The economics of risk

Outsourcing agreements can add significant value even when they cost more. How? Risk/reward management defines three types of activities that improve organisational performance and need to be measured – risk avoidance, reward enhancement and volatility[1].

Risk avoidance activities reduce large exposures, eg continuity planning, insurance or legal compliance activities. Reward enhancement activities are normal management projects to increase performance such as marketing, training, cost reduction or improved production. Volatility reduction is subtle, yet activities that reduce volatility or improve consistent delivery add measurable value.

Risk/reward management can be summarised in four diagrams (see figure 1). Imagine a company looking at how facilities outsourcing can reduce cost. Outcomes could range from 'on budget' (0.00) to a lot more cost (–100) or a lot less cost (+100).

The first outsourcing objective is **risk avoidance**: managers look to ensure that the outsourcer can, through better skills, insurance or knowledge, eliminate particularly adverse outcomes.

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Second, the company can look to **reward enhancement**: outsourcers will often promote reward enhancement in 'soft' terms such as 'increased productivity', 'improved staff workplace satisfaction' or 'better contracting'. A whole range of typical management decisions by the outsourcer may lead to improved outcomes. The outcomes for the buyer supposedly shift positively to the right.

Third, and more subtly, the company can expect the outsourcer to **reduce volatility**, by delivering consistently on cost and 'tightening' the range of possibilities.

In this example, all three activities – risk reduction, reward enhancement and volatility reduction – combine to move from a starting range of –100 to +100 with a mean of 0.0, to a range of –30 to +125 with a mean of 25, and a much higher probability of hitting that mean.

It is important to think about the advantages an external outsourcer might have over an internal outsourcer. Support services, internal or external, pursue three fundamental objectives to help increase shareholder value:

- **risk avoidance:** control costs, so that profit increases
- **reward enhancement:** improve service, so that more value is added by the 'front line', and profit increases
- **volatility reduction:** reduce profit volatility, as lower profitability variance leads to increased share value

'Least cost' is rarely a sensible objective, as it may mean increased risk. For example, poor maintenance leads to a higher chance of plant failure, leading to increased volatility. It may also mean that front-line value-added is poor. For example, ineffective human resources management leads to key staff losses and poor-quality intake or purchasing decisions that impede good supply chain logistics. Recognising the interrelationships among the three fundamental objectives is crucial to making decisions about cost and quality on specifications to an external outsourcer of such things as service-level agreements.

In a listed company, volatility reduction can be estimated and the value calculated. One study[2] showed that companies in the lowest quintile of profit volatility had share premium of 17% (see figure 2). Simple procurement decisions can significantly enhance share prices, particularly if the outsourcer has a strong balance sheet and is able to guarantee 'on target' cost delivery.

OCCUPANCY

Paying more for serviced offices may make sense[3]. Figure 3 shows that occupancy volatility is a significant contributor to a 'true' cost/workstation. Staffing volatility of 25% is common, just look at the downsizing and right-sizing numbers as they affect some organisations, or look at the rate of staff increases during booms. The impact of 25% volatility is that space wastage or overflow increases the cost/workstation by £1,695 nationally and by £2,836 in the City of London.

'Serviced office' models guarantee a fixed cost/workstation, assuming the facilities management supplier's balance sheet and cost management are credible. The value of these 'risk/reward options' can be priced using standard financial tools and show that, although a more certain cost solution may cost more, the certainty that costs will not go over a certain amount has great value.

In some cases, Z/Yen has analysed the premium costs of serviced offices as a 'put option' to sell the remaining costs (typically at virtually nil cost); in others as a 'call option' to purchase temporary space at short notice. If costs are known to be fixed and occupancy is 100%, then these options have little value. If costs vary and occupancy varies, then the option increases in value.

Perhaps managed office service providers should be providing clients with tools to help them price risks – occupancy, cost, etc – in order to prove the value of more certain cost solutions to clients.

STRATEGIC OUTSOURCING EXAMPLE

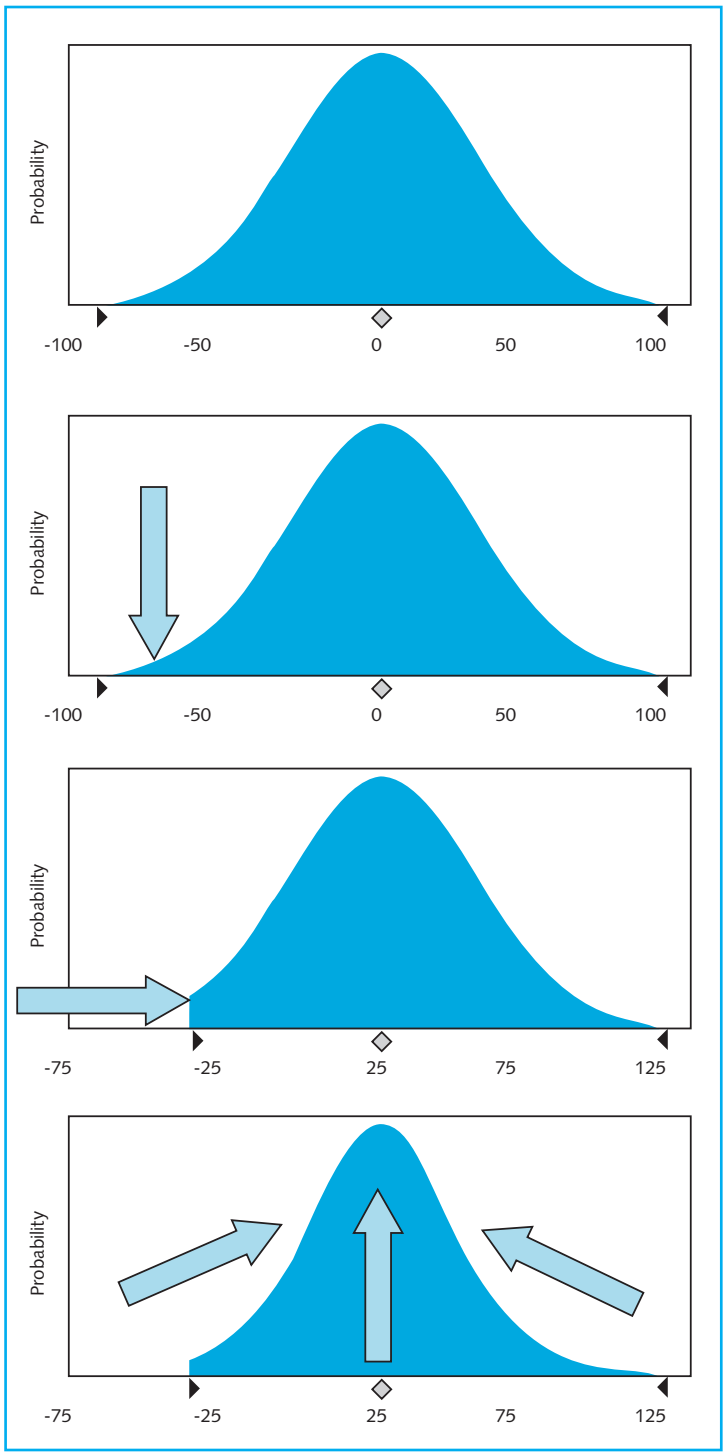
For two clients, company A and company B, Z/Yen independently developed strategic occupancy plans.

Companies A and B, despite coming from wildly different industries, had comparable, complex light industrial space requirements. Company A was largely based on three primary sites – 4,250 staff occupied 80,000 square metres. With rather high margins, it had allowed its property and facilities costs to creep up to nearly 20%. Company B was largely based on six large sites and some smaller ones with 7,000 staff occupying 120,000 square metres. As tighter margins required a more tightly run ship, B spent about 12% on property and facilities.

Both companies had unique industrial requirements and facilities that skewed cost analysis when examined minutely. Naturally, there were complications over calculations of rent, such as taking into account freehold, partial occupancy, dilapidation, depreciation, planned refits, space calculations for disused buildings, etc. Together, A and B spent about 70% on business occupancy (defined as cleaning, utilities, engineering maintenance, security and fire services) and business support (defined as engineering support, telecommunications, catering, some reprographics, cars and transport), versus about 30% on rent.

Company A was the more profitable, with twice the margin of B, yet the bottom line impact of business occupancy and business support costs was similar – each 1% increase in facility costs amounted to about a 1% profit decrease in both cases.

Figure 1: Range of probable cost outcomes of outsourcing



BUILDING A PICTURE

Z/Yen brought all financial projections back to two measures – £/m² and £/capita. Over the course of both projects, £/capita became the real centre of attention. Averages do mislead. A's £/capita costs averaged £5,578 but ranged from £4,250 to £7,000, while B's £/capita costs averaged £4,583 and ranged from £2,500 to £6,500. Although the outlying numbers were unlikely to arise in real life, it was going to be very difficult for managers to reduce costs by much. For instance, B's management had only a 30% chance of reducing costs by 10%.

When cost risk and sensitivity were contrasted, A had to look at engineering support and utilities, while B had to examine fire services, telecommunications and security. Although rent was included in both analyses, because rental costs were relatively fixed and the variance of rent low, the teams had other things to focus on before examining rental options such as sale and leasebacks.

Simply halving the volatility of fire services, telecomms and security (25% of total costs including rent) trimmed B's costs range from £2,500–£6,500 to a tighter £3,250–£6,000.

CLEAR DECISIONS

Z/Yen uses risk/reward option theory to value reduced volatility, focusing on six variables. Three of the six variables are used in other investment models – cash flows gained from the investment, the cost of the investment, and the risk-free interest rate. Three of the variables reflect the nature of an option – time to expiry, cash flows lost from not investing and volatility (risk). What risk/reward option theory demonstrates is that volatility (risk) has a high cost.

To illustrate, consider B's fire services. Fire services had a history of varying wildly, both annually and by site (at least when compared with other costs). While the reasons for the variances may be unimportant for algorithmic purposes, they included poor management, unbudgeted training costs, unexpected safety compliance issues and sub-optimal location.

B was looking at a radical new plan that combined site rationalisation, partial outsourcing, partial insourcing (external customers), heavy investment in new equipment and higher-quality staff. The plan significantly increased costs, but the expected variance was much less.

As fire services costs would be more certain under the plan, risk would be reduced. Company B could spend almost 12% just to ensure that next year's costs are the same as this year's and still create value. Company B's property project team used risk/reward option theory successfully to get the support of the board, particularly the finance director, for the plan, a major strategic outsourcing project partnering with a total service outsourcer on a contract amounting to 10% of corporate expenditure.

Figure 2: Relation of profit volatility to share premium

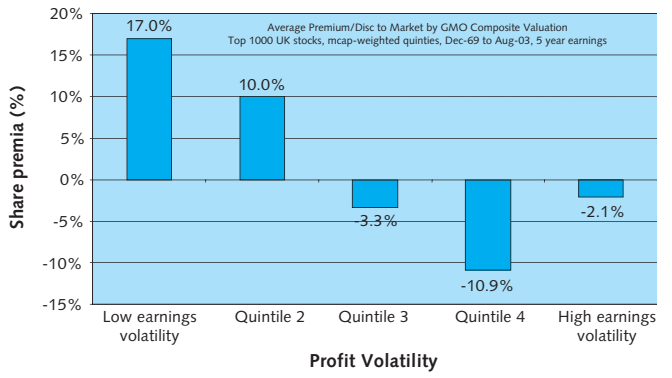


Figure 3: Relation of occupancy volatility to workstation cost

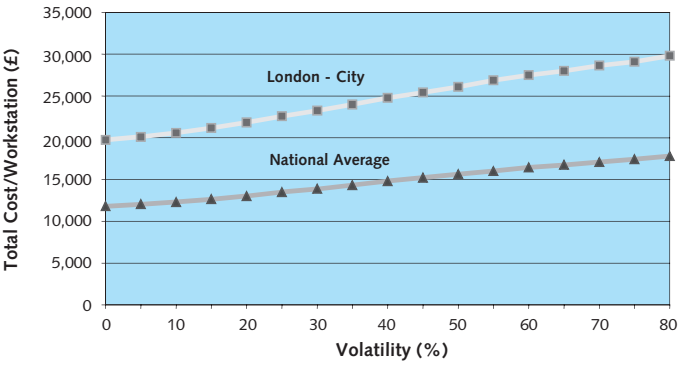
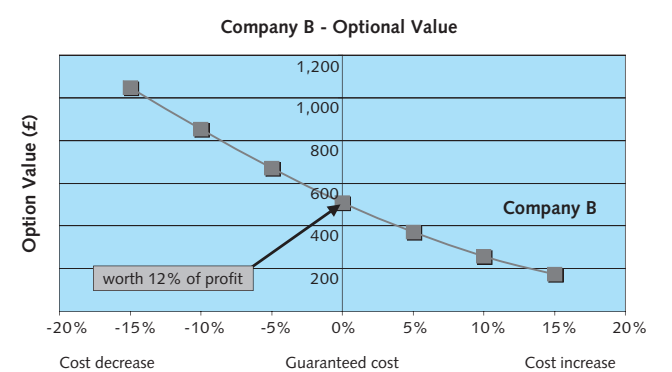


Figure 4: Company B – option value



Initially, B's management team were prepared to see a cost increase of up to 5% (0.5% at a corporate level), but the overall corporate gain from reduced volatility would show up in the share price as at least 7%. This was worth an additional £500 per capita, ie taking their value-created per capita from £4,286 up to £4,786.

Through some innovative contract structuring that shared risks and rewards with the outsourcer, costs actually dropped by 10% in the following year. While only 5% of these savings were retained by B, in just one year they had reduced costs by 5% as well as reducing volatility markedly. The total effect was worth an additional £832 per capita, ie taking their value-created per capita from £4,286 to £5,118, a 19% increase. That 19% per capita increase had come from the property and facilities area alone. On B's P/E ratio of 20, that 19% per capita improvement turned out to be worth over £110 million on the share price for a £40 million per year deal with the outsourcer.

Of course, there are examples where bringing things back in-house is the correct action, where cost reduction is worth increased volatility and where the right options are poorly executed. Incorporating operational and non-quantifiable risks can be problematic. Just obtaining quality historical data can be a problem for many companies.

The above discussion has ignored the very real issue of quality reduction for risk reduction, although good methods exist for incorporating quality into risk/reward analysis. For some property and facilities managers, the entire discussion is too technical. Often corporate finance needs to take charge of the analysis.

IMPLICATIONS

The overall objective must be to move from naively measuring occupancy solely on cost, to incorporating measures of volatility, quality and risk. Using risk/reward approaches helps to restore the big picture to occupiers' strategies, as well as communicate with today's corporate boards that are struggling with increasing market uncertainty. Risk/reward demonstrates numerically why some of today's innovations in occupancy make financial sense, even when they appear to increase costs. For occupier managers who wish to brave the analysis, this is an exciting time to enhance their organisations using a richer appreciation of risk and reward.

1. Harris I, Mainelli M and O'Callaghan M (December 2002), "Evidence of worth in not-for-profit sector organisations", Journal of Strategic Change, vol 11, no8, pp399–410, John Wiley & Sons.

2. Mainelli M (January 2004), "Ethical volatility: How CSR ratings and returns might be changing the world of risk", Balance Sheet, vol 12, no1, pp42–45, Emerald Group Publishing.

3. Mainelli M and Shah R (August 2002), "When it pays to put a value on certainty", Facilities Management, vol 9, no11, pp24–25, Butterworths Tolley.

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