2011 AFP
Current Trends in Estimating and Applying the Cost of Capital
Executive Summary Report

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Report of Survey Results

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This is the executive summary report. To receive the full report, which includes detailed data table with peer groups set by company size and ownership type, go to www.AFPonline.org/FPA

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Current Trends in Estimating and Applying the Cost of Capital

Introduction

On December 9, 2010, the Federal Reserve reported that non-financial companies in the U.S. held nearly $2 trillion in cash and short-term liquid assets. That $2 trillion represented the largest percentage of cash held by companies as a share of corporate assets in over a half a century.

Why are these organizations holding on to such a large amount of liquid assets? One likely reason is that they remain deeply concerned about the strength and sustainability of the economic recovery. Both consumer spending and job growth continue to be lackluster, and many companies are unwilling to invest in an expanding workforce or in new or improved plants and equipment. In an environment of slow economic growth, and amid a general perception of elevated levels of business and general risk in the U.S. and around the globe, companies have found it increasingly difficult to find opportunities where they can deploy their cash reserves into long-term productive assets that will generate economic returns for their stakeholders, as well as contribute to overall economic recovery and growth.

As corporate confidence in the domestic and global economies increases and uncertainty over regulatory guidelines stemming from the financial and economic crisis abates, CEOs and Boards of Directors will face increased pressure from shareholders to shift some of that cash into assets and projects that generate higher returns. Companies need to analyze whether or not the present value of the cash flow generated from any investment opportunities—projects, investment in personnel, etc.—are likely to exceed the cost. Such decisions often define the future of a company. Effective project selection can set the stage for long-term advantages including revenue growth, cost savings, productivity enhancements, and product innovations. Conversely, investing in projects that do not generate economic value can quickly and materially erode the competitiveness and profitability of a company.

The processes used to evaluate the profitability of projects and strategic investments are complex and involve many subjective factors that can dramatically affect the outcome of such analysis. Even seemingly small variations in these inputs can lead to pronounced differences in the projects a company undertakes or avoids, and therefore also can affect the company's long-term profitability and even viability. Among the variables companies must estimate are forecasted cash flows and the cost of debt and equity used to fund any project. Further, each of those variables is derived from other estimates, adding yet another layer of complexity to the analysis.

Providing the "right" answer about how to estimate each of these variables is a difficult, if not impossible, task. However, many companies at least want to ensure that their processes are in line with commonly accepted practices. However, given the strategic nature of this data and their use, companies are often hesitant to share their approaches openly with other organizations, and some even guard it closely within their own organizations.

To provide financial planning and analysis professionals with insight into current trends in project and investment valuation and estimating the cost of capital, the Association for Financial Professionals (AFP) conducted a survey in October 2010. More than 300 financial planning and analysis professionals responded to the survey. Their responses, which are reported here, provide current insight into practices currently being used in the profession to deploy corporate capital.

Executive Summary

Evaluating potential uses of corporate assets is one of the most critical and defining activities that an organization undertakes. Making the right choices among the various available investment alternatives can lead to immediate and long-term value creation that benefits the organization, its employees, its investors, and other stakeholders. Conversely, making the wrong decision, or failing to make any decision, can erode the value of a company, harm its competitive position, and even lead to the collapse of the business.

Yet despite the broadly acknowledged importance of cash flow forecasting and estimating the cost of capital when performing project valuation, there is little agreement on what constitutes the "right" approach for this function. While most companies —79 percent, including 91 percent of companieswith annual revenue greater than $1 billion—are currently using discounted cash flow (DCF) techniques, there is less consistency in how organizations estimate cash flows and determine the weighted average cost of capital (WACC) at which those cash flows are discounted.

While five years is the most common period over which organizations explicitly forecast the cash flows associated with a project (cited by 46 percent of survey respondents), over one third of organizations forecast explicit cash flows for the first ten years of a project. There is also great diversity in how organizations determine the value of cash flows for the remaining life of a project (i.e., terminal value). Slightly less than half of organizations (46 percent) use the perpetuity growth model, while 27 percent of organizations develop an explicit cash flow forecast for the entire life of a project. Nearly three in four organizations (72 percent) develop multiple cash flow scenarios (representing the expected outcome), as well as best case and worst case outcomes which are then discounted. However, a significant share of organizations (28 percent) uses only a single cash flow scenario.

There is even greater diversity among organizations in the methods they use when estimating the WACC. In estimating the cost of equity, nearly nine of ten organizations use the capital asset pricing model (CAPM). CAPM calculates the cost of equity using a risk-free rate, beta factor, and a market risk premium, each of which introduces significant variability. While nearly half of organizations (46 percent) use the 10-year Treasury note to estimate the risk-free rate, a notable percentage of companies also use the 90-day Treasury bill (16 percent), five-year Treasury note (12 percent), and even the 30-year Treasury bond. Given that the historical spread between 90-day Treasury bills and 30-year Treasury bonds is approximately three percent, this wide variation in choices for the risk-free rate will have dramatic effects on project valuation. Survey results

also reflect no dominant choice in terms of looking to the past, present or future in determining the rate to use for a selected instrument. While nearly half of organizations (47 percent) use the current rate on a selected instrument, more than one out of three (35 percent) use the average historical rate over some period of time. Fourteen percent of organizations take a forward look and use a projected rate on the selected instrument. Adding to this complexity, slightly more than one in ten organizations (11 percent) impose both a floor and a cap on the risk-free rate they use to minimize the impact of historically abnormal high or low rates, with another ten percent imposing only a floor on the risk-free rate.

Nearly three out of five organizations (59 percent) use Bloomberg to determine the beta factor used in CAPM to estimate the cost of equity. While other methods are used, only Ibbotson is used by as many as one in ten organizations. Those organizations that use Bloomberg still need to make decisions about the tenure and frequency of returns over that tenure that will be used in estimating the beta factor. Survey results show great diversity in this, with no combination being used by even a third of organizations. Twenty-seven percent of organizations use monthly returns over a five-year estimation period to calculate beta, with another 23 percent using monthly returns and a one-year tenure. A smaller but still significant share of companies use monthly returns over a three-year period and weekly returns over a five-year period to calculate the beta factor. More than half of organizations (57 percent) then use the adjusted beta, effectively driving the beta closer to one based on a long-term assumption of mean reversion.

As with the determination of the risk-free rate, there is great diversity in the market risk premium used in calculating the cost of equity. While nearly half of organizations (49 percent) uses a five- to six-percent market risk premium, other choices are still quite prevalent. Twenty-three percent of organizations use a market risk premium of between three and four percent, with nearly one in five organizations (17 percent) using a market risk premium of seven percent or more. At the other extreme, more than one out of ten organizations uses a market risk premium below three percent. This wide variation (of more than four percent) in the market risk premium used by organizations will have a dramatic effect on project valuation, especially for firms that rely heavily on equity financing.

Most organizations reevaluate the market risk premium they use with some regularity. Forty percent do so annually, while one in five organizations reviews its market risk premium every time it estimates WACC and 16 percent reevaluates each quarter. However, more than one in five organizations (22 percent) rarely reevaluates its market risk premium.

There is also little consistency among organizations in the methods they use to estimate the cost of debt. More than one third of organizations use either the current rate on their existing debt (37 percent) or the forecasted rate for newly issued debt (34 percent). More than one of five organizations reduces the volatility of the cost of debt by using an average rate on outstanding debt over some period of time. Results from the survey are more consistent for the tax rates that organizations apply to calculate the after-tax cost

of debt. Sixty-four percent of organizations use their effective tax rate, but nearly three in ten organizations (29 percent) use the marginal tax rate, and seven percent use a target tax rate.

After calculating the cost of equity and the after-tax cost of debt, organizations still have to choose the weighting factors to apply to each component of WACC. There is even less consensus among organizations on the best approach to weighting; no single approach is used by even one third of organizations. The most commonly used approach is an organization's current book debt-to-equity ratio (cited by 30 percent of survey respondents), with the targeted debt-to-equity ratio being used almost as widely (28 percent). Nearly a quarter of organizations (23 percent) use the current market debt-to-equity ratio, and 19 percent use the current book debt-to-current market equity ratio.

While estimating WACC is a complex undertaking, most organizations recognize its critical importance to their investment decision process and review WACC with some regularity. Thirty-eight percent of organizations review WACC each time it is used in a valuation, and more than one in three organizations review WACC on an annual basis. Smaller but significant percentages of organizations review WACC quarterly (19 percent) or monthly (eight percent).

Inaccurate estimates of the cost of capital can have significant impact on valuations. Despite extensive efforts to accurately estimate the cost of capital, most organizations lack confidence in the accuracy of such estimates. More than half of organizations (55 percent) believe their estimates are off by more than 50-basis points. Conversely, less than one in five organizations (17 percent) believes its estimates are accurate within 25-basis points. Organizations tend to keep their estimates of WACC closely guarded and communicate that information only on a need-to-know basis; only 15 percent of organizations communicate their estimates company-wide.

While the majority of organizations (53 percent) use the calculated WACC to evaluate all projects and investments, in certain circumstances nearly as many (47 percent) use a hurdle rate above the calculated WACC. Sixty-eight percent of organizations that use a hurdle increase it to account for unique project risks, while 43 percent assign a higher hurdle rate for new business projects. Approximately one third of organizations increase the hurdle rate above the calculated WACC for particularly large investments (35 percent) and international investments (31 percent).

The country risk rating model is the most commonly used method when adjusting WACC for international investments, with nearly half of organizations (48 percent) employing that approach. Three out of ten organizations use the sovereign yield spread to adjust the cost of capital.

When valuing a potential acquisition, organizations use a cost of capital other than their own calculated WACC. Slightly more than half of organizations use the cost of capital for a group of companies comparable to the proposed acquisition target, while 37 percent use the acquisition target's own cost of capital to evaluate the proposed acquisition.

Conclusion

Profile of Typical Project Valuation Process

The typical organization uses discounted cash flow (DCF) analysis to evaluate the uses of its capital when considering competing projects and long-term investments. When estimating the cash flows to be discounted, the organization develops an explicit cash flow forecast for the first five years of the project or investment, and applies an estimated terminal value to all cash flows thereafter. The company uses the perpetuity growth model to estimate that terminal value. Recognizing the unpredictability of forecasted cash flows, the typical company uses multiple cash flow scenarios, including best case, expected case, and worst case forecasts.

To determine the rate at which to discount cash flows, the typical organization calculates its weighted average cost of capital (WACC) and reviews that calculation only when needed for a valuation. The company uses the calculated cost of capital and does not commonly adjust the WACC to reflect factors unique to the project or investment being considered. The company recognizes that its estimate of WACC is not perfect, but believes it to be accurate within a range of plus or minus 75 basis points. The company does not broadly communicate its cost of capital, but rather shares it on a need-to-know basis. When valuing a potential acquisition, the company uses the estimated cost of capital from a group of companies comparable to the potential acquisition target.

To determine the weights to apply to the cost of debt and the cost of equity in determining WACC, the typical organization uses the current book debt-to-equity ratio. The nominal cost of debt is based on the current interest rate on the company's outstanding debt, with the after-tax cost of debt being calculated using the company's effective tax rate.

The company uses the capital asset pricing model (CAPM) to calculate its cost of equity. To make that calculation, the company uses the current rate on the 10-year Treasury note as its risk-free rate. Regardless of where that rate is, the company does not impose any floor or cap on the risk-free rate. The company uses an adjusted beta as reported by Bloomberg using monthly returns over a five year period. The market risk premium to which this beta is applied is between five and six percent, and that premium is re-evaluated annually.

About the Survey

In October 2010, the Research Department of the Association for Financial Professionals (AFP) sent a 30-question survey to its corporate practitioner members and prospects (along with subscribers to gtnews) with senior-level job titles including CFO, Treasurer, VP of Finance and Assistant Treasurer. When the survey closed, AFP had received 309 responses. The modified response rate from AFP corporate practitioner members only (after adjusting for bad e-mail addresses, etc.) was approximately seven percent. Those responses to this survey are the basis of the report.

Financial professionals who responded to the survey on behalf of their organizations are representative of AFP's membership as a whole. The typical respondent works for an organization with annual revenues of $1.9 billion. The largest percentage of respondents is employed in manufacturing. The following tables provide a demographic summary of the survey respondents

Industry Classification
(Percentage Distribution)

Manufacturing	25%
Energy (including Utilities)	13
Retail (including Wholesale/Distribution)	10
Business Services/Consulting	8
Health Services	8
Software/Technology	8
Banking/Financial Services	6
Telecommunications/Media	5
Transportation	5
Construction	4
Insurance	3
Non-Profit (including Education)	2
Real Estate	2
Hospitality/Travel	1
Government	0

Annual Revenues
(Percentage Distribution)

Under $50 million	12%
$50-99.9 million	5
$100-249.9 million	6
$250-499.9 million	8
$500-999.9 million	12
$1-4.9 billion	29
$5-9.9 billion	14
$10-20 billion	10
Over $20 billion	4
Median	$1.9 billion

Organization's Ownership Type
(Percentage Distribution)

Privately held	57%
Publicly traded	43

AFP Research

AFP Research provides financial professionals with proprietary and timely research that drives business performance. The AFP Research team is led by Managing Director, Research, Kevin A. Roth, PhD, who is joined by four research analysts. AFP Research also draws on the knowledge of the Association's members and its subject matter experts in areas that include bank relationship management, risk management, payments, and financial accounting and reporting. Study reports on a variety of topics, including AFP's annual compensation survey, are available online at www.AFPonline.org/research.

About the Association for Financial Professionals

The Association for Financial Professionals (AFP) headquartered in Bethesda, Maryland, supports more than 16,000 individual members from a wide range of industries throughout all stages of their careers in various aspects of treasury and financial management. AFP is the preferred resource for financial professionals for continuing education, financial tools and publications, career development, certifications, research, representation to legislators and regulators, and the development of industry standards.

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