Derivatives uncovered

Swaps, futures and all that jazz

Artist: Mark Oldroyd

Ed Parker of **Gide Loyrette Nouel** gives an overview of some of the most common types of derivatives and summarises the ISDA document platform.

The first in this two-part series on finance looked at debt capital markets (*see feature article "Debt capital markets: an introduction", www.practicallaw.com/2-201-1581*). This second article provides an overview of derivatives.

Warren Buffet, the US investor, famously described derivatives as "financial weapons of mass destruction" following $173 million of losses from a derivatives and trading business subsidiary. But many disagree, and instead see derivatives as an important tool for managing risk in the financial markets.

At the end of 2004, the International Swaps and Derivatives Association, Inc. (ISDA) estimated that $200 trillion of derivatives transactions were outstanding (*see box "ISDA"*). Interest rate and cross-currency swaps alone accounted for $183.6 trillion of this. Derivatives are an essential element of corporate strategy and form a part of an increasing number of finance transactions. Today, a solid understanding of derivatives is essential for all corporate and finance professionals.

ISDA

The International Swaps and Derivatives Association, Inc. (ISDA) is the dominant trade association for derivatives. It was formed in 1985 and has approximately 650 institutions based in 47 countries among its members, which include almost all the major market players together with law firms and other interested parties.

ISDA aims to reduce derivatives' risk and costs, to streamline documents and to encourage the growth of markets in different derivative products. Its major achievements include the development of a document platform, which includes the ISDA Master Agreement, schedule, template confirmations and definitions for a wide range of transactions (*see "Documenting derivatives" in the main text*).

ISDA's working committees regularly draft best practice statements and also produce user guides and supplements to definitions and promote the understanding of derivatives through conferences. ISDA also fulfils a lobbying function on behalf of the industry.

ISDA documents can be obtained via its website (hard and electronic prices vary) (*www.isda.org*).

WHAT ARE DERIVATIVES?

Derivatives are financial instruments whose price and value derive from the value of the underlying assets or other variables; these could be, for example: equity indices such as the S&P 500, individual shares, debt securities and their issuers, commodities and interest rates. New underlying assets or variables classes include the weather, inflation, carbon emissions and available bandwidth on the radio spectrum.

Derivatives may be traded on an exchange or over the counter (OTC) (that is, sold directly by seller to buyer). Exchange-traded derivatives are sometimes thought to be safer, as they are traded in a regulated and liquid market where there is a high degree of price transparency, but exchange-traded derivatives do not lend themselves to being tailored and geared in the same way as OTC derivatives. This article focuses mainly on OTC contracts.

Derivatives can be used for two main reasons:

- To give the buyer protection against certain financial risks.
- As a type of investment to make money. Derivatives can be attractive in this sense because the initial outlay should be less as the underlying asset in respect of which a return may be generated does not have to be bought (*see box "Examples of uses of derivatives"*).

However, despite the benefits, derivatives are controversial and have been the cause of a number of financial scandals. In the UK, the most notable of these culminated in the bankruptcy of Barings Bank, when Nick Leeson's unauthorised derivatives trading made losses in excess of the bank's capital. Other big losses in the 1990s included $4 billion by Long Term Capital Management on currency and interest rate derivatives, $600 million by Askin Securities and $200 million by Codelco Chile in copper and precious metals futures and forwards.

Many reasons were given for the losses including unsupervised or rogue employees, speculation and pricing models which failed to anticipate extreme circumstances. As modelling systems, risk controls and understanding have improved, fewer large derivatives losses have been revealed, although more recently the US subsidiary of Allied Irish Banks lost nearly $700 million through the derivatives contracts of a rogue trader and National Australia Bank suffered A$360 million losses in options trading losses.

UK regulatory regime

The Financial Services Authority (FSA) regulates the arranging of derivatives deals and related advice and has broad disciplinary powers against FSA-authorised firms and approved persons that trade in derivatives.

The following areas of regulation are particularly relevant to those authorised to trade in derivatives:

Market abuse. Market abuse can occur in relation to any qualifying investment traded on the London Stock Exchange, London International Financial Futures and Options Exchange (LIFFE) or other UK recognised investment exchange and is not limited to the qualifying investments themselves but also any behaviour which affects their value more generally (in particular, the use of derivatives) (*for a feature article on the regulatory issues, see "MAD, bad and dangerous (not to) know: the new market abuse regime", www.practicallaw.com/5-200-8252*). Both the FSA and the Takeover Panel have recently expressed concern at the use of derivatives in relation to takeovers and are making moves to increase disclosure relating to dealings in derivatives during offer periods (*see News brief "Derivatives and options: move towards transparency on dealings", www.practicallaw.com/8-200-2362*).

Conduct of Business. Authorised persons dealing in derivatives must comply with the FSA's Conduct of Business Rules (COB) (part of the FSA's Handbook of rules and guidance). The provisions relating to OTC derivatives are not onerous and relate to standards of disclosure, the classification of customers and the suitability of the product.

Financial promotion. The financial promotion section (*COB 3*), subject to various exceptions, prohibits non-authorised persons in the course of business from communicating an invitation or inducement to engage in investment activity (unless the content of the relevant communication is approved by an authorised person). Breach of this requirement, subject to a defence of taking reasonable precautions and carrying out ap-

Examples of uses of derivatives

Investors can use derivatives to speculate or manage assets or liabilities more effectively than some other forms of investment:

- Through ***arbitrage*** (*see Glossary*) an investor can exploit different prices on different markets for similar or identical products. Derivatives such as equity options can allow investors to take positions on these underlying products without the cost of directly entering the markets. For example, where a futures contract trades on two exchanges, derivatives can help exploit the pricing differences (*see "Forwards and futures" in the main text*).

- Derivatives can replicate equities speculation at reduced administrative costs and leverage returns (and losses) on an equity index, a share or any financial instrument far in excess of the value of the underlying security and without actually purchasing that security.

- Derivatives can match risk and income through ***hedging***; for example, where a party has exposure to a rise in oil prices a derivatives call option could hedge against higher oil prices by giving the right but not the obligation to purchase oil at a future date at an agreed price (*see "Options contracts" in the main text*).

- Derivatives can be used to manage assets and liabilities in asset portfolios by protecting against market changes, for example, by protecting against a fall in interest rates.

propriate diligence, is a criminal offence. If an unauthorised person enters into a derivatives agreement in contravention of this prohibition the contract will be "unenforceable against the other party".

In addition, the selling of financial products must be "fair, clear and not misleading". Failure to comply with this may lead to the FSA taking disciplinary action or the affected person launching a civil action under section 150 of the Financial Services and Markets Act 2000.

TYPES OF DERIVATIVES

This article considers some of the most common types of derivatives: swaps, options, forwards and futures, and credit derivatives.

Swaps

Swaps are OTC bilateral contracts where the parties agree for a period to exchange cash flows on future dates. The different types of swap are many and varied: interest rate swaps and currency swaps are the most common, but there are also large markets in other derivatives, such as in credit default swaps (*see "Credit derivatives" below*).

Interest rate swap. An interest rate swap is a bilateral contract under which each party agrees to make periodic payments to the other. The payments are equal to the interest on agreed principal amounts but the interest is calculated on a different basis (for example, fixed rate and variable rate). The payments are usually netted, which means that only the positive difference is paid.

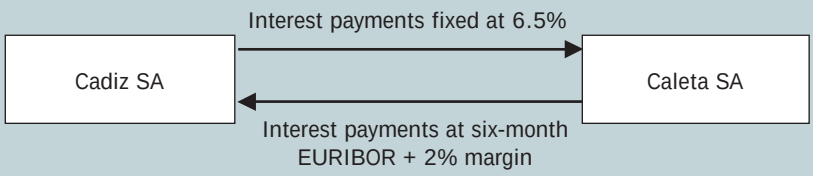
For example, Cadiz SA, a Spanish drinks distributor, is a customer of Banco Sagasta and wants a €200,000 fixed rate loan maturing in five years. Sagasta offers it an 8% per annum fixed rate loan or, alternatively, a floating rate loan at six-month Euribor (Euro Interbank Offered Rate) plus 2% (equivalent to 5% interest per annum). Both loans have semi-annual interest payments. As Cadiz needs the loan to buy sherry from a co-operative to sell on in three years' time after ageing, a variable loan could result in Cadiz's profit margin on the sale of the sherry being reduced if rates were to rise (which Cadiz believes could be the case). So, although the floating rate loan initially appears cheaper, it is unappealing to Cadiz.

Caleta SA, a nearby deckchair manufacturer, is a customer of Banco Carranza and wants a €200,000 floating rate Euribor-linked loan, maturing in five years. Carranza agrees to offer this plus a 3.5% margin (equivalent to 6.5% interest per annum), or alternatively, a 6% per annum fixed rate loan. Both loans have semi-annual interest payments. Caleta will use the loan to buy wood for its deckchairs and, because it believes interest rates are more likely to go down, it prefers the floating rate option.

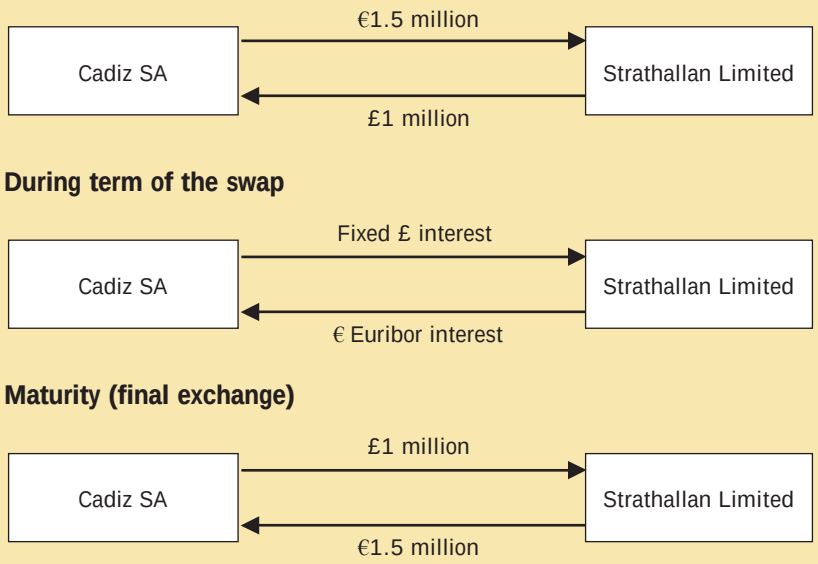
However, Cadiz and Caleta could each get a more favourable rate of funding by entering into an interest rate swap with each other. Cadiz takes out the floating rate loan and Caleta the fixed rate. They then enter into a five-year fixed rate/floating rate interest rate swap, on a €200,000 notional amount (the amount is notional, because there is no exchange of principal amounts). Cadiz will make semi-annual 6.5% fixed rate payments (as opposed to the 8% per annum Sagasta had offered) and Caleta will make semi-annual floating rate payments equal to six-month Euribor plus a margin of 2% (Carranza had offered 3.5%).

So, by using a derivative, Cadiz has shaved 2%, and Caleta 1.5%, off their cost of funding (*see box "Interest rate swap"*).

Interest rate swap



Currency swap



Currency swaps. These follow a similar format to interest rate swaps. In a currency swap, the parties make their payments in different currencies. There is usually, but not always, an exchange of principal at the outset and at maturity of the swap, with the parties exchanging interest rate payments during the term.

For example, Cadiz now wants to finance a £1 million expansion of its British operation. It has a relationship with a Scottish bottle maker, Strathallan Limited, which wants to finance a €1.5 million expansion of its Spanish operation. Cadiz can raise euros cheaply from Sagasta in a floating rate Euribor loan equivalent to 5% per annum and Strathallan can raise sterling cheaply from its local bank, Ruthven, in a 6% fixed rate loan.

Cadiz and Strathallan could both meet their funding needs by borrowing in their home currency from their local bank and converting the funds on the foreign exchange markets. Both parties though, are unimpressed with the available foreign exchange rates, finding that their cost of capital is close to 9% per annum. Neither has the borrower profile to borrow the foreign currency at an attractive rate directly from a local bank in the other's country.

The companies could source their foreign exchange requirements more cheaply by entering into a currency swap. To do this, Cadiz takes the euro floating rate loan from Sagasta; and Strathallan the sterling fixed rate loan from Ruthven. Both loans are repayable on the same date. Cadiz and Strathallan then exchange the principal amounts, with Strathallan paying £1 million to Cadiz and Cadiz paying €1.5 million to Strathallan. At this point both companies have the funding amounts they need.

Both parties must make periodic interest payments under the loans to their respective banks. On agreed dates Cadiz makes fixed rate payments to Strathallan to match Strathallan's sterling liabilities to Ruthven; and Strathallan makes floating rate Euribor payments to Cadiz to match Cadiz's euro liabilities to Sagasta. At the maturity of the swap, which matches the repayment date of the loans, the parties again exchange principal amounts and use these to repay their respective loans.

The currency swap has reduced Cadiz's funding costs by 4% and Strathallan's by 3% (*see box "Currency swap"*).

If Strathallan had preferred to make fixed rate euro payments rather than floating rate euro payments, Cadiz could have entered into a further interest rate swap (a back-to-back swap) with Caleta, as described above, to access cheaper euro fixed rate interest payments.

Options contracts

Derivative options are bilateral contracts between an option holder and an option writer. The option writer, in consideration for a premium, grants the option holder the right but, crucially, not the obligation, to buy or sell an agreed amount of an underlying asset at a fixed price on a future date.

Options are either cash settled or physically settled (that is, by actual delivery of the assets underlying the options), with the settlement amount being called the "exercise price" or "strike price". The timing of the exercise varies according to the option:

- A European style option can only be exercised at the end of its term, or during a specified period.
- An American style option can be exercised at any point during the term, perhaps when certain conditions have been met.
- A Bermudan style option can only be exercised on certain dates during the term.

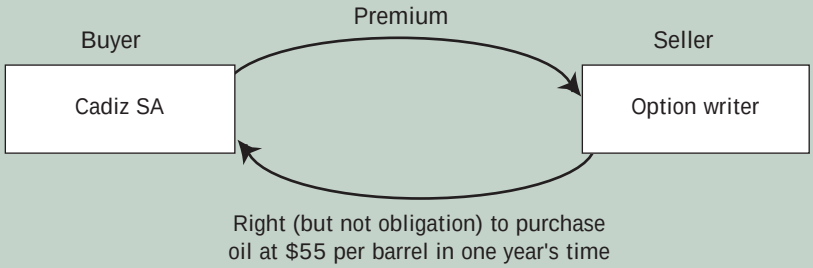
The most common options are "put" and "call" options. Put option holders have the right to sell or deliver an underlying asset at an agreed price on a future date. Call option holders have the right to buy or receive an underlying asset at an agreed price on a future date.

There is a wide range of potential underlying assets, including commodities such as oil, gas, coal, electricity, wheat or gold; equities such as shares, baskets of shares or the return on an index such as the S&P 500; and debt securities such as bonds.

Common uses of options can involve the holder of a share portfolio buying a put option to sell the portfolio at a fixed price at any time during an agreed period

to hedge against a fall in equity prices; or an electricity company buying a call option to purchase coal at a fixed price on a future date, to hedge against coal price rises. Options can also be "embedded" into (or form part of) other securities. In ***convertible bond*** (*see Glossary*) issues, issuers embed put options into bonds allowing the bondholder to exchange the bond for shares, once the share price reaches a strike price.

Option contract



For example, Cadiz is concerned that there may be a steep rise in oil prices (currently $54 per barrel) and decides to create a ***hedge*** by entering into call option contracts giving it the right to buy oil at an agreed price on a future date. It purchases 10,000 options expiring in one year's time from an option writer and pays a premium for each option. The unit of each option is a single barrel of oil. The options are American style options and so can be exercised at any time, resulting in the physical delivery of the oil. Each option's strike price or exercise price is $55 per barrel. If the oil price remains under $55 per barrel there is no point in Cadiz exercising its options: it will be cheaper to buy on the open market. If the price of oil goes above $55 per barrel, Cadiz is protected against the increase and has the option to purchase oil at $55 per barrel.

Cadiz could instead enter into cash settled options if it does not want to take actual delivery of the oil from the option writer, for example, if it already has established suppliers. If a cash settled option were exercised the option writer would pay Cadiz the option's market value, that is, the difference between the strike price ($55 per barrel) and the value of a barrel of oil at the exercise date (*see box "Option contract"*).

Forwards and futures

In forward and futures contracts, the parties agree to buy and sell an underlying asset at a future date at an agreed price. Forwards and futures differ from options in that the buyer of a forward or futures contract is obliged to pay the agreed purchase price even if the underlying asset is worth less than the purchase price on the settlement date, while the buyer of an option is not obliged to exercise the option and pay the purchase price. Usually, neither party actually expects the underlying asset to be delivered. Settlement instead takes place by payment of a cash sum representing the difference between the underlying asset's price agreed at the outset and its market price at the relevant future date. The forward price is usually a best estimate of the expected future price of the underlying asset.

Forwards and futures are similar, the main difference being the way in which they are traded: forward contracts are OTC private bilateral contracts where each party takes a credit risk on the other; futures contracts are standardised exchange-traded contracts with limited credit risk.

For example, a cash settled agreement for an airline to buy 10,000 barrels of jet fuel in one year's time at $30 a barrel would, depending on the circumstances, be either a forward or a futures contract (that is, if it were a standardised exchange-traded contract it would be a future and if it were a bilateral OTC contract it would be a forward). At the agreed future date, if the price of jet fuel has risen to $50 a barrel, the airline's counterparty will pay the airline $20 a barrel (that is, $200,000) representing the difference between the current $50 per barrel price and the agreed $30 price. If, however, the oil price has gone down to $20 per barrel, the airline will pay the counterparty $10 per barrel (that is, $100,000).

Forward and futures contracts cover a wide range of underlying assets, for example, LIFFE trades futures in agricultural commodities, which include cocoa, robusta coffee and white sugar. The London Metals Exchange trades futures in tin, nickel, copper, aluminium, lead, zinc and nickel. The International Petroleum Exchange, one of the world's biggest energy futures and options exchanges, trades futures in oil, gas and electricity. Futures contracts can also be entered into in relation to interest rates.

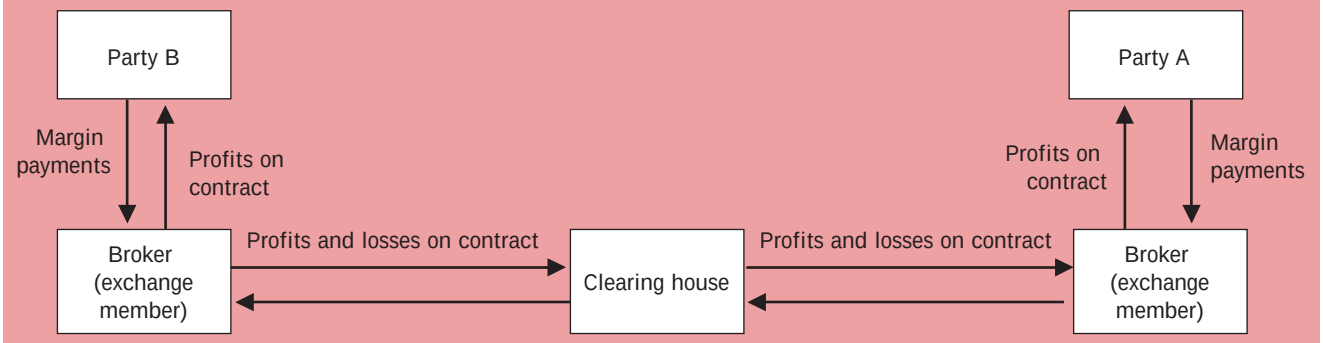
Futures. The futures markets developed by promoting efficiency, market regulation and increasing investor confidence. The pricing, delivery provisions, grading and elements of each futures contract are now standardised. The New York Metals Exchange Light Sweet Crude Oil futures contract, for example, specifies that the sulphur content of the oil must be below 0.5% and that the minimum purchase size is 1000 barrels. Delivery of the underlying asset rarely occurs, with the initial contract being hedged against.

While forwards have both credit risk and market risk **(**with the credit risk arising from exposure to the counterparty**)**, futures aim to eliminate credit risk as far as possible, leaving only market risk. In futures contracts a clearing house acts as a central counterparty. The clearing house will only transact with brokers, who are institutions with a seat at the exchange. The clearing house takes a limited credit risk on each broker and the brokers take a limited credit risk on their clients. No party takes any credit risk on an unknown party.

Each broker will take an initial margin payment in the form of cash or securities from its client, which it holds in a margin

Futures contract

New York Metals Exchange light sweet crude oil contract



account. This margin payment acts as security for the contract and reflects the maximum likely price movement of the futures contract in a single day. The amount of the payment will be set according to a formula decided by the exchange and will be a fraction of the market value of the future's underlying asset.

The profit or loss on a futures contract is calculated each day. If a loss has been made, the broker will debit its client's margin account and make a payment to the clearing house. If instead there is a gain, the clearing house will transfer this amount to the broker, who will credit its client's margin account. If, through losses, a client's margin account falls below a certain level, the broker may make a margin call requesting that a further margin payment is made (*see box "Futures contract"*).

Forward rate agreements. Forward rate agreements (FRAs) are the most common types of forward. They are cash settled bilateral contracts relating to short term loans where both parties agree to exchange the difference between two interest rates on a notional loan at a future date. One party will agree to pay a fixed rate (the contract rate); the other pays a floating rate, for example, LIBOR (London Interbank Offered Rate), determined at the maturity of the FRA (the underlying rate). The payments made are the difference between the contract rate and the underlying rate. In this way an FRA is similar to an interest rate swap which can be characterised as a series of forward contracts on interest rates.

FRAs are used to protect borrowers with variable rate loans against interest rate rises. Lenders or investors with exposure to asset portfolios generating a variable rate income on the other hand may enter into FRAs to receive fixed rate income in order to protect themselves against falling interest rates.

For example, Cadiz intends to borrow €10 million in six months' time from Sagasta at a floating rate linked to Euribor with three-month interest periods. It wishes to fix its borrowing rate for the first interest period as it believes that interest rates may rise in the intervening period. It therefore buys a FRA covering the three-month interest rate in six months' time with an interest rate of 5% from Carranza. If interest rates rise above 5% then Cadiz will be protected against that rise but if they fall below Cadiz will be paying more than the market rate. Settlement is made at the start of the interest period while interest payments are usually made at the end of the interest period. Any interest payments made will be discounted to compensate for the early payment (*see box "Forward rate agreement"*).

Credit derivatives

In December 2003, Parmalat SpA, the Italian multi-national food company, filed for bankruptcy following a default on an outstanding bond issue. Allegations of massive corporate fraud followed. Parmalat had been active in the corporate bond market and had over 100,000 domestic bondholders, most of whom suffered large losses on their holdings. Many of its eurobond holders were financial institutions and suffered no losses at all: they had protected themselves by entering into credit derivatives.

A debt security holder assumes a bundle of risks that affect the security's value (*for background, see feature article "Debt capital markets: an introduction", www.practicallaw.com/2-201-1581*). The security's denomination currency may devalue, its interest rate or maturity can become unattractive relative to other securities or its credit risk (the risk that interest payments or principal repayments are not made) may increase. Credit derivatives allow for the isolation and separate trading of credit risk.

The market has grown significantly in recent years. The first credit derivatives were structured in the early 1990s; by 2005 the British Bankers' Association estimated that the market's size was just under $5 trillion: a 500% increase in just five years. In 2004 alone, ISDA estimates that the market grew by 123%.

Credit derivatives are most commonly structured as credit default swaps, but can also be structured as total return swaps (which transfer market risk as a whole) or credit default options (which transfer credit default risk only). In structured finance transactions such as credit linked notes (debt instruments bundled together with credit derivatives) one of these types of credit derivatives will be embedded into a bond to create the credit derivative element of the transaction.

Credit default swaps. Credit default swaps are bilateral contracts between a credit protection seller (seller) and a credit protection buyer (buyer). Under a credit default swap contract the seller agrees to pay out sums by reference to a single or group of reference entities, which may be corporates or sovereigns. Parmalat, Enron, Worldcom and Railtrack were all popular reference entities in the credit default swap market before their respective collapses. The reference entity is not a party to the transaction and is probably unaware of its existence.

The buyer buys a pre-agreed amount of credit protection on a reference entity's obligations. These are decided at the outset; for example, a specific security such as a €200 million floating rate bond issue, or a wide-ranging class of obligations such as bonds or loans above a certain threshold.

The seller sells credit protection against the loss in value of the reference entity's obligations if certain events occur (that is, credit events). The parties choose which credit events are applicable to the reference entity from a list of definitions set out in the 2003 ISDA Credit Derivatives Definitions: namely, bankruptcy, failure to pay, restructuring, repudiation/moratorium, obligation acceleration and obligation default (*see "ISDA document platform" below*).

The choice of credit events will also depend on the jurisdiction of incorporation and business type of the reference entity. For example, parties to a market standard credit default swap relating to Ford, a North American investment grade corporate as a reference entity, would select different applicable credit events to one with British Airways, a European investment grade corporate.

If a defined credit event occurs, the seller (and also usually the buyer) has the right, but not the obligation, to declare a credit event. This is done by delivering a credit event notice to the other party and also usually attaching two sources of public information, such as news reports, to back up the claim. The transaction will then be settled either by the seller paying a cash amount to the buyer designed to mirror the losses made on the reference entity's securities or, alternatively, by physical settlement.

In physically settled transactions, the seller accepts delivery of obligations of the reference entity with a face value equal to the transaction's notional amount. Although following the credit event they are worth far less than their face value, the seller pays the full face amount of the securities to the buyer.

For example, Cadiz holds €800,000 of floating rate notes issued by a Spanish drinks distributor, Comillas SA. The company is one of Cadiz's largest clients and the debt holding has helped enhance their client relationship. Cadiz is reluctant to sell its holding but has become worried about the risk that Comillas will default on payments due on the notes and how much it could then lose. Cadiz decides to protect itself by entering into a credit default swap with its bank, Sagasta, which wishes to increase its exposure to the Spanish beverage market.

The credit default swap has Comillas as its reference entity. Although Cadiz was initially looking only to protect itself against the risk of default on the €800,000 bond issue, it has decided that by buying credit protection in relation to a wider range of Comillas' obligations, it will help insulate itself better against any business disruption should Comillas collapse. The reference obligations are defined as any bond issued, or loan taken out, by Comillas.

Cadiz purchases €1 million of credit protection on Comillas for a three-year period, so the swap has a notional amount of €1 million and a maturity date three years ahead. The parties select as credit events Comillas' bankruptcy, a failure to pay principal or interest on any of its bonds or loans above €1 million or any restructuring of such debt.

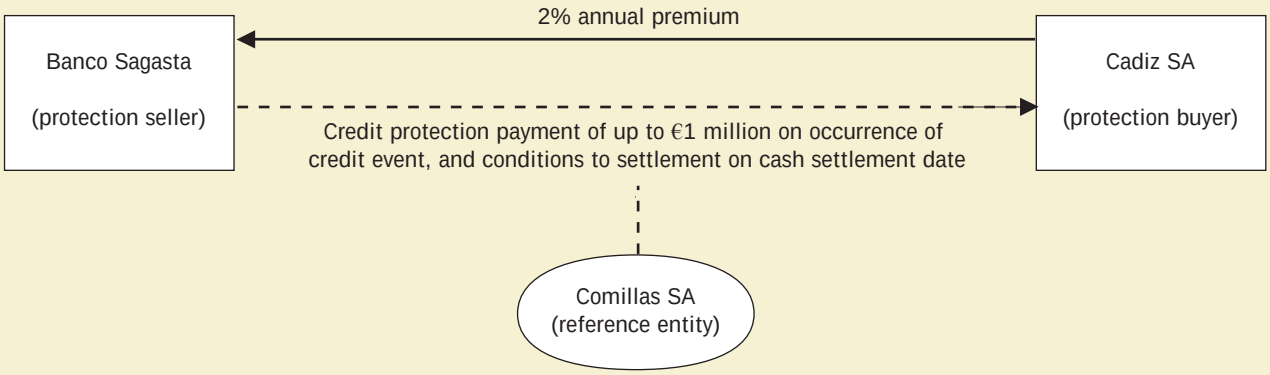
Sagasta and Cadiz use an ISDA standard credit default swap agreement incorporating the 2003 ISDA Credit Derivatives Definitions (*see "ISDA document platform" below*).

To compensate Sagasta for taking on the Comillas risk, Cadiz pays an annual premium of 2% of the notional amount of the swap. This is similar to the margin over its lending costs that Sagasta would have expected to make if it had entered into a loan transaction directly with Comillas.

Unfortunately for Sagasta, one year later, Comillas defaults on an interest payment on an issue of $100 million 5% bonds due 2012 (2012 debt). Comillas moves into restructuring talks with the 2012 bonds' creditors. The value of Cadiz's bonds plummets from 95% of their face value to 45%.

Cadiz considers that several things could happen. Comillas could restructure its 2012 debt, which could further devalue Cadiz's bonds; it could go bankrupt; or it could fail to make the interest payment on Cadiz's bonds in a few months' time. Cadiz is also likely to suffer business disruption in relation to its key client.

Credit default swap: single name, cash settled



Cadiz decides to trigger a credit event under its credit default swap and delivers a credit event notice to Sagasta. The credit event notice states that a "failure to pay" credit event occurred when Comillas failed to pay an interest coupon in relation to the 2012 debt. The credit event notice attaches two pieces of publicly available information confirming that a credit event has taken place (a report from Bloomberg and a Financial Times article). (Sagasta might have decided to trigger the credit event itself, for example, if a restructuring took place resulting in a relatively small decrease in the value of Comillas securities, but the fear of bankruptcy still remained.)

The settlement process begins: the parties had agreed at the outset that in this situation Cadiz would choose an obligation of Comillas 45 days after the delivery of the credit event notice. The 45-day period has been chosen to allow the market to settle down following the delivery of Comillas' bad news. Cadiz selects Comillas' worst performing obligation, which by coincidence happens to be the floating rate note issue that Cadiz holds. Cadiz uses a valuation process set out in the credit default swap confirmation (*see "ISDA document platform" below*) and values the obligations at 50% of their face value (a slight recovery in price). The final price of the obligations is 50% and Sagasta is then required to pay the difference between the notional amount of the credit default swap that is, 100%, and the final price, so Sagasta pays Cadiz €500,000.

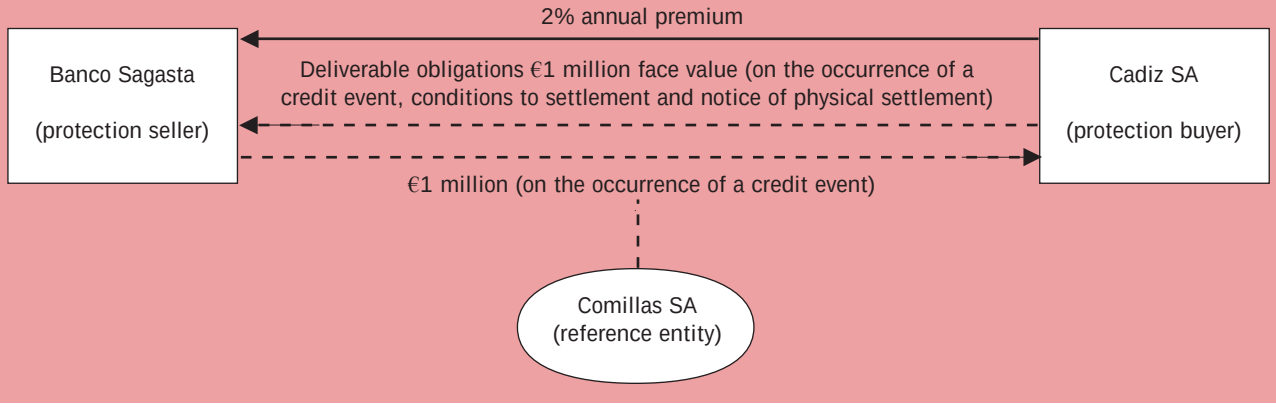
Cadiz then decides to sell the €800,000 Comillas bonds that it holds and realises €400,000 for them. It has therefore made €100,000 over and above the extent of its loss in relation to the bonds and this helps to compensate it for future business disruption (*see box "Credit default swap: single name, cash settled"*).

If the parties had entered into a physically settled credit default swap then, following the delivery of the credit event notice, Cadiz would have delivered a further notice to Sagasta stating that it intended to physically settle the transaction. Before 30 days had elapsed from the date of the credit event notice it would deliver eligible Comillas securities with a face value equal to the notional amount of the credit default swap to Sagasta. Sagasta would be required to pay the notional amount of the credit default swap to Cadiz. Cadiz could then have delivered its €800,000 of Comillas notes and received their face value back. It would also have needed to purchase €200,000 of Comillas notes at whichever price they were trading at, and would have received back their full face amount (*see box "Credit default swap: single name, physically settled"*).

DOCUMENTING DERIVATIVES

The early derivatives transactions were documented so that there was a single

Credit default swap: single name, physically settled



agreement for each transaction. This set out all the provisions relating to the derivative such as obligations, representations and warranties, events of default, and early termination, as well as the specific financial details of the transaction. If two counterparties had a course of dealing between them, negotiating a specific comprehensive agreement for each transaction could prove both time consuming and expensive.

ISDA document platform

To simplify matters, ISDA developed the master agreement concept (the Master Agreement). The Master Agreement allows the counterparties to negotiate standard terms between them at the outset of their relationship. The parties then enter into a Confirmation for each transaction incorporating the standard terms, which means that only the specific financial terms of the transaction need be set out.

Glossary

Arbitrage. Taking advantage of small price differences (of securities, currencies or goods) in different markets to make a profit, by purchasing in one market (where the price is less) and selling in another market (where the price is more). For example, if a company is listed in London and Tokyo, the price of its shares in London may be less than it is in Tokyo. By buying in London and selling in Tokyo, the arbitrageur makes a profit on the transaction. The term has been extended to so-called risk arbitrageurs who take a position in securities, particularly where a company may become or is the subject of a takeover bid.

Collateral. Assets pledged by a third party to secure payment by the borrower of a debt. The term is now commonly used to describe assets pledged by the borrower itself.

Convertible bond. A debt instrument convertible generally during a specified period of time into a number of newly-issued listed ordinary shares of the issuer at a predetermined conversion price.

Hedge or hedging. A form of protection against market fluctuations most usually involving a swap, that is, an exchange of one product for another, usually currencies or income streams (*see also "Swaps" in the main text*).

Not only did this approach reduce both professional and administrative costs, it also reduced the amount of credit exposure between counterparties. This is because, in bundling the transactions into a single agreement, the risk of a trustee in bankruptcy cherry picking transactions favourable to a bankrupt counterparty is much reduced.

Master Agreement. Today, most OTC derivatives transactions are documented through the Master Agreement. The Master Agreement is published as a pre-printed form by ISDA. The market practice is not to amend the pre-printed form but instead set out negotiated modifications to the standard form in a further pre-printed form, the ISDA Schedule (*see below*).

The Master Agreement sets out the important boilerplate contractual terms and falls into three distinct areas:

- Clauses 1 to 4 cover the basic mechanics of entering into the transaction (interpretation; obligations; representations; and agreements).
- Clauses 5 to 7 cover events of default, termination events and early termination of the transaction. These provisions set out when and by whom transactions can be terminated before their stated date of maturity and related quantum and method of calculation of any payments between the parties.
- Clauses 8 to 14 cover the administrative side of the transaction: transfer of derivatives contracts; the contractual currency; miscellaneous provisions such as the survival obligations on the termination of a transaction, offices, expenses and notices; governing law; and jurisdiction.

Schedule. The Schedule is also a pre-printed form and allows the parties to tailor their Master Agreement. It contains a number of choices that the parties may make in relation to the Master Agreement (including whether certain provisions should apply to both parties, to one party or to neither) and allows parties to modify and add provisions.

The Schedule is divided into three parts. Part 1 deals with termination provisions. Part 2 covers agreements to deliver documents. Part 3 deals with miscellaneous matters such as addresses for notices; governing law; and netting. In Part 4 the parties amend and delete various provisions of the Master Agreement as well as incorporating additional provisions: for example, that all agreements between the parties will terminate on a change of control of a counterparty, if a counterparty disposes of a substantial portion of its assets, or if its credit rating is downgraded.

Confirmation. The Confirmation sets out the terms of the transaction, its key dates, various amounts and mechanics and administrative details such as bank accounts, which are not set out in the Schedule.

Depending on the type of derivative being documented, different sets of definitions are incorporated into the Confirmation (this allows for many Confirmations to be only a few pages long), namely: the 2000 ISDA Definitions; the 2004 Commodity Derivatives Definitions; the 2002 Equity Derivatives Definitions; the 2003 Credit Derivatives Definitions and the 2004 Inflation Derivatives Definitions.

Each set of definitions has standard provisions that apply to the particular type

of derivative. For example, in a credit derivative transaction, the definition of each credit event will be defined in the 2003 Credit Derivatives Definitions, as will the standard provisions for cash and physical settlement.

The parties can, of course, amend or disapply any of the provisions that they see fit in the relevant Confirmation.

Credit Support Annex. Each party to a derivative transaction will face some credit exposure to the other party and will therefore wish to reduce this as much as possible. The parties can agree at the outset that if certain events occur, such as a counterparty being downgraded by a rating agency, it must deliver a certain amount of ***collateral*** to the other party based on its exposure to the other party pursuant to the Master Agreement. These provisions are usually annexed to the Schedule in another preprinted form called the ISDA Credit Support Annex (the Annex).

The Annex contains basic contractual terms, which are then customised by the counterparties. The English law Annex works by allowing a transfer of title to the collateral. This differs from the New York law version, which instead creates a security interest over the collateral.

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