

A search for precision



The idea of shareholder value is now almost universally recognised as the fundamental governing principle for corporates across the globe. Maximising returns to shareholders by delivering increased dividends and capital growth is the key goal by which organisations are measured.

The basic concepts are straightforward. The value of the corporation (and therefore its value to shareholders) is the net present value (NPV) of future cashflows, discounted at the firm's weighted average cost of capital (WACC).

So companies seeking to maximise shareholder value have two primary aims. The first is obvious: to enhance positive cashflows by delivering increased income and cutting costs.

The second is to reduce the WACC by which those cashflows are discounted. Reducing the WACC increases the NPV of those cashflows, and therefore maximises the market value of the corporation.

Through these two aims, shareholder value influences decision-making throughout the entire business.

Consequently, given that business decisions will ultimately be assessed in financial terms, an intrinsic connection between corporate strategy and financial decision-making has developed. Given the central role of the treasury department in corporate

finance, the importance of the treasurer's role in delivering shareholder value is clear.

One area in which treasury can have a clear impact on shareholder value is through influencing capital structure policy – how the company is financed.

The basics of financing (debt versus equity) are clear. Equity providers take greater risk through their investment than debt providers, and thus demand an equity risk premium. Because it has a prior claim to assets in the event of liquidation, debt is cheaper than equity, and also benefits from tax-deductibility (the 'tax shield'). As gearing increases, the requirement to service debt increases and so the risk to both equity and debt providers is greater, and both will demand higher returns.

At a simple level, an 'optimal' capital structure simply means that proportion of debt and equity which minimises the WACC, therefore increasing the NPV of the firm and maximising shareholder value. The concept of optimal capital structure implies that it is possible and feasible to manipulate the financing mix of the company in order to reduce the WACC.

ROWAN AUSTIN LOOKS AT HOW OPTIMISING CAPITAL STRUCTURE IS A REAL-WORLD ISSUE RATHER THAN AN ACADEMIC EXERCISE.

FIERCELY CONTESTED But while the basic principles are apparent, the question of whether an organisation's capital structure can in practice be optimised to minimise the WACC and to maximise corporate value has been one of the most fiercely contested in corporate finance.

Executive summary

- Whether capital structure can be optimised to minimise the weighted average cost of capital is one of the most fiercely contested issues in corporate finance.
- It is generally accepted that there is an optimal capital structure but difficult to ascertain what that optimum is.
- For many corporates, the ability to maintain financial flexibility is as critical as minimising the weighted average cost of capital.

In the 1950s, Modigliani and Miller initially hypothesised that capital structure had no effect on the value of a firm, arguing that the WACC remained unaffected by gearing levels. The implication of this argument was there could be no optimal point in the capital structure because gearing level has no effect on WACC.

Accepting that these theories were based on unrealistic 'perfect markets' assumptions, Modigliani and Miller later revised their theory to integrate the tax shield of debt finance, and also bankruptcy costs as leverage levels increased.

These theories initiated a debate which still rumbles on. However, most theorists and practitioners now generally accept the concept of risk transference: that there is a trade off between the tax advantage of further borrowing, and the increased cost of potential financial distress.

Accordingly, it is generally accepted that there is an optimal capital structure (in theory at least), where WACC can be minimised and the value of the company can be maximised.

Figure 1 illustrates the theoretical effect of increasing leverage on respective costs of debt, equity and the combined WACC. As leverage increases, the WACC reduces as the tax shield is utilised. However, over a certain leverage level, the costs of potential financial distress outweigh the tax shield (which may be exhausted), and therefore the WACC starts to rise.

If it is accepted that there is a capital structure which minimises WACC, presumably managers pursuing shareholder value should be committed to moving towards that capital structure.

In theory they are, but in practice the issue is not quite so simple. Although it forms a key tenet of both financial and commercial decision-making, one particular challenge lies in the calculation of WACC itself. The arithmetic calculation is straightforward: inserting numbers into a simple equation, to reflect the weighting of debt and equity at their respective costs.

THE CAPITAL ASSET PRICING MODEL The cost of debt is relatively simple to identify, but calculating the cost of equity is far more subjective. There are various methods which can be utilised – for example, the dividend discount model, arbitrage pricing theory, and the capital asset pricing model.

The capital asset pricing model measures the cost of equity through a beta coefficient and an assessment of the equity risk premium, and is perhaps the most widely used method. Though simple to calculate, it is far from perfect due to a number of assumptions inherent in the methodology.

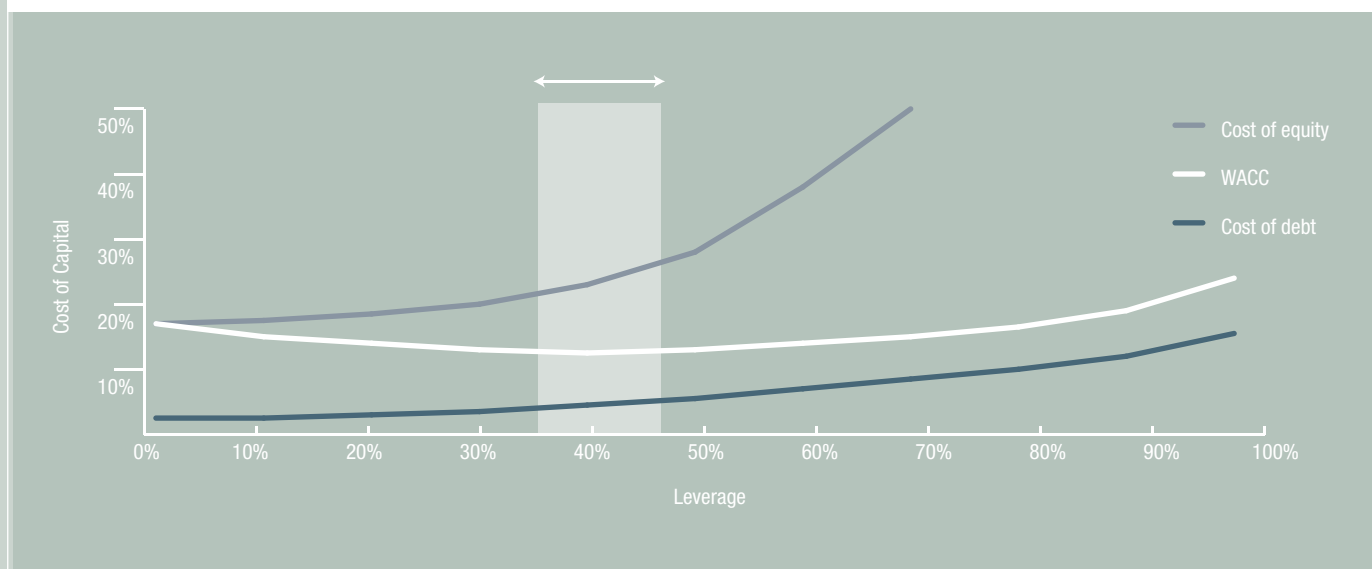
More complex methods of calculating the cost of equity from market-implied data and future cashflows may be more academically sound, but rely on uncertain future outcomes and are also cumbersome to calculate. Such different methodologies can result in markedly divergent figures for WACC, which can clearly influence the capital structure decision-making process.

There is so much uncertainty around the calculations that it is challenging to accurately identify exactly what effect a change in leverage level will have on a company's capital structure. This is further complicated because capital structure is dynamic and constantly changing.

With differing theories, subjectivity and even a fair degree of guesswork around capital structure, it is therefore difficult to ascertain a precise optimum gearing level. Indeed, merely assuming the achievement of mathematical precision around WACC can be highly misleading!

This lack of precision causes problems for managers looking to maximise shareholder value by moving to an optimal capital

Figure 1. Optimal leverage to reduce WACC



structure. Because of these challenges, common practice is to set a leverage range for a company.

Also, it is generally accepted that the relationship between leverage and shareholder value is relatively flat around the optimum, meaning that exact calculation is less critical. Aiming to reduce WACC by manipulating the capital structure should therefore be a useful guideline for making financial decisions, rather than the solitary goal.

In purely numerical terms, therefore, an optimal capital structure is where WACC is minimised. However, this ignores other important considerations. The difference between optimum and maximum leverage levels (which will differ between companies and industries) is important, as is the recognition that the capital structure must suit the financial and operating profile of the business.

FINANCIAL FLEXIBILITY For many corporates, the ability to maintain financial flexibility is as critical as the minimisation of WACC. This is illustrated by the desire of many rated companies to maintain a certain credit rating, giving them cost-effective access to the capital markets and facilitating effective debt management.

Financial flexibility enables a company to take advantage of attractive investment opportunities when they arise, and also cushions against any unexpected downturn.

Excessive leverage can seriously impede an organisation's room for financial manoeuvre, and can destroy more value than may be generated by the quest to reduce WACC. Indeed, empirical evidence indicates that even where corporates establish defined leverage targets, the target tends to be based on the need to maintain a certain level of financial flexibility.

The decision on the maturity of financial liabilities is another important consideration in determining capital structure. Relying heavily on short-term debt may save basis points and therefore minimise WACC, but the liquidity and refinancing risk which this exposes the business to may be unacceptable. Increasingly, corporates are seeking to match liability and asset maturities, using a blended approach to debt tenor despite the comparatively higher cost.

For a business operating in overseas territories or in foreign exchange, the currency profile of borrowings will also be a factor to consider in determining the debt capital structure, given that foreign

currency assets and liabilities can be utilised to optimise risk management.

Finally, the interest rate profile of assets and liabilities is another key element of managing the capital structure.

If interest rates rise or fall, this clearly has an impact on the cost of debt and therefore WACC (and ultimately shareholder value). Effective management of the fixed/floating profile of the portfolio presents an opportunity to maximise shareholder value both by reducing WACC and by managing the volatility of future cashflows by protecting against downside risks.

This theory can be extended to other areas of risk management. Protecting against any downside risk can have an impact on both cost of debt and cost of equity (and therefore WACC and shareholder value). Stronger cashflows lead to an enhanced credit profile, and therefore a tighter credit spread and a lower cost of debt. Lower volatility leads to lower equity price fluctuation, less risk to shareholders and therefore ultimately a reduced cost of equity.

Other decisions made by treasury can also have an impact on the capital structure.

Focusing on enhancing working capital has become a central treasury theme in recent years. This is because capital released from working capital cycle can be deployed more effectively elsewhere in the business. For example, implementing an effective cross-border pooling structure can enhance liquidity, and reduce debt (thus changing the capital structure). A similar effect can be achieved by reducing investment in working capital through enhancing operational processes (in payables, receivables and stock management).

Aiming to optimise capital structure was once dismissed as an arithmetic and academic exercise. However, today it is very much a real-world issue. The increasing popularity of share buybacks by UK corporates is testament to the drive to enhance the efficiency of capital structures, as is the increasing use of hybrid capital instruments. Some corporates have even used capital structure to drive change within the business (see *Box 1*).

Also, corporates are increasingly prepared to take action to optimise the capital structure when certain opportunities arise. For example, many treasurers are taking advantage of strong credit markets to refinance at historically low rates. With the current

Box 1. Sealed Air case study

In 1989 Sealed Air Incorporated underwent a dramatic leveraged recapitalisation. As a leading global manufacturer of packaging materials, the organisation's strong cashflow was protected from competitive pressures by strong patents. However, both share price and operational performance languished.

Before the recapitalisation, the business had just \$33m in debt, with \$54m in cash. Sealed Air borrowed more than \$300m (compared to a net worth of \$160m), distributing \$328m to shareholders in the form of a special dividend – nearly 90% of the total market capitalisation.

The CEO explained that "our purpose was to use the company's capital structure to influence and even drive change in strategy and culture", and the recapitalisation certainly heralded a remarkable improvement in results.

The increase in leverage introduced a sense of urgency which shook up the business. This led to a revision of manufacturing processes, and a reduction in working capital investment. Targeting was revised, forcing managers to focus on the cost of capital in making investment decisions and in measuring returns achieved.

In the five years following the recapitalisation, the share price outperformed the S&P 500 by nearly 400% and the value of the firm also increased by over 100%.

REFERENCE

Karen H Wruck, "Financial Policy as a Catalyst for Organizational Change – Sealed Air's Leveraged Special Dividend," in *Journal of Applied Corporate Finance*, Winter 1995, Volume 7.4.

liquidity in the syndicated loans marketplace, BBB-rated corporates are able to refinance at equivalent spreads to those which were available to AA credits only two years ago.

In other words, optimising capital structure is not just about reducing WACC. There are many other factors which must be taken into account, many of which treasurers can influence in the drive to maximise shareholder value.

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