

THE QUEST FOR BETTER CREDIT

THIS EXTRACT FROM JPMORGAN'S *CREDIT DERIVATIVES PRIMER* LOOKS AT THE BASIS FOR THE GROWING MARKET FOR CREDIT DERIVATIVES AND THE 'VALUE PROPOSITIONS' BEHIND IT THAT ARE TRANSFORMING THE CREDIT WORLD.

The applications discussed in this article provide strategies for risk managers addressing portfolio concentration risk, for issuers seeking to minimise the costs of liquidity in the debt capital markets, and for investors pursuing assets that offer attractive relative value. Credit Derivatives (CDs) create huge opportunities to profit from discrepancies in the pricing of credit risk across distinct markets through the ability to bypass barriers between different asset classes, maturities, rating categories and currencies.

WHAT ARE CREDIT DERIVATIVES? A CD is a bilateral financial contract that isolates the credit risk of a reference credit and transfers that risk from one party to another. In doing so, CDs separate the ownership and management of credit risk from other qualitative and quantitative aspects of ownership of financial assets. Therefore, CDs share a key feature of other successful derivative products, which is the potential to achieve efficiency gains through a process of market completion. Achieving market completion means CDs enable the transfer of credit risk to the most efficient holder of that risk, even if the underlying asset containing the credit risk cannot be transferred to that holder.

Until the advent of an efficient CD market, credit remained a key component of business risk for which no tailored risk-management products existed. Loan portfolio managers were limited to a strategy of portfolio diversification backed by line limits, with an occasional sale of positions in the secondary market. Derivative users were limited to purchasing insurance, letters of credit, guarantees, or negotiating collateral provisions to master agreements. Corporates either carried open exposures to key customers' accounts receivable or bought insurance where available. Investors were constrained in their activities by the availability of publicly traded assets in predetermined maturities and volumes. However, these strategies are inefficient as they do not separate credit risk from the asset associated with that risk.

Consider a corporate bond which represents a bundle of risks including duration, convexity, callability and credit risk (constituting both the risk of default and the risk of volatility in credit spreads). If the only way to adjust credit risk is to buy or

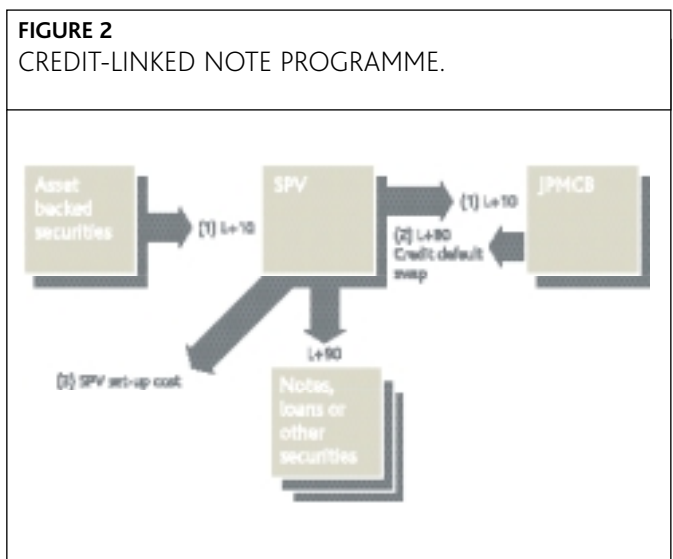
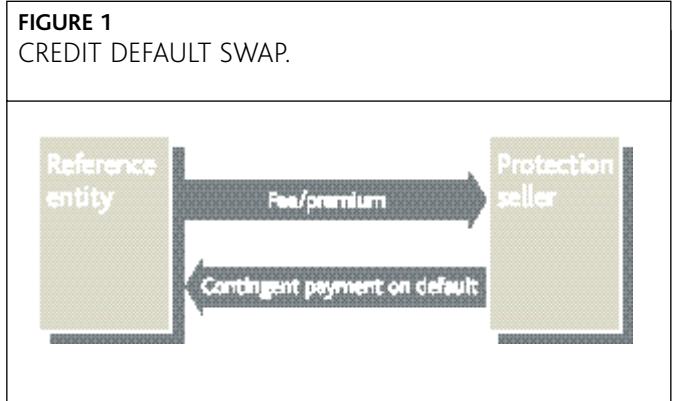
sell that bond, which would consequently affect positioning across the entire bundle of risks, there is a clear inefficiency. Fixed income derivatives introduced the ability to manage duration, convexity, and callability independently of bond positions. CDs complete the process by providing the ability to independently manage default and credit spread risk.

BASIC CREDIT DERIVATIVE STRUCTURES

- **Credit default swaps (CDS).** A credit default swap (see *Figure 1*) is a bilateral financial contract under which the protection buyer pays a periodic fee (expressed in basis points per year on the notional amount) in return for a payment by the protection seller, contingent on the occurrence of a credit event with respect to a reference entity.
- **Credit-linked notes.** A credit-linked note is a security with principal and/or coupon payments linked to the occurrence of a credit event with respect to a specific reference entity. Essentially, a credit-linked note embeds a credit default swap into a funded asset to create a synthetic investment that replicates the credit risk associated with a bond or loan of the reference entity. Credit-linked notes are typically issued on an unsecured basis by a financial institution, but may also be issued from a collateralised special purpose vehicle (SPV). They provide access to the CD market to investors who cannot trade derivatives or do not have an ISDA master agreement. For example, credit-linked notes may be issued directly by JPMorgan Chase Bank or through an SPV programme. Corsair is the brand name for JPMorgan's proprietary SPV programme for issuing repackaged notes and credit-linked notes. These vehicles exist in various jurisdictions throughout the world to address investor needs, as well as tax and structural considerations. Each Corsair vehicle has standard documentation and low execution costs creating a platform for efficient and timely credit-linked note issuance.

OTHER CREDIT DERIVATIVES. As with most derivatives, CDs have already evolved into a variety of structural variations which can be executed in funded or unfunded form. Examples include:

- **'First to default basket'**: A CD which transfers credit risk with respect to multiple reference entities. The protection seller agrees to make a contingent payment to the buyer with respect to the first reference entity in the basket for which a credit event occurs, and does not have exposure to subsequent credit events.
- **'First-loss basket'**: A CD in which the seller of protection agrees to make contingent payments to the buyer of protection upon the occurrence of a credit event with respect to one or more reference entities. The contingent payment amount for each credit event equals par less the liquidation value of an obligation of the impaired reference entity, with the aggregate amount of contingent payments payable by the seller of protection capped at an agreed portion of the total reference portfolio. The structure allows the seller of protection to obtain leveraged exposure to a portfolio of credits.
- **JECI-100** (JPMorgan European credit index-linked security – pronounced Jessie) is a flexible, liquid instrument that trades the broad European high-grade credit market in funded and unfunded form, offering two-way liquidity. JECI consists of a basket of 100 CDS that reference the most



'THE CREDIT DERIVATIVE MARKET HAS SEEN DRAMATIC INCREASES IN USAGE BY OTHER ACTIVE PARTICIPANTS CREATING SUBSTANTIAL GROWTH AND LIQUIDITY IN THE MARKET'

actively traded European corporate and financial names, and is designed to reflect the European high-grade corporate and financial credit component of the Maggie Index (JPMorgan Aggregate Euro Index). The JECI-100 comprises three distinct credit sectors: industrials, senior financials and subordinated financials. With JECI, investors can take advantage of relative value between the cash and CDS markets in a single transaction.

- **HYDI-100** (High-Yield Debt Index) is designed to provide investors with the ability to trade on a liquid diversified index that is highly correlated with the JPMorgan Domestic High-Yield Index. The HYDI-100 consists of a basket of 100 CDSs referencing a diversified pool of high-yield credits. The pool of credits within the contract remains static for the five-year life of the trade, but a new five-year contract referencing an updated pool of names is offered every six months. The index offers investors exposure to 100 different credits in more than 20 sectors in the high yield market.
- **'Synthetic securitisation'**: A first-loss basket structure that references a portfolio of bonds, loans or other financial instruments held on a firm's balance sheet. The technique replicates the credit risk transfer benefits of a traditional cash securitisation, while retaining the hedged assets on the balance sheet of the bank. Advantages over cash securitisation include reduced cost, ease of execution and retention of on-balance sheet funding advantage.
- **'Bistro'** (Broad Index Secured Trust Offering), the synthetic

securitisation programme developed by JPMorgan, is a structure that transfers tranching credit exposure to large, diversified portfolios of commercial or consumer loans from the securitising bank to investors.

GROWING IN IMPORTANCE. Until recently, the CD market was perceived as a tool used by banks to achieve regulatory capital relief. However, bank portfolios have now moved to using CDs for economic risk reduction. Furthermore, since 1997, the CD market has seen dramatic increases in usage by other active participants (reinsurance and insurance companies, asset managers, mutual funds, hedge funds, corporations, and collateralised debt obligations (CDOs) creating substantial growth and liquidity in the market.

JPMorgan estimates that the global CD market had grown to \$2trn by year-end 2001, more than doubling in size over year-end 2000 and increasing tenfold over the past four years. There are several distinct arguments, which combine to account for the increased use of credit derivatives by all institutions that routinely carry credit risk as part of their day-to-day business.

- The CD market provides liquidity to the cash market in times of market stress. This is because of the way in which the respective trading desks are traditionally positioned. Cash desks are typically long risk because they hold an inventory of bonds. CD desks are typically short risk as they hold an inventory of credit

protection. During periods of market stress, clients can reduce long risk positions by either selling bonds or buying protection. At such times, cash desks are reluctant to increase their inventory and assume more risk by buying bonds from clients. In contrast, CD desks are happy to go from short to flat by selling their inventory of protection (the equivalent of going long a cash bond). They can also source additional protection from clients who had previously used the product to short credits and now wish to monetise that position. These characteristics allow the CD market to maintain two-way flows, and provide liquidity and accurate credit pricing when other markets are less active.

- The CD market also provides liquidity to individual credits under stress. The same factors that allow CDs to add liquidity to a stressed market allow it to provide liquidity to individual names – an inventory of protection held by dealers and a desire among other clients to monetise naked short positions.
- CDs act as conduits for information across distinct cash markets. In sourcing and selling generic credit risk, the CD desk serves as a link between many different markets. As a result of its central

'CREDIT DERIVATIVES ACHIEVE THE FINANCIAL EQUIVALENT OF A 'FREE LUNCH', WHEREBY BOTH BUYERS AND SELLERS OF RISK BENEFIT FROM THE ASSOCIATED EFFICIENCY GAINS'

position, the CD market will often account for price movements in the cash market. If a company is obtaining a new loan, institutions exposed to the credit risk of that loan will often seek a hedge against concentrations of risk by using CDs. As lenders purchase protection on an entity to which they are exposed, spreads in the CD market will widen. This will occur before the effects of the new loan have rippled through to be reflected in bond market spreads. In this way, the CD market serves as a link between institutionally separate markets.

- CDs isolate credit from other aspects of ownership of credit instruments. The reference entity, whose credit risk is being transferred, need neither be a party to, nor aware of, a credit derivative transaction. This confidentiality enables risk managers to isolate and transfer credit risk discreetly, without interfering with important business relationships. This contrasts with both a loan assignment via the secondary loan market, which requires borrower notification, and a silent participation, which requires the participating bank to assume as much credit risk to the selling bank as to the borrower itself. The absence of the reference entity also means the terms (tenor, seniority, compensation structure) of the CD transaction can be customised to meet the needs of the buyer and seller of risk, rather than the particular liquidity or term needs of a borrower. The availability and discipline of accurate market pricing enable institutions to make pricing and relationship decisions more objectively.

- CDs are the most efficient way to short a credit without the risk of a short squeeze. While it is nearly impossible to achieve long-term repo funding for corporate bonds or short-sell a bank loan, a short position can be synthetically achieved by buying credit protection. Consequently, risk managers can short specific credits or a broad index of credits, either as a hedge of existing exposures or simply to profit from a negative credit view. Similarly, the possibility of short sales opens up a wealth of arbitrage opportunities. Global credit markets display discrepancies in the pricing of credit risk across different asset classes, maturities, rating categories and currencies. These discrepancies exist because traditionally there was no efficient short against cheap obligations, to extract profit. As these opportunities are exploited, credit pricing discrepancies will gradually disappear.

- CDs (except when embedded in structured notes) are off-balance sheet instruments offering considerable flexibility in terms of leverage. The appeal of off-balance, as opposed to on-balance, sheet exposure will increase as the cost of balance sheet and asset administration increases. Bank loans have not traditionally appealed to hedge funds and other non-bank institutional investors due to the administrative burden of assigning and servicing loans, and the absence of a repo market. Without the ability to source secured financing for bank loans via a repo market, the return on capital offered by bank loans has been unattractive to institutions that do not enjoy access to unsecured financing. However, by taking bank loan exposure through a credit derivative, a hedge fund can both synthetically finance the position and avoid the administrative costs of direct asset ownership. The degree of leverage will depend on the amount of up-front collateralisation (if any) required by the swap counterparty. CDs have opened up new ways to distribute the credit risk embedded in bank loans and other instruments, into the institutional capital markets.

CREDIT WHERE CREDIT'S DUE. The use of CDs has grown exponentially since the beginning of the decade. Transaction volumes have picked up from the occasional tens of millions of dollars to regular weekly volumes measured in hundreds of millions of dollars. While it is true that banks have been the foremost users of CDs to date, it would be wrong to suggest that banks will be the only institutions to benefit from them. The end-user base is expanding rapidly to include a broad range of broker-dealers, institutional investors, money managers, hedge funds, insurers, reinsurers and corporates. Growth in participation and market volume is likely to continue at its current rapid pace, based on the unequivocal contribution that CDs are making to efficient risk management, rational credit pricing and, ultimately, systemic liquidity. By enhancing liquidity, credit derivatives achieve the financial equivalent of a 'free lunch', whereby both buyers and sellers of risk benefit from the associated efficiency gains. CDs can offer both the buyer and seller of risk considerable advantages over traditional alternatives. Both as an asset class and a risk management tool, they represent an important innovation for global financial markets, with the potential to revolutionise the way that credit risk is originated, distributed, measured and managed.

This article is extracted from JPMorgan's product report *Credit Derivatives: a Primer*.
<http://morganmarkets.jpmorgan.com>