

Slaying the dragon

Bringing counterparty risk under control

MICHAEL SCHEWITZ EXPLAINS WHAT THE CORPORATE TREASURER SHOULD BE DOING ABOUT COUNTERPARTY RISK.

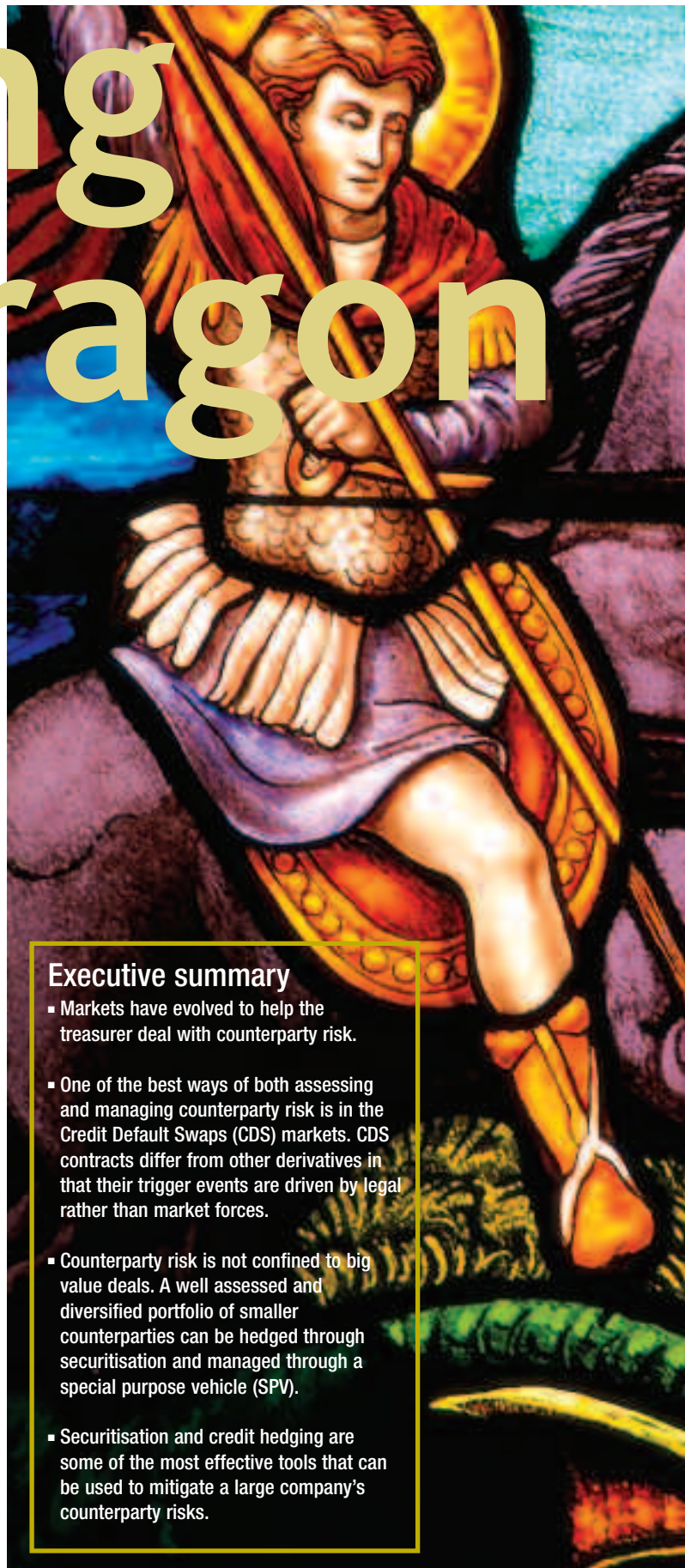
Until fairly recently, all the corporate treasurer could really do about counterparty risk was to hedge using an old technique. The treasurer prayed fervently: "Oh, please, please let these guys pay us".

Alas, in an age of activist shareholders, omniscient regulators and paranoid accountants, the theological hedge is no longer acceptable. Other hedges must be found. Fortunately, markets have evolved to help the treasurer in this. This article will briefly discuss some of the current ways that counterparty risk or credit risk (the terms will be used interchangeably here) can be managed. Counterparty risk will not be taken to include concentration risk.

"A clever man knows how to get out of trouble, a wise man knows how not to get into trouble in the first place." This little aphorism describes what all good treasurers know. It is often tempting to make up for a slow business environment by taking other risks. Poor counterparties can always be persuaded to pay more if they are able to pay later. The fact is though, that no matter how clever the treasurer is, managing poor counterparties is going to be expensive.

This does not necessarily mean that a company shouldn't sell to risky counterparties. What is central is to have a strategy for doing this, a strategy for hedging and a clear understanding that this is being done before the sales take place. The treasurer may have had little say in how a sale is made. However, he or she can at least tell the sales department what the credit cost of the business is likely to be.

USE CREDIT DEFAULT SWAPS TO BE CLEVER (IF YOU MUST) AND WISE One of the best ways of both assessing and managing



Executive summary

- Markets have evolved to help the treasurer deal with counterparty risk.
- One of the best ways of both assessing and managing counterparty risk is in the Credit Default Swaps (CDS) markets. CDS contracts differ from other derivatives in that their trigger events are driven by legal rather than market forces.
- Counterparty risk is not confined to big value deals. A well assessed and diversified portfolio of smaller counterparties can be hedged through securitisation and managed through a special purpose vehicle (SPV).
- Securitisation and credit hedging are some of the most effective tools that can be used to mitigate a large company's counterparty risks.



counterparty risk is in the Credit Default Swaps (CDS) markets.

CDS are a way of transferring credit risk by using a derivative instrument that directly references credit risk. These instruments price a company's credit or a nation's credit as an abstract spread; no cash is actually advanced to the entity that is referenced. CDS are derivative instruments and so are governed by the standard International Swaps and Derivatives Association (ISDA) legislation that applies in most of the world's developed economies.

GET PAID WHEN YOUR FRIEND CRASHES HIS CAR? In short, Nervous Corp (see Box 7) has purchased a kind of insurance against a Ford default for 4% per annum. Of course, this is not insurance as

Box 1. How a CDS works

Suppose that Nervous Corp supplies material to Ford Motor Corporation and consequently has a counterparty exposure of £5m to Ford. The auto sector is currently going through quite a tough patch, to put it mildly, so while a Ford default is probably unlikely, the effect of a default would be very large and so it may be worthwhile to hedge this exposure. Nervous Corp would almost certainly look to hedge this exposure with a well rated bank (Biggi Bank).

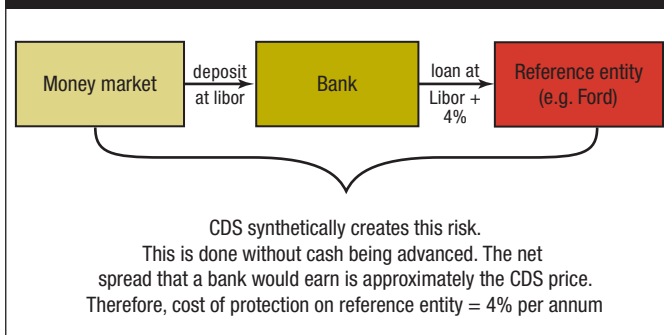
This could be done by entering into a CDS that would be described by the partial term sheet below.

Buyer of Protection	Nervous Corp Ltd
Seller of Protection	Biggi Bank
Reference Entity	Ford Motor Corporation
Reference Obligation	Ford Motor Company Bond, 7.45%, 16/7/31
Maturity	3 years
Nominal	£5m
Fixed rate Amount	4%
Settlement	Physical
Bond or Loan	yes
Events of Default	- Bankruptcy - Failure to Pay - Restructuring

Nervous Corp is 'buying protection' from Biggi Bank who is 'selling protection' on Ford for three years. This means that if at any time over the next three years Ford defaults, Nervous Corp can deliver a senior unsecured claim with a nominal value of £5m issued by Ford to Biggi Bank. In return, Biggi Bank would pay £5m for this Ford debt, even although the debt might only be trading at 60p in the pound due to the default.

Nervous Corp would therefore receive net value of £2m from the CDS hedge. Of course, while Ford does not default, Nervous Corp would have to pay a fixed amount, in this example 4% of £5 million or £200,000 each year for the period of the transaction. This payment is normally divided up into quarterly payments. If Ford defaulted, the 4% payment would cease immediately and Nervous Corp would be able to claim against Biggi Bank by delivering a physical claim against Ford.

Figure 1. How CDS Prices are Derived (Approximately) In the Market



the parties to the trade need not have an 'insurable interest' in Ford. That is, Nervous Corp could buy protection even if it did not have an exposure to Ford. It may even buy protection in anticipation of an exposure. Buying protection without having an exposure to the reference entity is a bit like insuring your friend's car against an accident; out of the question in the insurance market, but routine in the CDS market.

A key point about a CDS is that, in the event of default, the protection buyer would be able to deliver any senior unsecured obligation. The role of the reference obligation in the term sheet (the Ford 2031 bond) is only to establish the class of obligation that could be delivered. Any obligation that ranks pari passu with the reference obligation can be delivered. This means that a CDS contract gives the protection buyer the right to deliver the cheapest obligation in the market ('cheapest to deliver') in the event of a default.

LAWYERS PULL THE TRIGGER CDS contracts differ from other derivatives in that their trigger events are legal events rather than market moves. The legal triggers to default are thus key. A company's debt may be trading at 80p in the pound. However, this discount can only be realised in the CDS market if there is an event of default. If there is not an event of default, then the price of the reference entity's debt is irrelevant. The legal triggers for events of default were defined in the term sheet and are:

- Bankruptcy.
- Failure to pay.
- Restructuring.

Bankruptcy (and this includes Chapter 11 in the US) or failure to pay a material amount due are clearly default events. A default criterion, however, is also met if a company suffering credit distress chooses to restructure its debt in a manner deleterious to the holders.

Thus, for example, repaying a Sterling loan in Turkish Lira equivalent, or making a loan less senior in a company's corporate structure would trigger a default under the restructuring clause of a CDS. Restructuring is the most complex trigger and is the one where there is some subjectivity. When is a restructuring deleterious? Companies can restructure their balance sheets (such as during a merger or leveraged buy-out) without being in difficulty. ISDA documentation therefore defines events of restructuring very carefully and also adds limitations on the obligations that the buyer of protection can deliver in the event of a default that has been triggered by the restructuring clause.

Precise definitions on all the events of default, including the discussion of restructuring, can be found in the ISDA 2003 Credit

Derivative definitions. This is the Bible for anyone actively involved in the CDS market.

CDS contracts are an effective way of managing counterparty risk:

- They are over the counter (OTC) derivatives that are generally liquid, easy to trade, are governed by standard language, and have stood up well through very volatile markets.
- CDS protection can be bought for nearly any cashflow profile.
- Players in the CDS market work hard to ensure that the market mirrors the credit status of the reference entities and work hard to eliminate legal arbitrage (such as a company defaulting without triggering a CDS or vice versa).
- Pricing is transparent.
- Most of the investment grade credits are covered in the CDS market and the corporate treasurer can usually get a tight bid ask price on them. A credit that is not impaired will normally price with a bid offer spread of 10-20 interest basis points (0.1% - 0.2%).
- The treasurer can hedge without selling the counterparty claim and so without damaging a counterparty relationship.
- Potential future exposures as well as present exposures can be hedged.

There are, however, some drawbacks:

- The market tends primarily to cover sovereign debt and investment grade companies (companies rated Baa3/BBB- and above). There are fewer CDS prices on smaller or riskier companies (although the coverage of sub-investment grade companies is increasing).
- CDS spreads can be pricey. This is a market where banks and credit funds can take pure credit exposure to corporations without having a lending relationship with them. This means that there is no 'relationship' discount in the spread.
- The CDS market is a derivative market. As derivatives are frequently an emotive issue, a company may be prohibited from trading in them. Treasurers should campaign hard for their companies to have access to this market.

The CDS market facilitates wisdom as well as cleverness; it allows the treasurer not only to hedge exposure on investment grade names but to see where the name is trading before the exposure is taken. In fact, the CDS markets are good predictors of trouble. The CDS spread on Enron debt screamed out some time before Enron's share price

Box 2. Indicative 5 year CDS Spreads

	Reference Entity	Spread
1	Adecco S.A.	0.63%
2	AT&T Corp.	0.51%
3	Daimler Chrysler AG	1.33%
4	General Electric Capital Corporation	0.24%
5	General Motors Corporation	9.00%
6	Hilton Group plc	0.55%
7	Hutchison Whampoa Limited	0.42%
8	Lloyds TSB Bank plc	0.16%
9	Pinault Printemps Redoute	0.85%
10	Thyssen Krupp AG	1.05%

crashed and indeed often the CDS price is a better predictor of financial distress than the share price. Treasurers should understand the CDS market as well as they now understand money markets.

Box 2 shows some examples of current five year CDS spreads.

SECURITISATION: SAFETY IN NUMBERS The credit risk of the corner café or the dentist down the road does not trade in the CDS market. If these are a firm's counterparties, though, they can still be managed if, paradoxically, the firm has enough of them. A well assessed and diversified portfolio of smaller counterparties can be hedged through securitisation.

A pool of high risk assets can be tranching out and in one of the wonders of modern finance, can be used to generate debt that is AAA rated. The key to this alchemic transformation is the realisation that in a well diversified portfolio, there can only be so many defaults. The housing market may collapse, but most people will still pay their mortgages; even the riskiest portfolio is likely to have a riskless core.

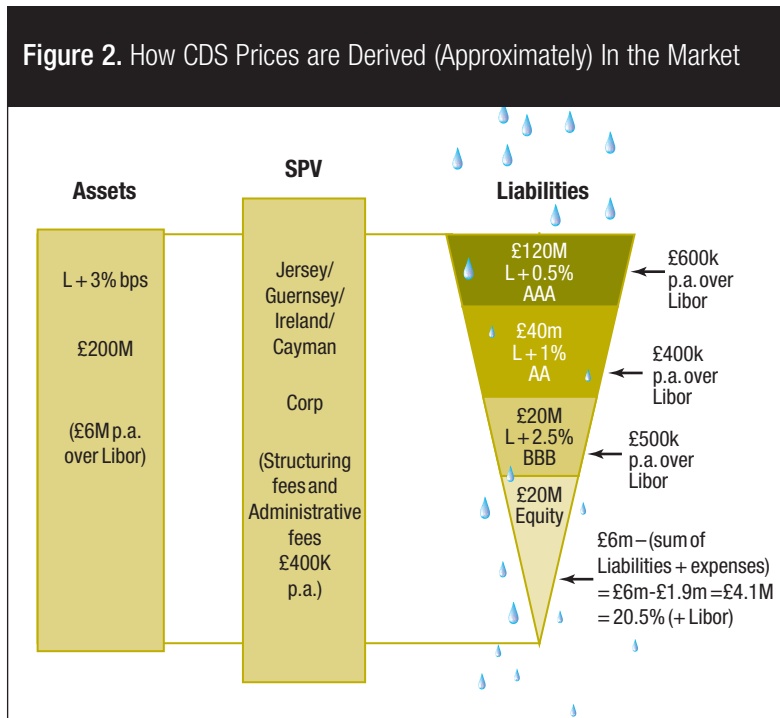
When a company does a securitisation, it sells its receivables to a special purpose vehicle (SPV) that is normally incorporated in a jurisdiction that does not have withholding taxes and has friendly law for these structures. The SPV is run by trustees and the debt of the SPV is issued as private placement in terms of the applicable law.

The SPV will exist for several years; securitisations are not economical if they run for less than five years. Even if the assets in the securitisation are short-term assets, provision can be made to roll new assets into the SPV as older assets expire.

WATERFALLS OF MONEY The SPV's liabilities are tranching out into a first-pay slice, a second-pay slice, a third-pay slice down to a last-pay or 'first loss' (colloquially called 'equity') slice. In this structure, all the interest received from the pool of counterparties is used to pay the AAA interest in a given period. When all the AAA interest is paid for that period, then the remainder goes to pay all the AA interest and so on, down the structure. The interest falls like a waterfall and fills up the rated pools. When a pool overflows, the next pool is paid. This is why this structure is often referred to as a 'waterfall' structure.

In Figure 2, a pool of counterparties that pay Libor + 3% on average has been securitised. This pool could be mortgages of a bank or the accounts receivable due to a large FTSE company. The interest yield generated by this pool (the Libor + 3%) cascades down on the liability structure. The liability that is 'watered' first is the top or most senior tranche. Consequently, it is the most secure and is rated AAA.

As it is very robust, there is normally a strong institutional bid for AAA debt. This AAA paper could probably be sold at a spread no higher (and in the current market, somewhat lower) than Libor + 0.5%. Similarly the AA paper would price in the market at a relatively



low spread. In the example this is Libor + 1%. The AA paper has less subordination than the AAA paper, but more than the BBB.

In the example the £20m equity is retained by the company and, after all costs are paid, the equity earns about £4.1m or 20.5% over Libor. The equity is normally retained by the company that sponsors the securitisation.

MATHS BOFFS NEED APPLY The debt of the SPV would be rated by the rating agencies (Standard & Poor's, Moody's and Fitch) who would assess the likelihood of a particular tranche not being paid. Typically, the rating agencies will do a quasi-actuarial analysis on

the assets (mortgages or receivables) and decide, based on historical data and stress tests, on the risk of loss in the pool.

Some hair-raising maths may be done in order to assess how much of the pool could default. Technically, a hazard rate, a recovery rate and stress multiples are applied to the pool of assets in order to assess the risk of loss. The securitisation would also be stressed with respect to non-credit variables, such as interest rate risks. The bank that structures the securitisation (it is almost always a bank) for the company would model this with the rating agency. The structuring bank would try to persuade the rating agency to give the best possible rating to the debt which the bank would then sell in the market.

PROS AND CONS In our example, the pool of counterparties originally paid a surplus over Libor of £6m a year to the company. The effect of the securitisation is for the company to forgo £1.9m of this a year. However, a risk pool of counterparty exposure of £200m has been reduced to £20m.

The company has consequently:

- mitigated counterparty risk significantly;
- freed up capacity to take on more counterparties;
- earned a very high return (over 20.5%) on cash and risk deployed; and
- raised non-recourse funding of £180m. In the event that there are losses in the pool of more than £20m, these losses will be borne by the rated note holders.

It is often the case that the non-recourse funding to the company is at a lower rate than the rate at which the company could get full recourse funding. In the example above, the company is borrowing money at a weighted average spread of about L + 0.83%. This is competitive for long-term funding, particularly when that funding is non-recourse.

There are some issues to consider though:

- Spread from assets is given up. Securitisation thus works best when

a business is scalable and so new business can be written in order to replace the assets that have been sold. If new business cannot be written, the securitisation would mean that income is foregone.

- There is no problem if the assets being securitised are risky and non-standard. However, the assets need to have a history; the securitisation cannot take place unless the asset class has sufficient history to allow rating agencies to estimate the expected loss in the pool.
- Securitisations can be complicated and document-intensive.
- The structuring bank will charge fees as will the trustees who run the SPV. These fees – £400,000 in our example – are clearly a leakage for the company.
- All the assets in the SPV are likely to stay on the company's balance sheet for accounting purposes. This is due to the fact that the company will hold all or a very significant portion of the equity and that the company is normally the sponsor of the securitisation.

The last point is sometimes a concern. However, as treasurers normally try to manage real risk, accounting concerns should be secondary. Also, often, accounting issues can be managed (although not too creatively).

In order to facilitate securitisations, the treasurer should ensure that as much data as possible is kept about the performance of counterparties over the years. Rating agencies and banks are happy to look at risky unusual portfolios of counterparty risk providing these portfolios are relatively granular and losses on the pool can be predicted.

Securitisation and credit hedging are some of the most effective tools that can be used to mitigate a large company's counterparty

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risks. These can also be used by smaller companies. Typically, though, smaller companies would use simpler forms such as factoring.

The treasurer of a large company should become familiar with the techniques discussed. This is not only because they are palliative, but also because they are diagnostic. When counterparties are chosen, someone should always be asking whether the risk can be hedged or securitised. This will diminish the need for fervent prayer later.

Of course, there are times when the only way is to take the risk and to hope: sometimes the counterparty is just too important and hedging is just too expensive. The treasurer who understands how to manage counterparty risks, and has programmes to do so, will also develop a good sense of when the Deity really needs bothering.

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