Executive summary

- Distinct but interrelated activities are demanding a more integrated and holistic perspective on corporate performance.
- A framework to ensure consistent decision-making must be faithful to the work of Modigliani and Miller.

Dump the silo

Historically, companies have addressed risk management, funding and capital structure as related but largely unco-ordinated decisions. Typically, the organisational structures set up for these functions and the decision-making processes themselves have been compartmentalised, operating in distinct silos in a way that has failed to capture fully the relationships between them. This has clearly not been optimal for shareholder value.

However, the past few years have seen a convergence in the management of these activities. There is now a growing recognition of the need for closer alignment and better co-ordination between the decision-making processes. Where and how to raise financing and what risks to hedge are interrelated questions that affect shareholder value and require input and co-ordination across several corporate functions, especially treasury, tax, corporate finance, legal and accounting.

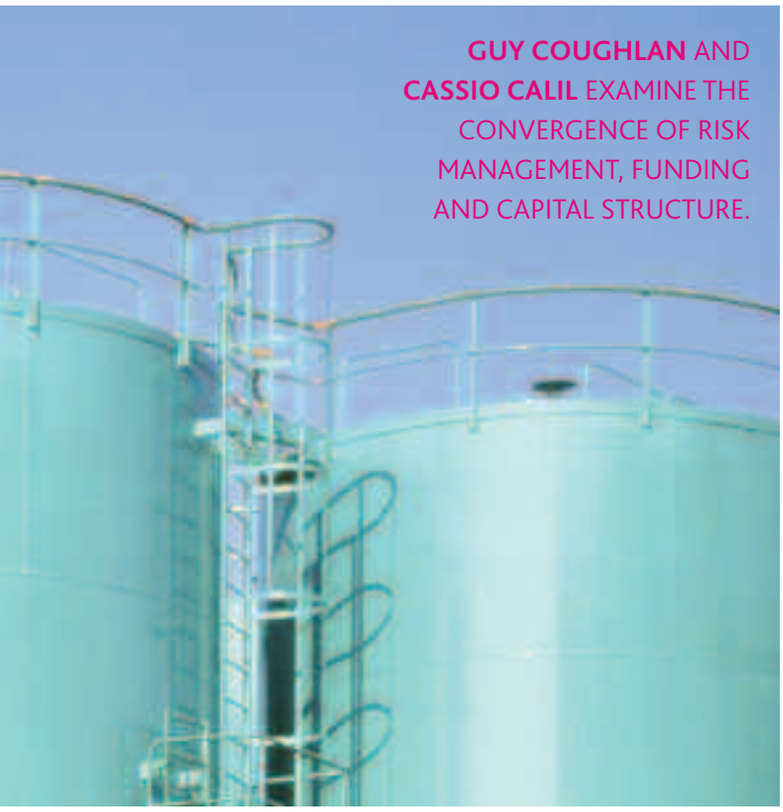
DISTINCT BUT INTERRELATED ACTIVITIES This is not to deny that risk management, funding and capital structure are distinct activities – they are indeed very different in nature. Risk management is the selective use of risk transfer and risk reduction (hedging) techniques to optimise the risk profile of the corporation in a way consistent with its risk budget. By contrast, capital structure management involves identifying the best mix of financing required to support the business objectives and sustain the company through the business cycle. Finally, funding is the implementation of a chosen capital structure and can also be a part of the implementation of a chosen risk management strategy.

Despite these differences, the interrelationships between these functions are demanding a more integrated and holistic perspective on corporate performance. These interrelationships have already made corporate risk management more holistic in terms of both scope and implementation. For example, responsibility for risk measurement, hedging and risk management has increasingly become centralised in the group treasury, which devises and executes a co-ordinated strategy across on- and off-balance sheet exposures. Furthermore, risk measurement and hedging decisions are increasingly being made in a corporate-wide asset-liability management (Calm) framework, which takes a holistic perspective on all corporate risks. Such co-ordination brings clear benefits in terms of capturing natural offsets in exposures and in the economic diversification of risk. It also ensures attention is appropriately focused on the most important risks.

The same kinds of interrelationships are aligning the way in which corporations approach capital structure and risk management, both at corporate and subsidiary level.

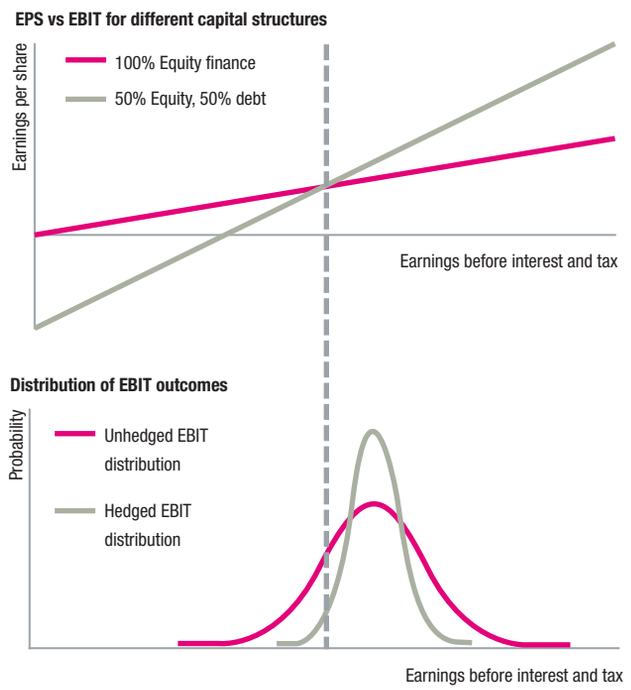
The need for this alignment is clear: without it 'optimal' decisions made in one part of the company may conflict with decisions made elsewhere. For example, having foreign currency debt as part of the capital structure can provide an effective hedge against much of the foreign exchange (FX) exposure associated with foreign subsidiaries. Failure to take this into account in the risk management strategy will expose the company to greater risk.

In a similar vein, hedging and risk reduction are activities that increase debt capacity, which in turn alters the optimal capital structure of the company. Failure to take this into account can lead to the business being inappropriately leveraged, as illustrated in *Figure 1*. Debt provides gearing or leverage to earnings per share (EPS), and a lower earnings before interest and tax (EBIT) volatility through hedging reduces the downside risk to EPS, so the firm can take on more debt, although the benefits of reducing EPS volatility need to be weighed up against the cost of hedging. So optimal capital structure and optimal risk management are intertwined and must be addressed consistently in a common framework.



GUY COUGHLAN AND **CASSIO CALIL** EXAMINE THE CONVERGENCE OF RISK MANAGEMENT, FUNDING AND CAPITAL STRUCTURE.

Figure 1. Hedging reduces downside leverage risk



AN EXAMPLE: CORPORATE PENSIONS Corporate pensions provide a topical example of the convergence discussed above. Until recently, pensions were paid very little attention by management and shareholders alike. Throughout the 1990s funding was not an issue and the fact that pensions might have implications for capital structure and corporate risk management was not even contemplated. In 2000 and 2001 our efforts to introduce pensions into the capital structure and risk management agenda of non-financial corporations were met with a surprising lack of enthusiasm.

However, the sustained downturn in the equity market, along with changes in accounting and regulation, has raised the profile of pensions and highlighted their impact on shareholder value and credit ratings. Increasingly, over the past five years companies have acknowledged this impact and started to measure and manage it on a holistic basis.

The relevance of pensions for capital structure and corporate risk management originates with the significant mismatch between assets and liabilities in most corporate pension plans. Pension liabilities (the benefits that must be paid to members) are fixed income-like in character, but pension assets typically include large amounts of equities. This mismatch exposes shareholders, as well as the pension beneficiaries, to considerable risks which are unrelated to the mainstream business. Moreover, this pension risk can in some cases completely dominate the corporate risk profile, dwarfing the risks associated with the operating business and its financing. To effectively measure and manage the impact of pension risk on the corporation requires a holistic risk management framework, such as the Calm approach mentioned earlier.

The pension risk mismatch also increases the effective gearing, or leverage, of the company and so alters its effective capital structure. A company with a pension plan invested heavily in equities has a much higher leverage in economic terms than that implied by its simple debt/equity ratio: its sensitivity to economic conditions is magnified and its weighted average cost of capital (WACC) can be significantly different.

FRAMEWORK FOR CONSISTENCY It is evident that capital structure, funding and risk management need to be integrated in a common framework to ensure consistent decision-making. That framework must involve a stochastic approach that combines holistic risk management with optimal capital structure in a corporate finance setting. In particular, it should be consistent with the work of Modigliani and Miller, which has become the cornerstone of capital structure decisions. Modigliani and Miller essentially identify three factors as the only drivers of optimal capital structure:

- Corporate taxation;
- Financial distress costs; and
- Imperfect capital markets.

If these three factors were absent, then capital structure wouldn't matter. The impact of corporate taxes on optimal capital structure is to make debt financing more favourable than equity, because interest is paid to debt holders before tax whereas the returns to equity holders are after tax. By contrast the last two factors provide a counterbalance, making equity more favourable. So the optimal capital structure reflects a trade-off between these factors.

The key to understanding optimal capital structure and its relationship to risk management is the observation that a firm's operating cashflows are stochastic and are affected by the choice of capital structure, by virtue of financial distress costs and the lost investment opportunities caused by financial market imperfections.

While the former is intuitive, the latter needs some explanation. Lost investment opportunities arise when investments are

OPTIMAL CAPITAL STRUCTURE AND OPTIMAL RISK MANAGEMENT ARE INTERTWINED AND MUST BE ADDRESSED CONSISTENTLY IN A COMMON FRAMEWORK.

postponed, curtailed or cancelled because debt service obligations eat into the cash that would otherwise have been used to make those investments. Frictions in the financial markets often mean that corporations do not raise additional capital to meet the shortfall and the forecasted cashflows generated by the planned investment are either reduced or lost. Lost investment costs and financial distress costs are clearly related and have a similar impact on limiting the total amount of debt in the optimal capital structure.

Note that the fact that a firm's operating cashflows change with its capital structure means that the capital structure decision cannot be addressed purely by focusing on the WACC.

Figure 2 illustrates this framework for integrating capital structure and risk management. Operating assets generate returns, which are used to pay tax, pensions, dividends and interest, and make new investments. Debt financing reduces the amount of cash diverted to pay tax, but in difficult times can limit the amount of cash available for investment, which in turn, reduces future operating cashflow. The optimal capital structure is the one that best supports corporate goals and sustains the business through the cycle. The optimal risk management policy reflects the hedging strategy that reduces the volatility of operating cashflow to a level that keeps the probability of financial distress and lost investment opportunities acceptably low.

PRESERVING VALUE Capital structure, funding and risk management are interrelated decisions that need to be co-ordinated to ensure value is not being destroyed. This requires a holistic perspective on corporate risks and a framework for evaluating the combined impact of risk management and capital structure. Implementation involves establishing the process linkages needed to facilitate a comprehensive corporate finance solution embracing close co-operation between different departments.

Guy Coughlan is Manager Director and Global Head of ALM Advisory at JPMorgan.
guy.coughlan@jpmorgan.com
Cassio Calil is Managing Director and Head of Corporate Solutions for the Americas at JPMorgan.
cassio.a.calil@jpmchase.com
www.jpmorgan.com

Figure 2. Framework for integrating risk management and capital