And now for capital structure arbitrage
Source: Euromoney
December 2002
Antony Currie and
Jennifer Morris

Go to our specialist pages on
markets and products and **regions**.
Search for related **Euromoney publications and events**

Markets have crushed banks this year but now some see a profit to be made in arbitraging debt against equity. It's a smart trick. Turning it into a sustainable business will be even smarter.

Household is about to default on its bonds. Or at least that's what might be inferred by looking at its spreads towards the end of October. The US consumer finance company's benchmark 10-year bonds, launched last year at a spread of 155 basis points over US treasuries, had hit 800bp over. Default swap prices were even wider at 900bp over.

Yet Household still had its single-A rating and its equity price, though way down on its high of $63.25 in April 2002, was still trading steadily at between $22 and $28. Was this really a company about to go bust, or one suffering from the fear and loathing of big debt issuers that has gripped credit investors for much of this year?

It sounds like the perfect opportunity for taking a bet on the company's future by loading up on its bonds at those juicy wide spreads. But wait – what if Household's bond investors had correctly sensed it was on the point of meltdown and it was the equity investors who were over-optimistic about the company? You would not be able to hedge that long bond position when the default swap was at even wider levels than the bonds.

But you could put a partial hedge on a bet on the bonds by shorting the stock. That's exactly what Boaz Weinstein, head of credit derivatives trading for the Americas at Deutsche Bank, did. He's one of a growing number of bank proprietary traders and hedge fund investors who see profits to be made by trading across asset classes to benefit from big discrepancies between the debt and equity prices of the same issuer.

A bold new arb play
According to traders at several investment banks, capital structure arbitrage is fast gaining ground as the next big trading strategy. The term is a bit of a mouthful, as is capital structure inbreeding, another of the phrases bankers use to describe what can cover a multitude of different types of trade. But the concept as it's being used today is simple enough: to take a position in a debt security to hedge an equity position, or vice versa.

For traders, risk managers and academics who for years have confined themselves to modelling correlations between closely related markets – cash equities versus equity derivatives, cash bonds versus interest rate futures and so on – this is a bold new step.

It's been axiomatic for years that debt investors effectively sell issuers a put option on their own stock. More recently, at the depths of the credit cycle, it's become clear that movements in equity markets can quickly have an impact on debt and vice versa. But is it a sound strategy actually to trade debt against equity? They are, after all, fundamentally different securities. Can investors and bank prop desks really be so confident of the correlations between debt and equity to make a business out of arbitraging them?

A few brave souls think so.

This new line of business has sprung from recent fundamental changes in how credit markets trade. “The number one reason why investors are getting involved in capital structure arbitrage now is because of the development of the credit default market,” says Jim Vore, an executive director in credit derivatives at Morgan Stanley in New York. “Even with the right theoretical models and the right views, investors weren't able to go long equity and short debt. Default swaps changed that. Credit is now much more tradable.”

Throw in an equity bear market that started in early 2000 and a series of near-credit crunches since late 2000 that have spawned large shifts in credit spreads and you've got pricing anomalies across company capital structures that arbitrage traders could previously only dream about.

Smart derivatives traders at such firms as Deutsche Bank have been trading debt against equity in distressed companies for more than 18 months. “When a company's credit spreads widen the correlation between the movement of the spread and the equity price movement increases,” says Rajeev Misra, head of integrated credit trading at Deutsche.

Investors too are now starting to take note of the potential of a market that some traders describe as the most significant development since the invention of the credit default swap itself nearly 10 years ago. At the start of November, Morgan Stanley hosted its annual conference on the use of credit derivatives. “Usually we'd get a handful of equities players turning up, no more than one per cent of the total number of delegates” says Vore. “This year they made up at least 20% of the 400 or so delegates.”

Viswas Raghavan, co-head of equity capital and derivative markets at JPMorgan, has noticed a similar development from his seat in London. “We have witnessed a stunning acceleration in the number of investors looking at this over the past few months,” he says. “At the beginning of the year, there were only a few serious investors looking at debt-equity strategies, today there are over 30 funds and by this time next year that figure could well reach 200.”

Few of those who have got involved thus far have done so in any meaningful way, though. “It’s not a large market yet,” says Suzanne Cain, managing director at Morgan Stanley. “I asked one client how many of these trades they’d put on, and the answer was around 10 or 15. There’s not enough liquidity yet for big trades. At the moment they’re just getting their feet wet, or are getting ready to start trading in January.”

One fund manager on the US east coast who manages $100 million describes capital structure arbitrage as “the fastest-growing hedge fund strategy” and admits that he has struck a few trades himself. But, he cautions, there are also “a lot of guys doing it in amateur hour and screwing it up”.

A rising tide

A key question is about what happens in practice: can investors really model pricing anomalies between debt and equity and trade them in a disciplined, programmatic fashion on a large scale? Many of the players use CreditGrades, which was set up earlier this year by Riskmetrics, Goldman Sachs, JPMorgan and Deutsche, and uses equity volatility as a key input in a model that claims to throw out valid credit spreads that traders can compare with actual market prices (see box on page 40).

But does all this really just come down to old-fashioned traders’ gut feelings?

Michael Goldman, a founding partner of Momentum, a UK fund of hedge funds that has recently been bought by Pioneer Global Asset Management, says he has been increasing allocations to such cross-asset-class relative value strategies. “There are a lot of deep mispricings in the market today,” he says. “There’s some undervalued debt and overvalued equity, as well as a lot of bankruptcies and that means opportunities are available for certain players.”

Several fund managers, such as KBC Alternative Investment Management – an arm of the Belgian bank – are launching products that will focus exclusively on relative value trades across all parts of a company’s capital structure: bonds, equities, and equity and credit derivatives. “It’s a natural progression for us,” says Gareth Cherry, a trader at KBC. “We’ve gained practical experience of the relationship between stock price and credit spread within our current strategies and this has been supported by the work we’ve been doing on equity credit theory. Testing using historical data has made us feel very comfortable with the CreditGrades model.”

The new fund will start off with around £150 million ($245 million) of capital. KBC’s trading decisions will be based on the CreditGrades formula that Cherry and his colleagues have spent the past six months fine-tuning to come up with a quantitative proprietary model. Currently they’re trading with the new model – which Cherry says takes CreditGrades to the next level, though he declines to say how it does this. He says the trading strategy is proving highly profitable: “There’s relatively little arbitrage in these areas at the moment so for that reason we’re excited about the opportunity.”

For bank prop desks, it’s the next big thing, a handy strategy to replace the riches several garnered from playing the interest-rate and forex markets – one bank is in 55 trades involving linked long and short debt and equity positions and says it’s highly profitable.

And it’s also a good opportunity for the client-facing bank traders. Hedge funds are prepared to pay up for good research, trading ideas and access to liquidity, and represent one of the few bright spots for investment banking revenues right now. “Trading default protection versus equity is going to become the hottest strategy in the arbitrage community next year,” says Deutsche’s Weinstein. It’s little wonder, then, that Deutsche and other investment banks have started to reorganize their trading desks in preparation.

The idea behind capital structure arbitrage is hardly rocket science. It’s based on the assumption that there is a relationship between movements in equities and bonds. In 1974 Robert Merton came up with his equity-based model for valuing debt products. Commercial banks have been using such models for several years to help manage loan portfolios, creating the forerunner of capital structure arbitrage. They use them as an early-warning signal of problem loans. If a stock drops to a certain point, for example, perhaps it is time to sell the loan, or buy protection in the credit default swap market. In just the past year some banks have been quietly extending one-year credits to companies with covenants demanding that if their share price falls below a pre-set trigger, the borrower must immediately repay in full.

Default swaps are not the only hedge

Given the state of the market in the past 18 months, loan portfolio managers have been regularly facing these hedging decisions. “The increased volatility and downward drift in the stock market has led to big purchases of default protection, which are partly hedged by shorts in the cash market,” says Louise Purtle, analyst at research firm CreditSights. “We’d argue that there has never previously been such a direct transmission mechanism from equity movements to credit spreads as has developed in the past year.”

These are just basic default-swap trades being used to hedge long loan positions, taking advantage of information from the equity markets to judge when to hedge. But there were clearly more uses of the model. “Some of the commercial banks that have experience managing credit in their loan portfolios have pointed out the potential value of debt-equity trading to their investment banking cousins,” says Tim Kasta, a managing director at Moody’s KMV. “They see it as a powerful trade but can’t take full advantage of it because their job is to run the loan portfolio.” So the prop desks started making their own plays.

The first hedge funds to get involved were those specializing in convertible arbitrage. It’s no surprise that they should be pioneers, given that their core product itself is a hybrid of debt and equity. But even their shift from pure convertible plays into capital structure arbitrage was more by accident than by design. In the past two years hedge funds have become the dominant investors in convertible bonds, largely because of the development of new structures such as zero-coupon, zero-yield convertibles with high conversion rates, sometimes as high as 148%. These appealed to investors that wanted to play equity volatility rather than lock in a set return. Convertible arbitrage hedge funds would strip out the debt component, usually by using a default swap.

The drop in stock market valuations in the past 18 months killed much of the profitability in playing the equity volatility, and left many of the zero zeroes looking much more debt-like than they had previously. Meanwhile, most convertible new issues have reverted to traditional structures with coupon yields and a lower conversion premium. “Hedge funds found themselves long debt and short stock,” says a derivatives trader. “Most of them refer to it as style drift. There aren’t many investors, hedge fund or otherwise, who are keen on that. But hedge funds, being more flexible in approach, are seeing this as an opportunity: they now have all the approvals and agreements in place to trade default swaps, so can, if they so choose, play across the entire capital structure of a company.”

The plummeting equity and bond prices of the past 12 to 24 months have provided ideal fodder. Where credit spreads widen dramatically equity prices will generally fall. Look at what happened to the telecom companies: British Telecom’s crushing debt burden led to consecutive ratings downgrades throughout 2001, making its bonds look cheap. As a result of balance-sheet problems, BT’s share price plummeted too.

But BT’s equity and debt prices did not move in tandem. Shareholders were slower on the uptake than bondholders when it came to assessing the implications of BT’s excessive leverage on their investment, so there was a time lag in the share price movement.

Savvy investors could have taken advantage of this by betting that the equity price was also going to fall and shorting BT stock while going long its bonds. That second half of the play would be just in case it turned out that BT’s bonds were being too pessimistically priced by the market, rather than shareholders being too optimistic.

However, it’s one thing to say there’s a link between credit and equity, a different matter entirely to define that connection, quantify it and be sure enough about your results to go out and trade on them.

So how do you know it works?

This is where traders determined to rely on modelling are likely to fail. On the one hand, there’s enough evidence from recent history to remind traders that an overreliance on models can be extremely unhealthy; Long-Term Capital Management only went belly-up four years ago. “If you outsource all your ideas to the wrong Hal, you’ll end up in the wrong Space Odyssey,” says Glenn Reynolds, CEO of independent research firm CreditSights, clearly a man who likes his sci-fi. “The reality is that all models have their anomalies.”

More than that, though, the correlation between debt and equity just isn’t that great. “Who knows if you’ve even got the right hedge?” asks Vore at Morgan Stanley. “The big question for traders is ‘what’s my delta?’” The answer might be surprising to many, as it was to some of those who attended Morgan Stanley’s credit conference in November. One of the speakers was David Modest, formerly a partner in LTCM who is now head of proprietary trading for Morgan Stanley. “He told us what the risk correlation was on a debt-equity trade,” says one of the participants. “I was expecting him to say something like 50%. But he said it was between 5% and 15%.”

For those who study correlations, that should come as no great surprise. “The correlation between two pieces of equity is about 30%,” says Kasta. “Debt correlations on their own are on an order of magnitude lower, say around 3%.”

More instinct than science

What’s more, much as some would like to think markets are wonderfully efficient, they are far from it. Weinstein’s trade on Household is a case in point. Shorting the stock offered a good partial hedge against his main bet that the company’s debt spreads would tighten but it doesn’t work every day. At one point while the trade was still on, he says, “the spread tightened to 600bp from 800bp and the stock fell from $26 to under $23.” That looks like nirvana. Had he closed the trade then he would have made money on both the main bet as well as the hedge.

As it was he kept it on, lost a bit on the hedge but made significantly more from spread tightening as this came in to 200bp on the day banking group HSBC announced its acquisition of Household. What would have happened to Household if HSBC hadn’t come along is anybody’s guess. Again, it’s a smart trade but it smacks of gut feel and instinct as much as science.

It’s not called volatility for nothing. It creates mispricing rather than efficient pricing, and the problem with that, says Kasta, “is that things don’t always happen that you’d expect simply from looking at the prices. So the share price on a company might have dropped and the expected default frequency of the bonds might have risen, which means that the bond price should fall. But you don’t always see that. Equally, there are times when the bond spreads gap out even though the EDF hasn’t changed and the share price is about the same.”

Nor do models capture the idiosyncrasies that affect companies or sectors. The role of banks in a company’s capital structure can also have its own effect on the performance of a company’s securities that are not yet fully understood. Companies involved in asbestos litigation are a good example of this. “Banks will have loans out to these companies, and will hedge out their risk in the default swap market,” says Reynolds. “That hits the bond spreads, and because the banks have already taken hits they’re unlikely to renew a line of credit without extra covenants or securing assets against it. That in turn hits the bond spreads again as it subordinates the investors even further, and it keeps the cycle going.”

Of course if the banks have taken out additional short positions in the default swap market against the credit they’re lending to over and above their own loan exposures, that might motivate them in very interesting ways – perhaps even to pursue a profit on the short position.

For all the doubts more and more banks are putting their equity and debt traders, analysts and derivatives specialists together and having them trade across asset classes.

“Our research teams are no longer isolated by product,” says Vore, an executive director in credit derivatives at Morgan Stanley in New York. “The credit derivatives strategists, the equity options strategists and the converts strategists all talk to each other and share information. We've also initiated regular meetings with the equity sales teams.” There are plans to formalize this structure before the end of the year into a hedge fund industry group. The client traders are separate from the firm’s prop desk, which is housed on the tenth floor of the firm’s New York headquarters, several floors above the trading floor Vore sits on, and is run by former Long-Term Capital Management partner David Modest.

Desk bridges a gap
At JPMorgan, Raghavan, head of equity capital and equity-linked markets, has set up a debt-equity trading desk to handle both proprietary and customer trades. The desk is a joint venture between equity sales, equity linked and fixed income. Logistically that’s awkward as the credit division is housed in a different building but it makes perfect sense in business terms, claims Raghavan, because a significant number of the investors that are now getting interested in capital structure arbitrage are convertible arbitrage funds.

So far six sales people, mainly from equity-linked, have been assigned to the new desk and the bank plans to add staff next year. They’re not all dedicated full-time to capital structure arbitrage trades, however. JPMorgan also has three dedicated research analysts providing trading ideas to the bank and its clients.

Deutsche also takes the view that a profitable prop desk is the way to its customers’ hearts. According to Weinstein, the bank’s prop desk has been taking positions for around 18 months. Although he’s under strict instructions from his boss, Rajeev Misra, not to reveal the size of positions Deutsche is taking, he claims the group is making money. Both he and Misra fly Concorde so presumably they’re doing something right.

The bank has four traders – three based in New York and one in London – who look at capital structure arbitrage full-time. Those doing this for Deutsche include Jeremy Berkowitz, a highly regarded equity derivatives trader who joined the bank from Société Générale and holds a professorship in finance, and George Pan, who wrote the blueprint for CreditGrades in late 2001. Misra hired Pan from JPMorgan earlier this year to oversee the bank’s risk position. Next year, two or three more people will be added in London.

Other banks are making moves towards this but don’t appear to be committing people or capital to the same extent. At Citigroup, Peter Jackson, a managing director in credit derivatives, says he has just hired a senior equity sales person to sell credit default swap protection to relative-value hedge funds and plans to devote more resources to modelling and trading in the future. There are no plans yet to create a specific desk, or to have dedicated analysts.

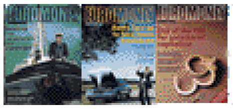
Despite its role in setting up CreditGrades, Goldman Sachs seems to be devoting fewer resources to building up its own capital structure arbitrage capabilities than some of its larger rivals. Even though Klaus Toft, an executive director in fixed income, says this area of the credit markets is generating by far the most excitement today, he’s the only banker at Goldman Sachs working specifically on debt equity arbitrage ideas for proprietary position taking and clients. “I’d say we’re still in the upstart phase,” he says. “Accounts are asking can we do this, how do we do it, can we get internal approval. I definitely see this growing fast though.”

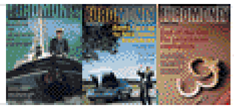
One thing at least is certain. Whether as a result of mispricing, bank hedging or extreme volatility there is a lot of raw material to fuel the growth of capital structure arbitrage trades, regardless of whether they make traders a bundle or entice them to lose their shirts. The big question is whether there will be enough opportunities in a more stable economic and market environment to satisfy all the hedge funds, the prop desks and client trading desks currently being set up.

Those putting on debt versus equity trades claim that money will be made even if markets return to more normal levels of volatility. “This business will grow anyway and if the markets stay volatile it will grow even more quickly,” says Weinstein. KBC’s Cherry is certainly undaunted “The scope of this strategy is enormous. We will be looking for opportunities across the whole corporate bond market.”

Kasta at Moody’s KMV agrees that the market is unlikely to die once volatility abates. “For as long as buy-and-hold investors who are constrained to trading in one asset class exist there will always be mispricing and opportunities for hedge funds and other less constrained money managers to exploit.”

Back at Deutsche Bank, Misra, head of integrated credit trading, strolls into the office where his credit derivatives trader, Weinstein, has pulled up a WorldCom share price chart to demonstrate a point he's making. “Ah, looking at equity prices again,” scolds his boss. “Every time I come in here he's looking at share charts.” Weinstein looks a bit bashful but doesn't bother denying it.





Markets and Products	Asian bonds . Asset Management . Banking . Bonds/Credit . Convertibles Covered Bonds . Credit Risk . Custody . Equities . Financial Technology Foreign Exchange . M & A . Syndicated Loans
Regions and Countries	Asia Pacific . Baltics . Brazil . Central Europe . China . Czech Republic Korea . Latin America . MENA . Poland . Russia . Spain . South Africa Thailand . Turkey . Western Europe
Other Resources	Awards . Contact Us . My Account . Search