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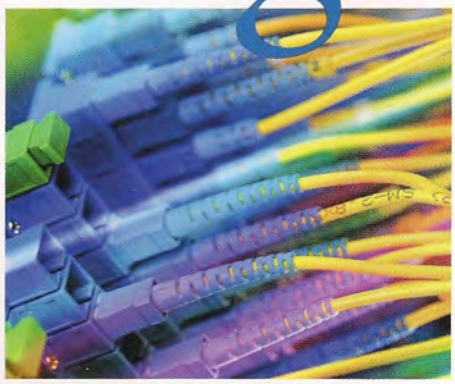


features

Clearing the Bar

Setting hurdle rates that properly encourage growth

Gregory V. Milano and Steven C. Treadwell

Hurdle rates are performance benchmarks used by management to evaluate new investments and control a company's capital spending. Management forecasts the revenue, profit and cash flow expected from an investment and typically compares some sort of internal rate of return (IRR) to the hurdle rate in order to determine whether the returns are sufficient to warrant making the investment or not. The hurdle rate can also be used to discount free cash flow forecasts in determining net present value (NPV), which is another method of evaluating investments.

Management teams have many other uses for hurdle rates, as Phil West, Vice President and Treasurer of W.W. Grainger, Inc., discusses in his accompanying sidebar. One of the more controversial hurdle-rate applications is as a benchmark for evaluating the annual rate of return on capital. A business has the potential to create (or destroy) value during a year by delivering an adequate rate of return on capital and creating the ability to deliver future high rates of return, often by investing in the business. When we measure annual rates of return against the full hurdle rate, we emphasize the first source of value and ignore the second.

The problem for management

Many management teams set hurdle rates too high for measuring the annual rate of return. To illustrate this, consider real estate valuations, which often are considered based on a capitalization rate, or "cap rate," that is the ratio between the income of a property and its value. Over the last three years the cap rate on New York office space generally ranged between 4 and 5 percent. Does this suggest landlords are satisfied with a 4-5 percent return on their investment?

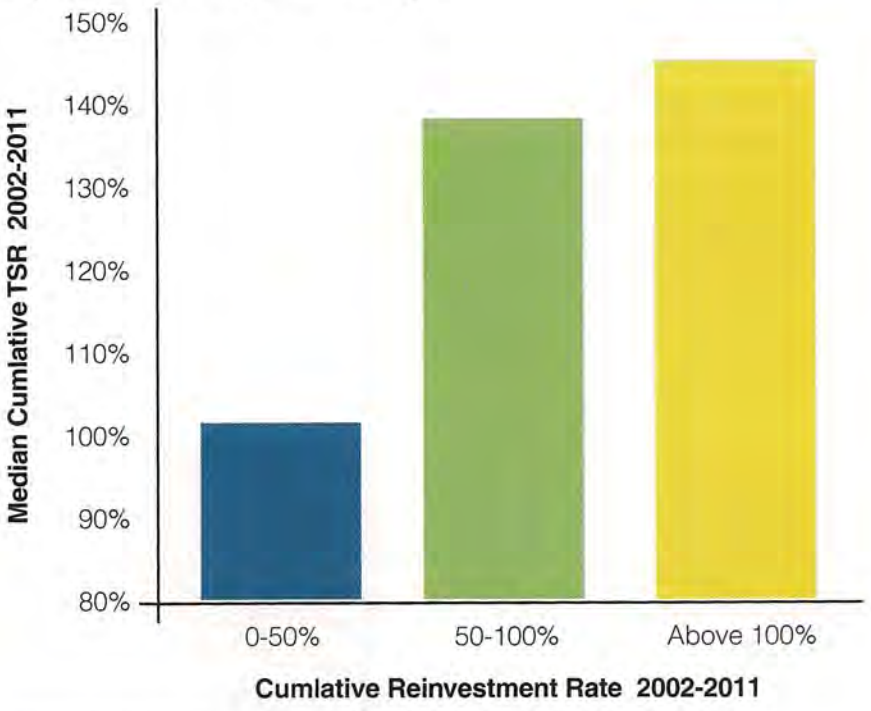
Not at all. Despite recent real estate market turmoil, investors expect their properties to grow in value over time to supplement the annual income and deliver the total return necessary to make the investment desirable. The same two sources of value creation hold for other industries as well and both must be accounted for in order to fully capture a company or an investment's value.

Recent research into the required rate of return demanded by investors uses a company's share price and forward expectations for cash flow to create a new approach in establishing a company's hurdle rate. Through this method the required rate of return for creating value is much lower than the hurdle rates typically used by corporations. The result is that many companies could create more value by increasing their willingness to invest.

Why is this important? Setting a hurdle rate that is more in tune with the capital markets helps executives better allocate capital and make all investments that grow the value of the company over time. As shown in Figure 1, companies that reinvest a higher percentage of their cash earnings tend to deliver higher total shareholder return in terms of dividends plus share price appreciation.

Many companies today reinvest a smaller percentage of their cash flow back into the business than they used to, limiting the value growth potential for their shareholders. There are many reasons for this, but for many companies a critical obstacle is that the hurdle rates they use are too high, leading them to reject investments that might have created value.

Figure 1: Reinvesting Cash Earnings



Source: Fortuna Advisors

Companies err on the conservative side by thinking that with a higher rate they are less likely to make a bad investment without regard for how a higher rate might lead them to avoid good investments.

Most companies start with some sort of cost of capital calculation based on the weighted average cost of their debt and equity capital. Interest rates on debt are straightforward but the cost of equity requires a bit of science—and often a lot of art. Most practitioners use the Capital Asset Pricing Model (CAPM), which adds a risk premium on top of the risk free interest rate. Here, the risk premium is based on an estimate of the general Market Risk Premium (MRP is the typical excess return earned by equities over the risk free rate) multiplied by "beta," a measure of the non-diversifiable risk of the company. There is no consensus on inputs to this formula and you are likely to get 10 different cost of capital estimates if you ask 10 experts.

To illustrate, consider the variety of expert assessments of the MRP. A fresh survey of MRPs applied in practice by Pablo Fernandez et al of the IESE Business School in Madrid found that among 2,200 survey respondents, the U.S. MRP was estimated as high as 15.0 percent by some and as low as 1.5 percent by others. One in four respondents estimated MRP above 6.0 percent and another quarter estimated it below 4.5 percent. To make matters worse, the estimate of company risk, or beta, for companies in the same industry can range quite widely.

In addition to the lack of agreement among experts on the actual cost of capital, many executives and directors also raise the hurdle rates to account for other risks, such as forecasting biases from management or to create a buffer in case the expected results are not achieved. The result is that companies err on the conservative side by thinking that with a higher rate they are less likely to make a bad investment without regard for how a higher rate might lead them to avoid good investments.

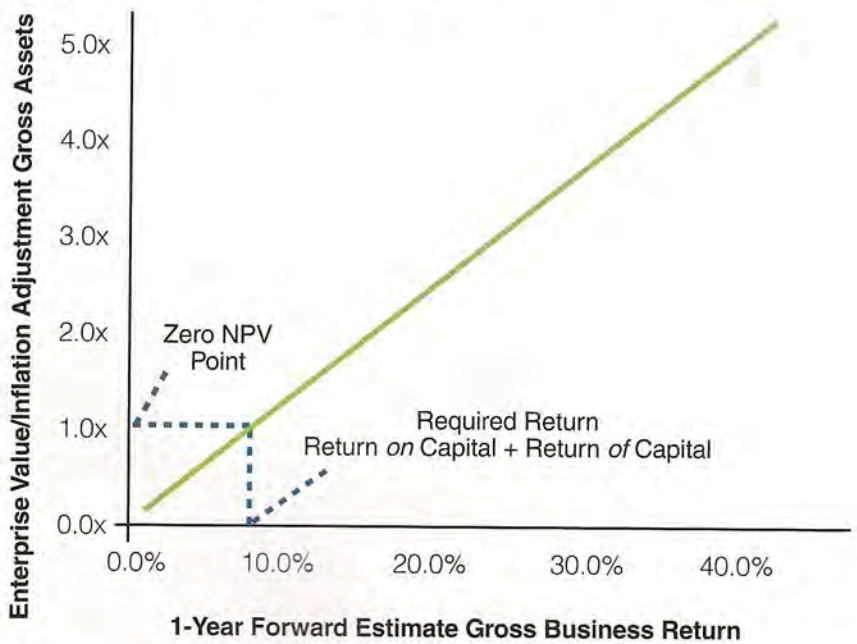
A fresh look at the required return

Businesses differ on growth expectations and performance sustainability, resulting in some companies trading at a premium to the value implied by their current performance while others trade at a discount. On average however, companies delivering the required return (no more and no less) should be worth an amount roughly equal to value of the capital employed (no more and no less).

There are many ways to calculate return on capital. The methodology employed here is called Gross Business Return and is a basic after-tax return on capital with three important differences that improve the ability to explain valuation in the market:

1. **No Depreciation:** The numerator starts as an after tax EBITDA with no charge for depreciation and

Figure 2: Deriving the Required Return 'Regression Method'



the denominator is based on gross (undepreciated) assets. This avoids viewing old assets as being more profitable simply because they have been depreciated for accounting.

2. **R&D is an Investment:** The numerator does not include the R&D expense, making it EBITDAR, and the last five years of R&D is accumulated in the denominator. This treats R&D as the investment in the future that it is.
3. **Operating Leases are Capital:** To treat leased and owned assets more consistently, rent is not charged to the numerator, making it EBITDARR, and is capitalized as part of the gross investment base.

This Gross Business Return is compared to a valuation ratio. It divides enterprise value using the market value of equity plus the net debt and the obligation of capitalized operating leases by the gross investment based on the very same definition used in the rate of return measure. It is a variant on the market to book ratio.

When the enterprise value equals gross investment, the ratio is 1.0x. We call this the Zero NPV Point. Figure 2 illustrates how the Zero NPV Point is used to determine the required return. The red line represents the median slope of the valuation versus return line for the largest 1,000 non-financial companies in the United States.

The required return determined in this way tells us the level of Gross Business Return required, on average, to be valued equal to gross investment (no more and no less).

The required return, as determined

Case Study: How One Treasurer Uses Hurdle Rates

Phil West

At W.W. Grainger, Inc., it's been our practice to calculate the company's weighted average cost of capital (WACC) at the end of each quarter. We've been doing this since 1989, so we have a robust history of how the number has moved over time. Like most others, we use the capital asset pricing model to drive our WACC calculation. This is fairly straightforward. But many in my role experience two significant challenges once the WACC is calculated.

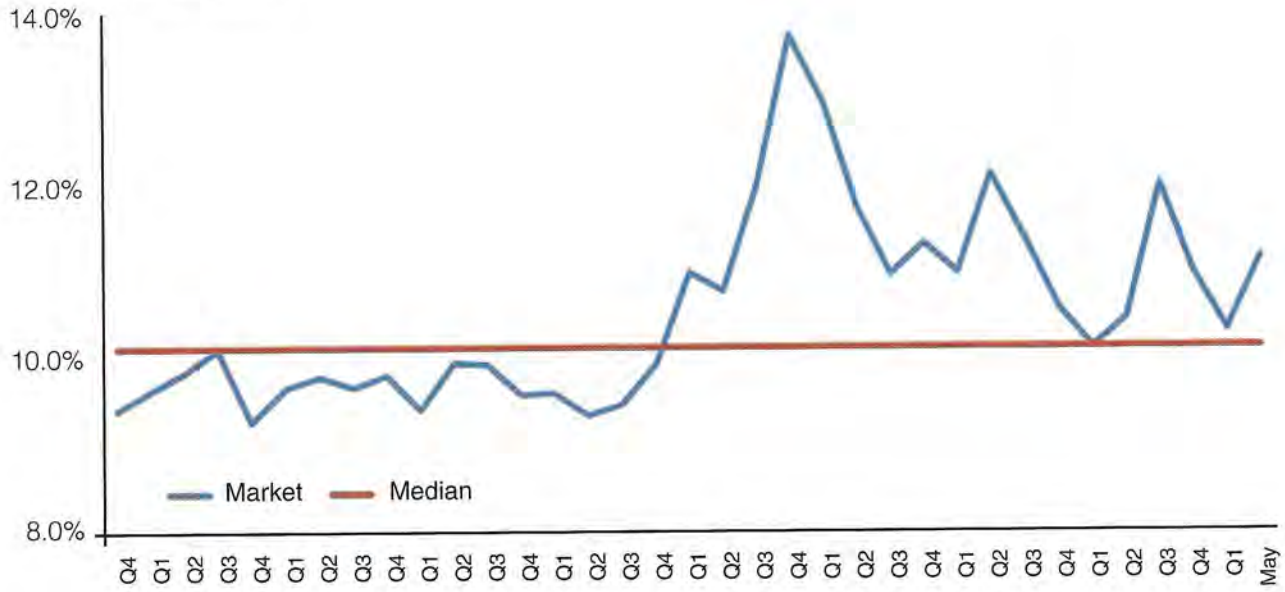
First, companies need to set a hurdle rate. This is the rate that will be used for discounted cash flow analyses, evaluating customer or product profitability, and perhaps even as a parameter in executive incentive plans. Can the WACC and the hurdle rate be the same number? They could, but many companies favor a hurdle rate that does not change frequently. These companies would like their employees to take aim at a fixed target, rather than wonder why the target seems to move around so much. This pretty much disqualifies WACC because it can change each time it is calculated. One way out of this dilemma is to look at the WACC over the preceding months or quarters, apply some judgment, and then declare a hurdle rate. The same hurdle rate is then used until the WACC drifts too far away. This approach allows for variability in the underlying WACC without having to make frequent adjustments to the hurdle rate.

Second, companies need to decide if the same hurdle rate is appropriate for every financial analysis. One view is that any company is simply a collection of many different projects and initiatives, each with a different level of risk. It follows that each project or initiative should be analyzed with a hurdle rate reflective of its own risk. Under this approach the purchase of a new photo copy machine and the development of a new product line would be analyzed using different hurdle rates. But this approach can get very complicated very quickly. Any large company is likely to analyze dozens, if not hundreds, of projects in any given year. And some initiatives become less risky over time; should the hurdle rate for these projects decline by year? Establishing a unique hurdle rate for each project, let alone each year of a project, is daunting. Some companies cope with this complication by categorizing projects as low, medium, or high risk, and then assign progressively higher hurdle rates to each category.

Responding to these two challenges can create a very healthy debate inside a company. Not surprisingly, each company will arrive at unique conclusions.

Phil West is vice president and treasurer of W.W. Grainger, Inc. West and Milano will speak at the 2012 AFP Annual Conference, October 14-17, in Miami.

Figure 3: Required Returns



In many companies, the use of excessively high hurdle rates shifts the dialogue away from investing in growth and toward squeezing short-term returns, often to a greater degree than should be the case.

herein, is the total annual required return including the return of capital (depreciation) and the return on capital (return). In May 2012, the required return was 11.2 percent and the quarterly median since the end of 2003 was 10.1 percent. These estimates may seem high versus the typical weighted average cost of capital for many companies. But this is due to the fact that depreciation is not charged against Gross Business Return the way it is in most rate-of-return and economic profit measures. In this sense it turns out to be about one-half to two-thirds of the typical hurdle rates applied when evaluating period performance.

When market valuations relative to the Gross Business Returns are generally high, the derived required return is low. For example, in 2007 investors did not demand very high returns on their capital, pushing valuations up faster than the improvement in the underlying earnings of the companies. When the market valuations relative to performance moves lower, the required return increases. The required return peaked at the end of 2008, when investors demanded very high returns. Figure 3 shows how the required return has varied over time.

With the exception of the middle of the financial crisis, the required return we derive from the capital markets is a noticeably lower benchmark than the hurdle rates used by many companies. In practice, most companies should use the long-term median required return rather than allowing the rate to float. This is easier for non-financial staff to understand and it tends to encourage more investment at the bottom of the cycle when assets tend to be less expensive and less investment at the top when assets are more expensive.

In many companies, the use of excessively high hurdle rates shifts the dialogue away from investing in growth and toward squeezing short-term returns, often to a greater degree than should be the case. Companies that recognize the value of investing in the future and seek to energize growth should consider this new approach to setting hurdle rates in order to avoid discouraging value creating investments.

Gregory V. Milano is the co-founder and chief executive officer of Fortuna Advisors LLC. Steven C. Treadwell is a former partner of Fortuna Advisors and contributor to the required return research.