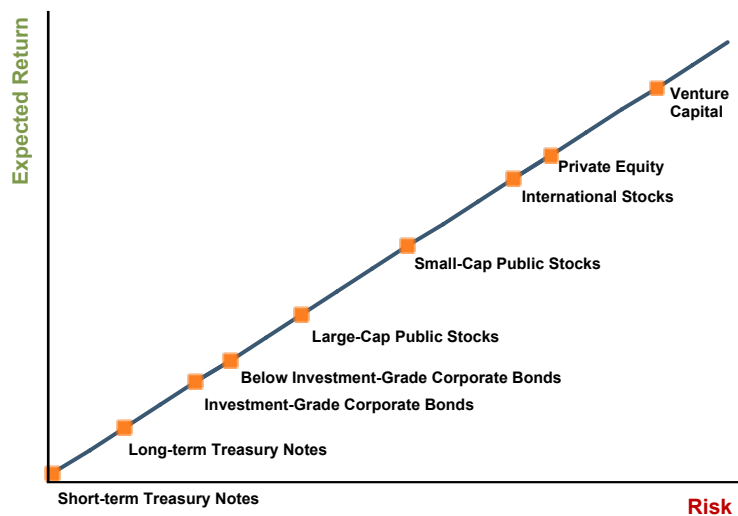
### Exhibit 1

Investment Returns Come in Two Forms



### Exhibit 2

Investors Choose from a Menu of Investment Alternatives



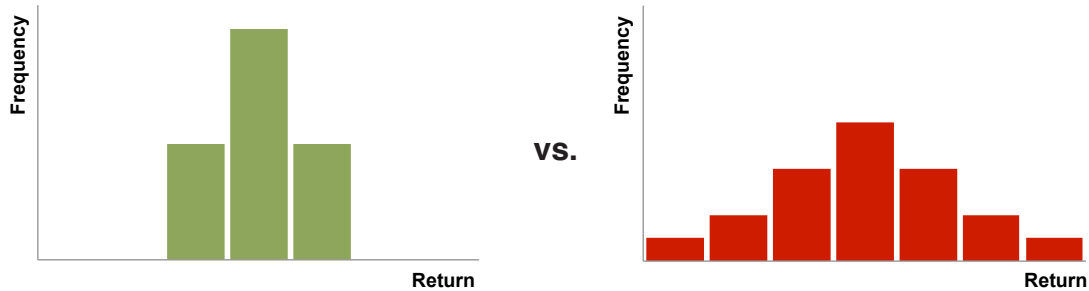
If the essence of investing is deferral, the primary task of investing is selection. Investors must select their investments from a large, but limited, menu of potential alternatives. Investors uniformly desire higher returns. However, in the process of competing with one another, investors bid up the price on less risky investments. For a given financial outcome in the future, a higher price today results in a lower return over the holding period. As a result, the more desirable investments offer lower expected returns. The second fundamental axiom of corporate finance, the risk-return relationship, follows from this. As shown in Exhibit 2, return follows risk.

The diagonal line illustrates some of the more common risk-return combinations available to investors. In order to achieve a higher expected return, investors must be willing to accept greater risk.

Peter Bernstein defined risk succinctly: “Risk doesn’t mean danger – it just means not knowing what the future holds.” As depicted in Exhibit 3, the most common basis for measuring financial risk is the dispersion, or variability, of potential financial outcomes.

### Exhibit 3

Variability of Returns as a Proxy for Risk

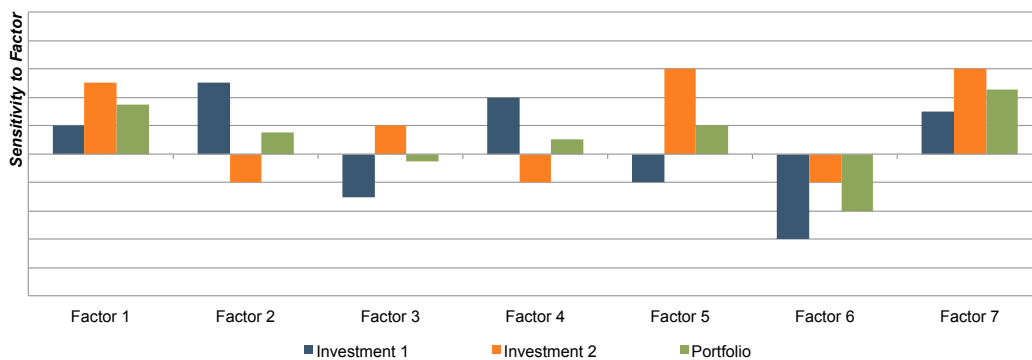


The charts in Exhibit 3 plot an equal number of outcomes for two investments. The one on the left has a smaller number of potential outcomes (with a higher frequency of occurrence) and is therefore – on an absolute basis – the less risky of the two.

The most counter-intuitive element of risk analysis is that the absolute riskiness of an investment is less important than the degree to which the addition of that investment to a portfolio changes the risk of the overall portfolio. The rational response to risk is to diversify. Diversification is effective precisely, and only, to the extent that the components of a diversified portfolio respond differently to common economic factors. Dividing one’s investment portfolio among multiple assets is a waste of time if those assets generate perfectly correlated returns. Correlation is a measure of the “co-movement” of returns. The more similar two investments are, the higher the correlation between them; highly correlated investments

### Exhibit 4

Diversification is the Easiest Tool for Managing Risks



do not contribute much to diversification. Exhibit 4 illustrates the risk-reduction benefit of less-than-perfect correlation among assets in a portfolio.

The two investments in Exhibit 4 (the blue and orange bars) have equal risk on an absolute basis (i.e., dispersion of standalone returns). However, the returns are not perfectly correlated with one another, making them well-suited diversification partners. As a result, an equal-weighted portfolio of these two assets exhibits less risk, or dispersion of outcomes, than either investment individually. Since diversification is easy, everyone does it, so the relevant measure of risk that corresponds to return (Exhibit 2) is a given asset's contribution to the overall riskiness of a well-diversified portfolio. This is called systematic risk, and the technical term for this measure of risk is beta. So, we can supplement our risk axiom as follows: return follows systematic risk.

The degree to which beta accurately measures systematic risk is a matter of debate among academics, but that debate need not detain us here; it is the underlying intuition that matters.

## Quick Review

Because a dollar today is worth more than a dollar tomorrow, investors evaluate investment performance by calculating returns. Investment returns are the sum of yield (current income) and capital appreciation (future upside). Because investors, each of whom prefers high returns and low risk, bid against one another for investments, returns follow risk. From a financial perspective, risk is simply the dispersion of the variability of future outcomes. Since the dispersion of outcomes is reduced by constructing a portfolio of less-than-perfectly correlated assets, the most relevant measure of risk to investors is systematic risk, or an asset's contribution to the risk of a well-diversified portfolio.

## Three Questions

At a strategic level, the essence of corporate finance is discerning rational answers to three fundamental questions. The three questions are so inter-connected that they should not be thought of as arising in a chronological sequence. For ease of exposition, we will address them sequentially, although we caution readers that the sequence is arbitrary and could be inverted or rearranged with no conceptual damage.

- 1. What is the most efficient mix of capital?** In other words, is there such a thing as too little or too much debt?
- 2. What capital projects merit investment?** In other words, given the expectations of those providing capital to the business, how should potential capital projects be evaluated and selected?
- 3. What mix of returns do shareholders desire?** In other words, do shareholders prefer current income or capital appreciation? Do these shareholder preferences “fit” the company's strategic position? Can these shareholder preferences be accommodated within the existing capital structure?

## Question #1: Capital Structure

From a corporate finance perspective, a business can be thought of as a portfolio of capital projects. The portfolio must be financed with a combination of debt and equity. The combination of debt and equity used to finance a company is called the company's capital structure.

### Exhibit 5

A Company's Portfolio of Projects is Financed with a Mix of Debt and Equity



As noted in Exhibit 5, lenders are entitled to a contractual return and have a priority claim on the company's assets. Shareholders, in contrast, benefit from the potential upside of growth opportunities but have only a residual claim on the company's assets. Since return follows risk, the expected return for debt holders is lower than that for equity holders.

The analysis of capital structure is complicated by the iterative nature of the risks facing debt and equity holders. For any given proportion of debt and equity, the cost of debt will be lower than the cost of equity. However, increasing the proportion of debt in the capital structure increases the risk of both the debt and the equity, which in turn raises the cost of each. As illustrated in Exhibit 6, at some point the benefit of using a greater proportion of lower-cost debt is eventually offset by the escalating cost of both capital sources.

The optimal capital structure is that which minimizes the overall cost of capital. As shown in Exhibit 6, the optimal capital structure for a company is likely a range rather than a single point, since the underlying measurements are quite imprecise.

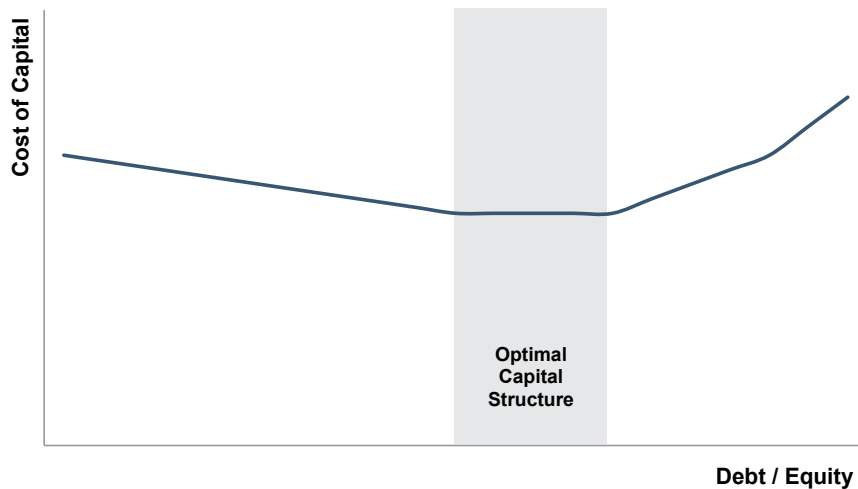
### Topics for Board Discussion

While the optimal capital structure cannot be defined with precision, the deliberations of an informed board and shareholder group will focus on the following:

- **What is the company's current capital structure?** In order to measure the company's current capital structure, the value of the enterprise must be estimated. For operating companies, enter-

## Exhibit 6

While the Nominal Cost of Debt is Lower than that of Equity, the Use of Debt Increases the Risk of Both Debt and Equity, Eventually Increasing the Overall Cost of Capital



prise value is often calculated as a multiple of EBITDA (earnings before interest, taxes, depreciation, and amortization). What multiple does management believe is appropriate for the Company? What is the basis for that multiple (public companies, transactions, or some rule of thumb)? How do the risk and growth characteristics of the company compare to the selected benchmark?

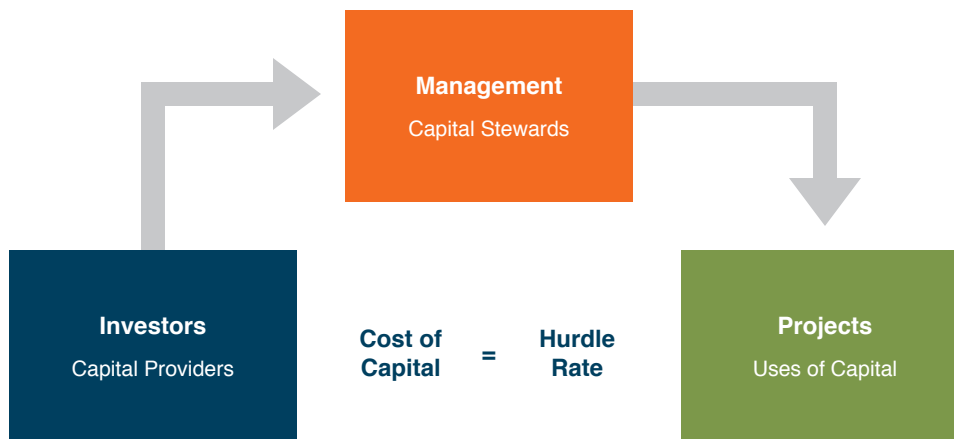
- **How does the company's capital structure compare to peers?** Capital structure is often related to the nature and intensity of a company's asset requirements, sensitivity to economic cycles and other industry attributes. As a result, the capital structures of companies within a given industry may exhibit a measure of affinity. Given the impact of equity valuation on capital structure, financial leverage is often measured as the ratio of interest-bearing debt to EBITDA to facilitate comparison among companies.
- **What is the availability and cost of marginal sources of capital?** If the company anticipates growth, the supporting capital can come through retention of earnings, issuance of new equity, and/or borrowing. Given the company's current capital structure, what effect would the various marginal financing decisions have on the overall cost of capital?
- **What is the company's target capital structure?** How, if at all, does it differ from the current capital structure? How does it compare to peers? What factors contribute to the differences from peers? Such factors could include differing strategic focus, unique elements of the company's business model, or shareholder risk preferences.

## Question #2: Capital Budgeting

Extending the image of the company as a portfolio of capital projects, senior management's role can be conceived of as managing investments on behalf of the shareholders, allocating available capital to selected projects.

## Exhibit 7

The Cost of Capital is the Price Paid to Attract Capital from Investors to Fund Projects



As depicted in Exhibit 7, management discharges its stewardship role by selecting capital projects for which the expected return equals (or, ideally, exceeds) the cost of capital. On this view, management acts as an intermediary, matching investors with capital projects. There is a symbiotic relationship between the returns required by investors and the riskiness of the capital projects identified by management. Viewed from one side, management that has the responsibility of stewarding high-cost capital will rationally seek out risky projects with corresponding high returns. Viewed from the other side, a portfolio of risky, high-return projects will attract risk-seeking capital. This relationship underscores the importance of management and directors communicating realistic and transparent expectations to capital providers. For public companies, this occurs through quarterly earnings calls and SEC filings; for private companies, it is no less important, but is often ignored since the regulatory mandate is absent.

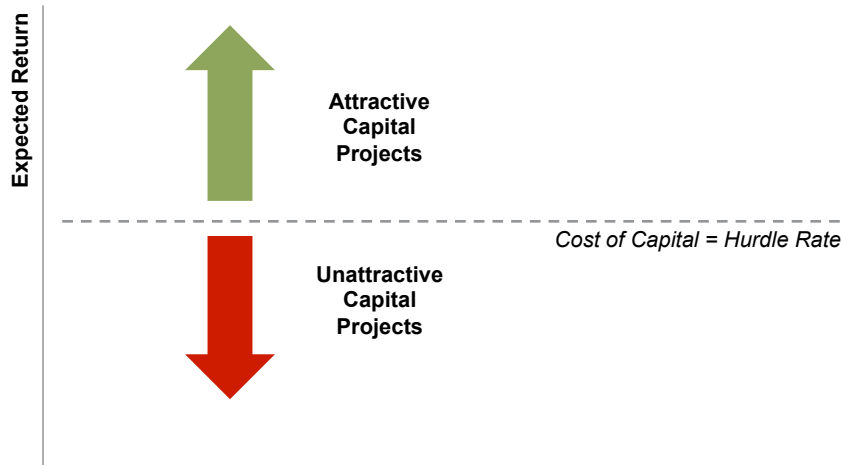
While specific techniques of capital budgeting are beyond the scope of our discussion, the goal of the capital budgeting process is to identify potential capital projects and evaluate whether the expected return from such projects meets or exceeds the hurdle rate.

When reviewing the results of a capital budgeting process, directors and shareholders should acknowledge the tension, or conflict, that may naturally emerge between management and shareholders. Recall that, from the perspective of shareholders, systematic risk (the contribution of a given project to the overall risk of a diversified portfolio) is more relevant than absolute risk (the dispersion of potential outcomes on a standalone basis). Careers are not readily diversifiable, however; as a result, it may be natural for managers to evaluate a project from the perspective of absolute risk. In a private company, shareholder portfolio diversification may be limited, so the absolute risk perspective may well accord with the shareholders' risk preferences. In any event, directors and shareholders need to be aware of the different risk perspectives and be able to reconcile them.



## Exhibit 8

Management's Task is to Evaluate Available Capital Projects to Determine Whether the Expected Return Meets or Exceeds the Hurdle Rate



### Topics for Board Discussion

Detailed capital budgeting is the responsibility of management; for significant projects, the board should evaluate management's analysis and recommendations.

- **What are the relevant cash inflows and outflows?** The relevant cash flows for capital budgeting are those at the margin – what revenues will the company earn and costs will the company incur upon completion of this project that would not be earned/incurred in the absence of this project? For example, fixed operating costs that will be incurred whether or not the project is undertaken are not relevant to the capital budgeting decision.
- **How are available capital projects ranked?** Available capital for investment is always constrained at some level. Beyond a simple thumbs-up/thumbs-down evaluation of individual projects, how has management prioritized the available opportunities?
- **What non-financial constraints does the company face?** In addition to limited financial resources, companies have limited managerial, human capital, and other resources. Will undertaking the proposed capital project violate any of the non-financial constraints? If so, do the relevant cash flows include the financial cost of dealing with such constraints?
- **What is the strategic rationale for the proposed project?** With the "right" inputs, a capital budgeting spreadsheet can always generate a positive net present value. Going beyond the mere numbers, does management have a compelling strategic narrative for why the project "fits"? Is the project an extension of the company's current strategy, or does it supplement or reverse the strategy in some way? How does the project contribute to efforts to differentiate the company from competitors?

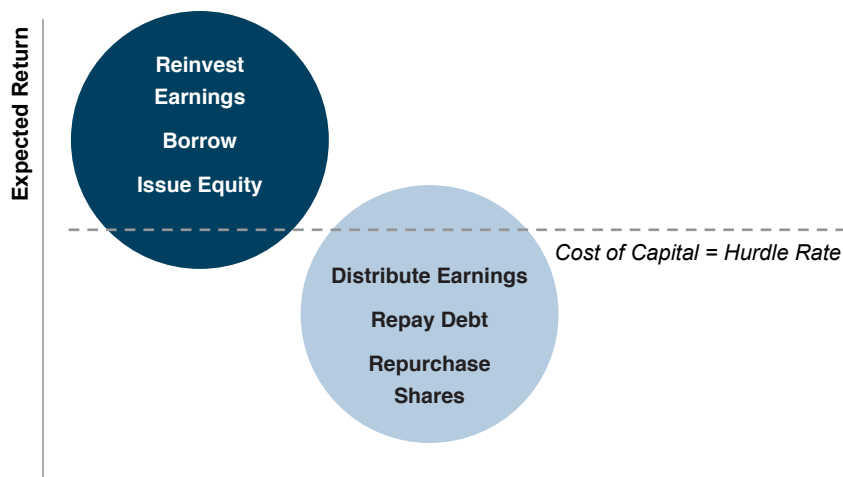
- **What returns have prior projects earned?** In a strict sense, historical results are not relevant to the capital budgeting decision. However, a program for monitoring actual performance relative to projections on prior projects is a key element of a sustainable capital investment process, highlighting potential “blind spots” or biases with regard to the projected financial results for the project under consideration. Capital projects that increase the size of the company may be attractive to management without being beneficial to shareholders. A process of calculating realized returns on projects can help ward off capital project bloat.

### Question #3: Dividend Policy

Capital structure and capital budgeting intersect at the point of the cost of capital, which serves as the hurdle rate for evaluating potential capital projects. As shown in Exhibit 9, capital budgeting also shares an intersection point with dividend policy.

#### Exhibit 9

At the Margin, the Availability of Attractive Investment Opportunities Informs the Appropriate Decisions Regarding Distributions and Return of Capital



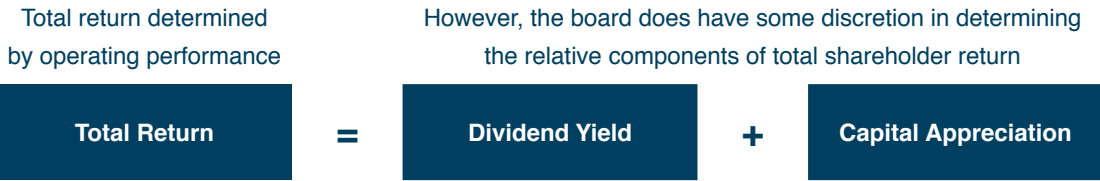
If management has identified an abundance of capital projects having expected returns in excess of the cost of capital, it may be appropriate to retain a greater proportion of earnings for reinvestment than if attractive capital projects are scarce.

Ultimately, the total return available to shareholders is determined by the operating performance of the business (the aggregate results for the existing portfolio of capital projects). Beyond that, however, the board does have some measure of discretion with regard to the form of that return (yield vs. capital appreciation).

Shareholders are likely to have a unique set of preferences with regard to the composition of their total return. Those preferences are likely to vary over time and, potentially, within the shareholder base at a particular point in time. In the public markets, shareholders can vote with their feet if the mix of return

**Exhibit 10**

Through Distribution Policy, the Board can Tailor the Components of Total Return to Fit Shareholder Preferences



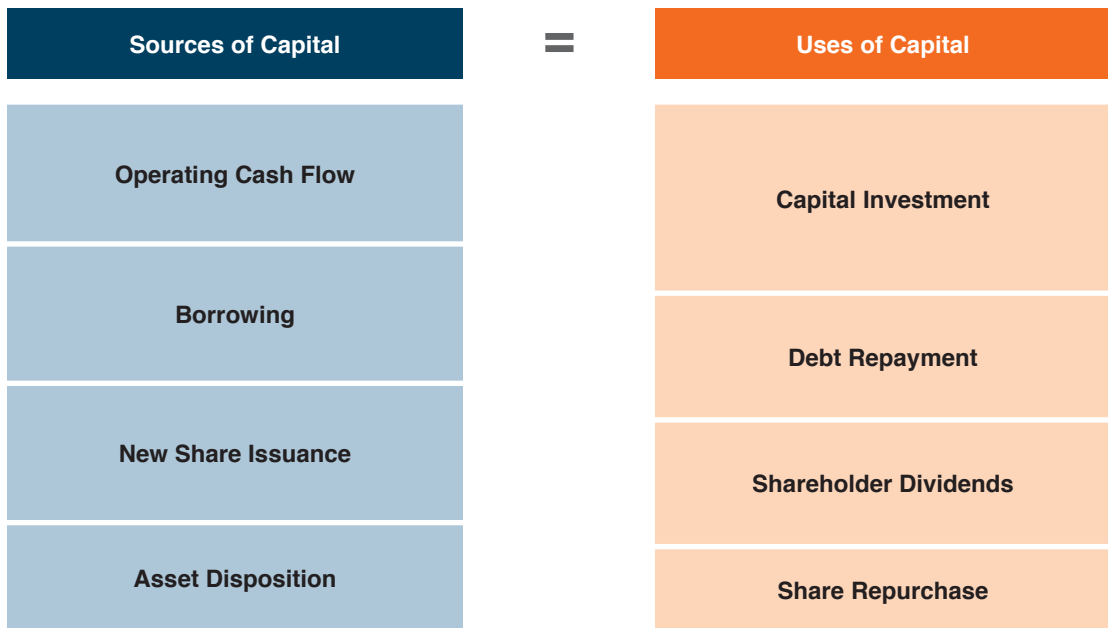
components does not correspond to their desired mix. Private company shareholders do not have ready liquidity, so it is important that directors and managers solicit input regarding shareholder preferences.

The board's latitude in configuring the desired mix of return components is determined by the availability of incremental debt and equity capital. For example, for a given level of operating cash flow and capital investment, higher dividends can be achieved through incremental borrowing, new share issuance, or asset sales. In each case, boosting dividend yield would come at the expense of capital appreciation. Incremental borrowing capacity may be constrained if the company's capital structure is already optimally leveraged. For private companies, it may be infeasible to issue illiquid shares at a fair price. And asset sales are not a sustainable source of cash flow.

If the company's shareholders have diverse preferences regarding the composition of total return, perhaps the best means of tailoring returns is the use of share repurchases in lieu of dividends. Shareholders desiring current income can sell a portion of their shares to the company, which fuels capital appreciation for share-

**Exhibit 11**

In the Aggregate, the Sources and Uses of Capital Must Balance



holders that prefer future upside. In order to implement this strategy, however, there must be a mutually agreeable share price. If the price is too low, the selling shareholders will effectively be subsidizing the remaining shareholders, while a price that exceeds fair market value will benefit the selling shareholders.

## Topics for Board Discussion

From the perspective of shareholders, dividend policy is the most transparent board action. There may be many things shareholders are content not to know regarding the company, but the timing and amount of periodic dividends will not be one of them.

- **Where is the company in its life cycle?** Mature companies with more limited opportunities for attractive capital investment are more natural dividend payers.
- **How does the company's current capital structure compare to its target capital structure?** Over time, the board can use dividend policy to migrate the company to its target capital structure while minimizing transaction costs.
- **What are shareholder preferences for the composition of return?** Do the shareholders have a consistent set of expectations regarding return composition or do different shareholder groups have conflicting preferences?
- **What type of dividend policy best fits the company and its shareholder base: a set dollar amount, fixed payout ratio, fixed yield on value, or residual after attractive capital investments have been funded?** Dividend policies can provide much desired predictability to shareholders, but can also place artificial constraints on the board.
- **How much financial flexibility does the company have to accommodate shareholder preferences?** Can the company borrow additional funds? Is there a market for issuance of new shares? If so, at what price?
- **Is a share redemption program feasible?** Can the board formulate a market-clearing price that does not unduly reward or punish either group of shareholders?

## Synthesis: Tying It All Together

We conclude by returning to the interdependence of the three primary questions (Exhibit 12).

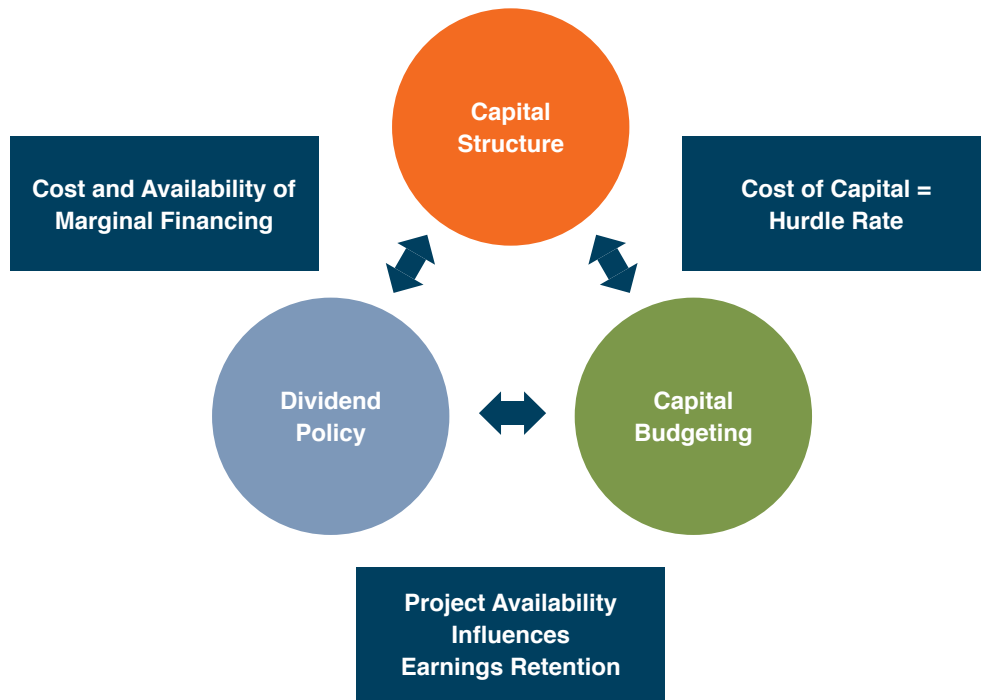
The **capital structure** and **capital budgeting** decisions are linked by the cost of capital. The cost of capital depends on both the financing mix of the company and the riskiness of capital projects undertaken. The cost of capital also serves as the hurdle rate when evaluating potential capital projects.

The availability of attractive capital projects is the point of intersection between **capital budgeting** and **dividend policy**. If attractive capital projects are abundant, retention of earnings will be favored over distribution, and vice versa.

**Dividend policy** also interacts with the **capital structure** decision as the board assesses the cost and availability of financing at the margin. The cost of capital influences the decision to distribute or retain earnings.

## Exhibit 12

The Three Primary Questions Relate to One Another



Being an informed director or shareholder capable of making relevant and meaningful contributions to strategic financial decisions does not require an advanced degree in finance or accounting. In fact, we suspect that a roomful of finance “experts” can actually be an obstacle to the sort of multi-disciplinary, collaborative decision-making that promotes the long-term health and sustainability of the company. Our goal with this guide is to give directors and shareholders a vocabulary and conceptual framework for thinking about strategic corporate finance decisions, allowing them to lend their voices to the discussion.

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