

New solutions

Keeping an eye on interruption risk

Swiss Re New Markets' Daniel Imfeld presents a new ART solution for business interruption (BI) protection in the telecom industry

Product innovation in the alternative risk transfer (ART) market has often started from deficiencies of traditional insurance or banking products. Single-line annual coverage was developed into multi-line, multi-year coverage, single-trigger insurance became multi-trigger insurance, and pre-loss funding concepts were developed into contingent capital post-loss funding concepts.

New insights in corporate finance put pressure on ART solutions by asking: what is the value-added of these new solutions? Under what circumstances does risk management, risk retention or risk

the interrupted period, and neglects new developments, such as:

- Non-fixed asset-based cashflow represents an increasing portion of a telecom operator's total cashflow. The industry is transforming into a service industry.
- For large publicly-held telecom corporates, the traditional BI product ignores new developments in corporate finance and strategic risk management. The new goal of risk management is to support the corporation in creating company value and protecting the ability to generate future cashflow streams as announced in the capital market, rather than to indemnify for a financial consequence of a past loss.
- High and further increasing stock mar-

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transfer add shareholder value in a fundamental economic sense for large publicly-held corporates?

Using the telecom business interruption (BI) risk as an industry-specific example, this article highlights clear criteria for a shareholder-value-enhancing risk management strategy. Based on a multi-trigger risk solution, we show how ART solutions can be designed to address clear specific risk situations, and thereby help to implement such shareholder-value-adding risk transfer/financing strategies.

Today, for service-related companies such as telecoms and dotcoms, traditional BI cover, with its focus on material damage developed for corporates in the manufacturing industries, is inadequate for several reasons. The BI insurance indemnifies just for the loss of profit plus fixed charges that continue to run during

market valuations are based on expectations for continued growth. If a BI event – primarily if due to non-physical damages – can seriously impair those valuations, an adequate protection should contribute to ensure that the expectations for future growth remain intact.

To address the dynamic needs of telecom operators, new risk solutions must shift the focus from loss-indemnification towards contingent and forward-looking business financing.

By bringing the future operational and financing cashflow better in line with cash needs for investments, risk management solutions can contribute to the ultimate business goal of creating company and shareholder value.

Shareholders and equity analysts will appreciate the value of risk management solutions designed to meet both immediate and future cash requirements.

Specific risks

The primary concern of large telecom operators and service providers in the New Economy is not the loss of profit during a normally short interrupted period, but consequential losses such as decreasing market-share, increased churn rates due to competitor's marketing and pricing reactions, decreasing reputation or brand value, client dissatisfaction and, in the extreme case, postponement of investment projects.

In addition, a telecom BI does not lead to a halt in production as in the manufacturing industry, where variable costs may decrease during the interrupted period. For telecom operators, a BI case leads to additional rather than decreasing variable costs.

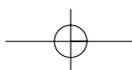
Repairing the network; increased marketing expenses to keep customers; discounts, penalties or liability claims for failure to supply if call centres, stock exchanges or other institutions are unable to service their clients during the downtime – all these things will increase the variable costs during and after a business interruption period.¹

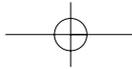
If BI losses were already difficult to quantify in a traditional, stable and steady manufacturing environment, they are almost impossible to quantify in a dynamic telecom environment. The loss quantification becomes so difficult that there is a high probability of legal proceedings after a substantial loss event.

An example is the price impact on revenue for an incumbent in a highly competitive environment, causing a period of freefall in international fixed-line prices. Market share is swinging towards the more aggressive newcomers. How much of the loss in revenue during, and some months after, the BI period is due to the actual BI event? And how much is due to aggressive pricing on the part of competitors?

But from a corporate perspective, the

¹ Some BI products address this issue of extra expenses, but in our view this is still not far-reaching enough





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risk industry must learn that, primarily in such situations, a protection or cash injection is needed, and risk transfer can add value.

Looking forward

Traditionally, the key concern of insurance and financial risk management was to avoid volatility in earnings, in particular the negative impact on accounting figures in the earnings statement. Stock market analysts focusing on traditional and stable EPS measures helped to enforce this focus. With the increasing importance of a shareholder value perspective for the valuation of corporations, the traditional approach of risk management came under scrutiny. New criteria for a value-enhancing risk management strategy were therefore developed within corporate finance.

A pertinent question is: how can a risk management strategy improve the general financial and investment policy of a corporation and positively affect either the return on invested capital or the cost of capital, thus increasing the value of the company? Financing activities such as market share protection, extra marketing expenses to keep customers after a loss period, making funds available to invest even if the company suffers from failure to supply claims, and protecting an optimal high leverage by avoiding negative impact on the credit rating, are all competitive issues where risk management can help to create and protect economic value in a difficult business situation.

The amount of capital or cash needed in such a situation is only marginally connected to a traditionally defined BI loss. It is much more dependent on the company's own investment strategy and financial performance in comparison with competitors.

This new orientation in risk management is particularly relevant in the high-tech and telecommunications industry. Here, a growing part of the companies' stock value stems from high expectations on cashflows and profits that will possibly arise in the future (three to 10 years). Fibre-optic backbone investments that create high bandwidth capacities between the major cities worldwide, or the third generation mobile network buildout that is based on expectations of explosive growth in data traffic or multimedia usage via mobile devices, are good examples of this.

ART value

A fundamental economic valuation of a corporation focuses on expected future

² "The impact of cash flow volatility on discretionary investment and the costs of debt and equity financing", *Journal of Financial Economics*, 1999, pages 423-460

cashflows and the corresponding cost of capital rate at which those cashflows are discounted. It becomes clear that a risk management strategy needs to influence either future cashflows or cost of capital in order to improve company value. The insurance mechanism by itself – paying premiums today for expected losses in the future – does not create value unless it can have other indirect effects.

An innovative ART solution for BI that not only covers narrowly defined BI losses but also concentrates on the supply of the necessary cash to fully capture all profitable investment projects – but only in a difficult and distressed BI business situation when other financing channels dry up – will create value through different mechanisms:

□ It will shift the debt/equity capital structure of a corporation towards a more cost-efficient environment by allowing more

tion shows for whatever reasons a higher growth in operating cashflow than its competitors, there is hardly a need for additional cash compensations due to BI losses. But if slow cashflow growth, together with a BI event and following consequential losses, put the corporation under abnormal stress, a value-enhancing risk solution should kick in. However, it should not only allow to indemnify narrowly defined losses, but should also make possible an injection of the full cash deficit up to a target level on which the corporation can compete as planned and compensate the consequential losses. Based on this conclusion, we suggest a modified double-trigger approach which should allow a design that ensures extra cash injection in case of severe adverse cashflow development and a simultaneous traditional BI event.

A first, more traditional trigger makes

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debt (reducing unused debt capacity), or reducing excessive equity (cash) reserves during normal business periods, thereby creating tax-shield advantages on the cost of capital or reducing the capital base needed.

□ It should also help to avoid a risk-averse core business strategy where chief financial officers would prefer investments in fewer and lower risk projects with steady, large cashflows by redirecting capital on higher returning proprietary opportunities.

□ The BI coverage programme should assure that contingent financing is readily available even under distressed situations to allow realisations of upcoming value-creating business options.

□ Further, a good alternative risk transfer solution will avoid higher refinancing costs that would occur if the company has to access capital markets during a distressed BI situation.

New empirical studies of US companies confirmed these value propositions, in particular regarding cashflow volatility. It was found that companies with higher cashflow volatility showed a tendency to invest less compared with competitors with stable cash flows.²

A possible design starts from the fact that traditional BI losses usually have no material impact on the financials of a corporation, or are compensated through other risk factors such as unexpected strong growth. So, as long as a corpora-

sure the coverage is triggered only by an operational risk, but not restricted to material damage. For example: large property damage, natural catastrophe, system failure, billing problems, viruses or hacker attacks, etc – all events that can be identified and separated from overall trends in core business risks such as price, volume and technology choice within the telecom industry.

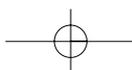
A second trigger is linked to the corporation's financial performance. We suggest looking at competitive cash needs, which means growth in cashflow compared to industry peers.

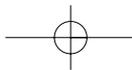
Such a measure is used as a second trigger, and at the same time it is the basis on which we define the extra financing compensation. This approach can overcome the problems of traditional BI, like impossible and costly loss quantification and overhedging, while making sure the solution is designed to address specific financing needs in distressed business situations.

The comparison with a peer index also means the insurer does not need to cover general market trends such as a general price downturn that affect the whole industry. These types of core business risks should be financed by shareholders.

Definitions

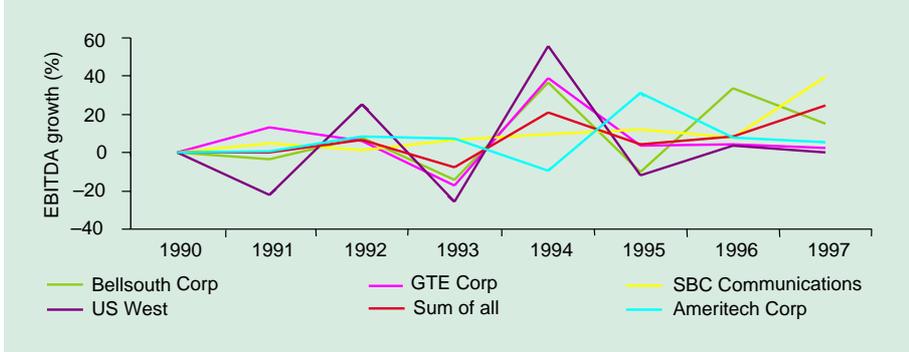
To define competitive cash needs, consideration was given to "earnings before interest, tax, depreciation and amortisa-



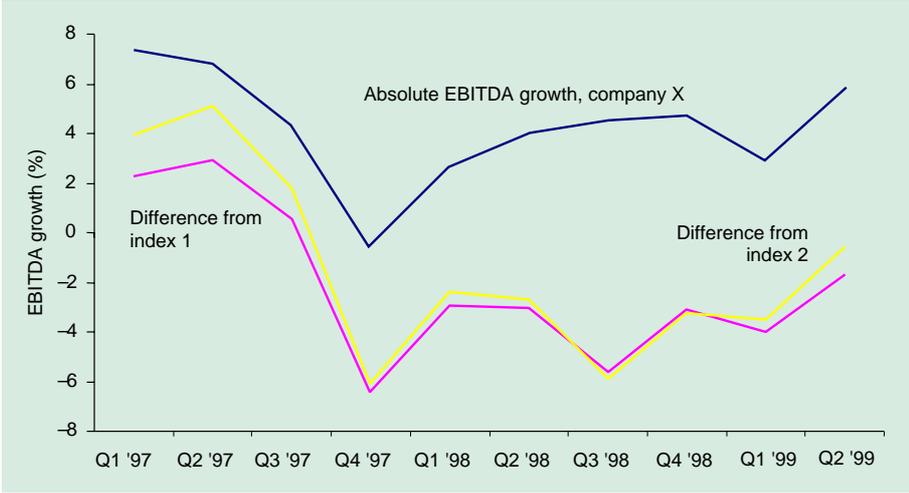


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1. Baby Bell's EBITDA volatility



2. Evaluation of competitive cash needs



(EBITDA)", in comparison with competitors. EBITDA has several advantages if interpreted as proxy for cash from operations: it includes the relevant profit and loss items that may be affected by a BI loss as discussed in the introduction. It allows for revenue reductions or expense increases as drivers of EBITDA, but avoids accounting distortions from depreciation policies or non-operating items.

A solution that focuses on the competitive cash needs takes advantage of all sources of internal diversification, and only transfers or finances those risks that occur on a net basis. For example, for telecom operators – if one region is out of service due to an earthquake, the telephone usage in many other regions increases for several reasons: emergency calls, stock market reactions, etc. The net effect on EBITDA is *a priori* unclear.

Figure 1 gives an overview for a sample of US companies, comparing the individual company's EBITDA growth rate with an average index of the competitor group. The idea of competitive cash-needs protection would mean that a ref-

erence index should include the key competitors in the relevant market of the protected company. Therefore, for each company, the relevant index may look different, depending on the relevant market and data availability.

If in some markets the key competitors are not listed and data is not available, it might be possible to use publicly-held competitors from other markets that show similar patterns in degree of competition, growth and market-share. Indexes 1 and 2 in figure 2 illustrate our example company's (company X) performance in EBITDA growth compared with two different competitor groups.

Figure 2 shows how an evaluation of competitive cash needs could work. An innovative BI programme should protect the relative EBITDA performance within a defined range in terms of percentage points difference to a competitor's index. The company defines at what range of underperformance it would need coverage, based on its risk appetite, financing and investment policy.

Example

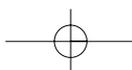
In figure 2, we assume the parties agreed on a first trigger emphasising high excess property damage/BI events, and that extreme BI events led to the negative consequential losses discussed above. Such a loss by itself may not put a telecom operator in a difficult or distressed situation. Cashflow growth may still be higher than the competitor's. Business and investments can proceed as planned.

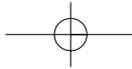
For such events, the corporation does not need coverage from a shareholder-value perspective (there may be other reasons to buy it). In figure 2, the company was in such a situation for the first three quarters of 1997, where EBITDA growth was outperforming the competitor's index.

From fourth-quarter 1997 to second-quarter 1999, EBITDA growth was 2–6 percentage points below the average for an extended period. Assume the company decided to buy ART BI protection if the underperformance was more than 3 percentage points below index 2. Such a coverage would kick-in in the fourth quarter of 1997, the third quarter of 1998 and the first quarter of 1999, but only if the first trigger – a large BI event – had been met.

How much cash compensation would the company get if both triggers were met? To avoid the difficult traditional loss quantification, the cash compensation is fully based on the relative underperformance index. The following hypothetical example illustrates how to quantify a competitive cash need:

- First trigger met: in fourth-quarter 1997 a storm event occurs that meets the first traditional insurance trigger: loss in excess of \$30 million (traditional loss turns out to be \$33 million).
- Retention: coverage is bought for relative underperformance to index 2 in chart 2, which is considered the relevant index for the corporation. A retention is defined as a percentage of relative underperformance to the index. It is decided to cover the first 3-percentage-point EBITDA underperformance compared with index 2 in the retention.
- Limit bought: \$300 million or 25% of an average quarterly EBITDA (\$1,200 million) of our example company.
- Cash-compensation: if the EBITDA of the company was \$1,200 million in fourth-quarter 1997, the corporation would get a \$42 million cash injection. The cash need is defined as total underperformance in EBITDA growth in fourth-quarter 1997 of 6.5% minus 3% retention = 3.5% underperformance coverage. 3.5% of \$1,200 million would be \$42 million, regardless of the fact that the traditional BI loss was only \$33 million, as in the example.





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The underperformance coverage compensates the EBITDA growth to a level that makes it comparable to the competitor's average. In economic terms, that means the coverage meets the cash needs enough so that the corporation will be able to finance ongoing projects to an extent that allows it to protect its market-share. The cash payment of \$42 million is a result of the underperformance analysis and an agreement upon how to define the cash needs in such a situation. A more extreme example emphasises the point:

□ Assuming an absolute underperformance in fourth-quarter 1997 of 15%, which would be 12% in excess of the 3% retention, but using the same first trigger event as above, the cash payment would be 12% of \$1,200 million, quarterly EBITDA = \$144 million, with the same BI loss of only \$33 million. The ART solution would create a substantial cash injection when most needed in a period of substantial underperformance.

The challenge is to find the right mechanism to define the competitive cash needs for the individual company. It is clear that EBITDA is just one possibility. But other relative key financials/figures could also be used as a base to define competitive cash needs:

for example, relative share price performance; contribution margin; churn-rate volatility compared with competitors; price or demand developments in the telecom market; etc.

The indicators should be transparent, frequently available and not subject to moral hazard issues. If risk transfer was not needed at all, such a double-trigger concept could also be used for a post-loss financing concept like a contingent capital injection, similar to transactions done recently for Michelin (see article on page S18).

Summary

An innovative ART BI risk solution has the following benefits:

□ The focus is on distressed competitive cashflow issues (out-of-the-money option); cash payments happen only when needed. This allows for a lower price coverage. A potentially substantial cash injection, which can be much bigger than a traditionally defined BI loss, should be available at a low price, since it targets only unlikely events.

□ It is a true enterprise risk management approach, with the focus on protection of value-creation processes in the company and not on indemnification of a narrowly defined traditional loss.

□ It takes advantage of a client's integrated risk management perspective (natural hedges, internal risk diversification).

□ The cause of cashflow problems – revenue reduction, extra expenses, market reactions, failure to supply – is not relevant.

□ Coverage is also provided if the company is not in absolute negative performance, but only underperforming compared with key competitors – a situation where cash needs are high to keep investment levels on a par with competitors. This is important with telecoms, where a 10% growth in absolute levels may look fine, but is too low in comparison with an industry average to protect the market share.

□ It avoids high transaction costs of traditional coverage, ie, loss definitions, uncertainty with regard to quantification, law suits, etc.

□ It provides implicit coverage, at least partially, for industry-specific problems: failure to supply, transmission and distribution risks, etc, loss of market-share, brand value, contingent BI. This excess cover can be combined with traditional BI. ■

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