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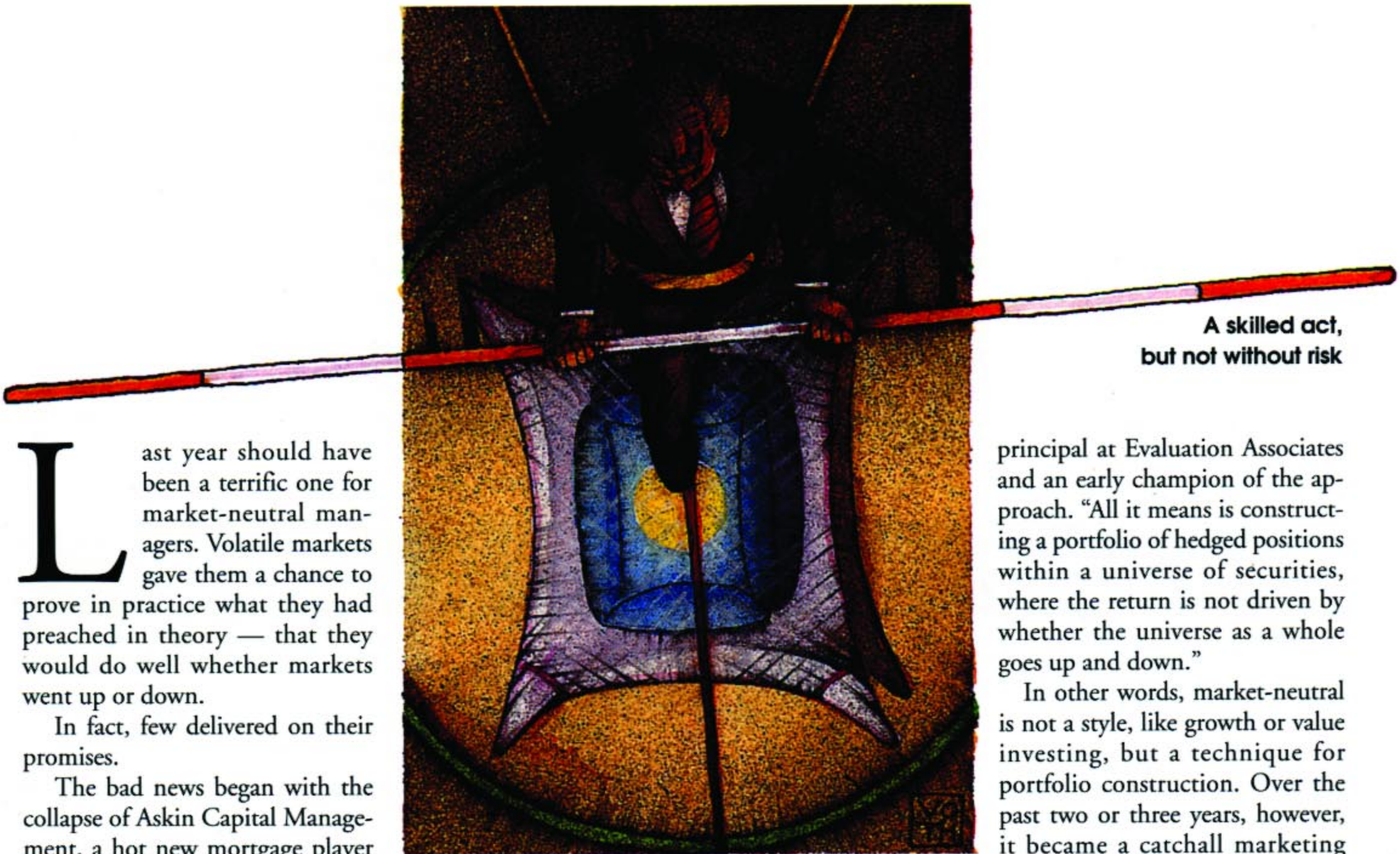

A skilled act, but not without risk

Greg Voth

Psst, we're market-neutral

Contrary to popular opinion, 'market-neutral' managers are thriving — just don't use that term. • By Miriam Bensman

Last year should have been a terrific one for market-neutral managers. Volatile markets gave them a chance to prove in practice what they had preached in theory — that they would do well whether markets went up or down.

In fact, few delivered on their promises.

The bad news began with the collapse of Askin Capital Management, a hot new mortgage player with $600 million in supposedly market-neutral funds. Many convertible arbitrageurs were also slammed; they were neutral to stock market moves — but not to interest rate risk. Even long-short equity players had a disappointing year. All told, market-neutral began to look like yet another fair-weather fad that failed to pass the stress test. Managers quietly started to drop the name in favor of "relative value," "long-short equity" and other less suspect labels.

But don't trash the concept yet. Some market-neutral managers have done well, even brilliantly, as the profiles on the following pages illustrate. "Despite Askin and related misadventures, a market-neutral portfolio is a viable concept," insists Robert Jaeger, principal at Evaluation Associates and an early champion of the approach. "All it means is constructing a portfolio of hedged positions within a universe of securities, where the return is not driven by whether the universe as a whole goes up and down."

In other words, market-neutral is not a style, like growth or value investing, but a technique for portfolio construction. Over the past two or three years, however, it became a catchall marketing term so broad as to be virtually meaningless. Any manager who went long *and* short any type of security seemed to fly the market-neutral banner. Worse, the term was too often used — or misunderstood — to mean "risk-free." Strip out that nonsense, and market-neutral encompasses a wide range of arbitrage and relative-value techniques that owe their returns — and risks — purely to a manager's skill in identifying value and constructing hedges, not to broad market moves.

The biggest and best-known group of market-neutral managers are long-short equity managers — modern-day practitioners of what A.W. Johnson, the first hedge fund operator, charted 30 years ago. Some 40 long-short players

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now manage between $12 billion and $15 billion in assets, estimates Geir Lode, senior research analyst at Frank Russell Co. That's up from between $3 billion and $5 billion two years ago.

Long-short equity players seek to neutralize market risk by balancing long and short positions. They claim to offer only alpha, from stock picks on both sides of the market, plus the short interest rebate, which is comparable to the return from Treasury bills. "These strategies make sense if you believe an active manager can add value," Lode notes. But like long-only managers, long-short managers don't always do so. And they aren't always market-neutral.

At their most naive, long-short players simply buy what they like and sell what they don't like, in equal dollar amounts. If the long portfolio has an average beta of 2 and the short portfolio one of 0.5, the dollar-balanced portfolio is far from market-neutral. "By definition, market-neutral should mean beta-neutral," argues Towers Perrin associate in asset consulting Naozer Dadachanji, who recently completed a study of long-short strategies.

Even a beta-neutral portfolio is exposed to some risk — the source of potential return. A portfolio long airline stocks and short oil stocks on July 30, 1990, for example, would have been hammered three days later when Iraqi tanks crossed the Kuwaiti border. While neutral to the equity market, such a portfolio is far from neutral to oil.

Few managers place such huge bets. But many — like long-only managers — do take sizable positions on "factors" such as sensitivity to the price of oil, industry sectors or investor preference for growth or value. Such bets offer a double win when they work — and a double whammy when they don't, because managers can be hit on both the long and the short side. Weiss, Peck & Greer Investments, the best-performing market-neutral player in 1993 (up 27 percent), was one of the worst-performing in the first half of 1994 (down 6 percent) — chiefly because of large sector exposure.

Other managers, such as Independence Investment Associates, Salus Capital and Advanced Portfolio Technologies, aim to hedge out factor risk, so they rely only on stock-specific risk to create value. That lowers risk: Tracking error for factor-neutral players may be as low as 3 percent, which makes it feasible to leverage three times yet still be less exposed to market risk than the average index fund, argues Lee Thomas, head of proprietary trading at Investcorp in London.

Market-neutral managers have less juice to squeeze from bond markets, which have only three statistical factors — duration, slope and convexity — rather than the 20 or so most quants say equities offer. To deserve the term market-neutral, they must hedge out duration —

Jacobs Levy: *A giant back in stride*

Jacobs Levy Equity Management burst onto the scene in 1990, quickly becoming the largest and best-known long-short equity player. Initial performance was fabulous: gross returns of 27.8 percent from June to December of its first year, and 17.4 percent in 1991. By mid-1993 co-founders Bruce Jacobs and Kenneth Levy, former managers of $1 billion in quantitative equity funds at the Prudential Insurance Co. of America, had garnered some $800 million in assets for the strategy from investors ranging from hedge funds and investment banks to pension funds and endowments.

But performance tripped, dropping to 1 percent in 1992, well below the product's T-bill benchmark, which was 3.6 percent that year. Returns were even worse in 1993, down 3.7 percent. Assets in the strategy plunged to about $400 million.

What happened, quite simply, was every long-short manager's nightmare. Many small-cap stocks Jacobs Levy had sold short — analysts' downgrades, and stocks with small or negative earnings or cash flow — appreciated faster than those in the long portfolios. Jacobs attributes this "irrationality on the short side" to indiscriminate buying from mutual funds and retail investors awash in cash.


Jacobs: Delivering equity returns without the risk

This year institutions that stuck with Jacobs Levy are smiling again. Performance rebounded to 5.2 percent (versus T-bills' 2.9 percent) in the first three quarters, when most of the firm's rivals were battered. After the bull market ended, the firm's shorts began behaving more as expected.

Despite the fluctuating returns since inception, Jacobs Levy's long-short portfolios have added the same value as equities for less than half the volatility. The standard deviation of monthly returns (on an annualized basis) has run about 8 percent for the product, less than half the annualized monthly volatility of the U.S. equity markets since 1926. Meanwhile, the product has returned 10.4 percent a year (before fees) since 1990, close to the 6 percent premium to T-bills that the market has historically delivered.

The firm's strength is a quantitative system — used for all the firm's money management products, which total some $2 billion — that ranks stocks based on 70 different factors, from earnings momentum and interest rate sensitivity to sensitivity to a parallel shift in the yield curve.

The simplest duration-neutral trades are bond-futures basis trades (buy or sell the cheapest-to-deliver bond and sell or buy futures against it) and bond-switch trades (buy one bond, sell another with almost exactly the same duration). Such strategies flourished during this year's bond market debacle. Fenchurch Capital Management's Gamma fund was up 16.62 percent in the first three quarters, while Coast Asset Management Corp.'s zero-duration Coast Arbitrage fund gained 20 percent.

Still, even basis trades are far from risk-free. The biggest risk is that the cheapest-to-deliver bond may change. And investors promised market neutrality may be shocked by mark-to-market losses if the basis spread widens before contracting. Worse, a market dislocation can throw off hedges completely, causing paper losses to become real if they trigger stops or margin calls.

Other players take yield-curve or convexity risk — like the active managers of tilted bond index funds. Returns may be rich, but they're not purely market-neutral. Still riskier are such strategies as international spread trades. A manager may buy German ten-year notes and sell their French equivalents, for example, betting that the spread will revert to its historic level. The danger, of course, is that it may not.

Askin Capital Management's innovation was to apply this strategy to the huge mortgage-backed securities market (*Institutional Investor*, July 1994). Askin bought undervalued exotic mortgage securities and hedged them by selling Treasuries and Treasury options, betting that the prices would converge. But when the bond market tanked in February, the portfolio fell apart. "I think we all underestimated the difficulty in controlling the portfolios," says David White, former COO at the Rockefeller Foundation, a onetime Askin investor. "If you purchase mortgages at a discount and sell Treasuries at a premium, the basis can go against you. If you're levered up 8-to-1, it can really hurt."

The Askin debacle hammered home another lesson — that the main risk of market-neutral management is the manager. "One thing we learned: There's a higher degree of manager risk than we thought," White reflects. "The risk of a human being failing." Strip out market risk and return, and a portfolio becomes wholly dependent on its manager's skill. And since market-neutral portfolios are by definition leveraged — a long-short portfolio puts on $200 million of positions for each $100 million of capital — that manager had better be good at identifying value *and* at designing hedges.

The lesson for market-neutral investors: Make sure you understand the strategy and have confidence in the manager — and add a premium for manager risk to your return requirements.

Here's how four of the better practitioners do it:

industry sector. The firm takes stock-specific risk and modest bets on many of these factors — buying the stocks that top the ranking and shorting those that languish at the bottom.

Behind the model is rigorous research that seeks to pick out the "pure attributes" of a stock by identifying, for instance, how much of its returns are attributable to small capitalization and how much to high volatility or a low price-earnings ratio. It also looks at the economic drivers behind the performance of selected groups of stocks: Small-cap stocks, for example, tend to outperform the broad market when the economy is rebounding and corporate spreads are contracting.

A few money managers use similar models, but Jacobs Levy boasts an unusually broad universe of 3,000 U.S. companies, from which the firm picks around 200 stocks to buy and 200 to short. (Some 150 stocks in each portfolio are small- and medium-cap stocks.) That plays to the firm's strength — its long-only small-cap portfolios have outperformed the Russell 2000 by 5 percent a year on average, for nearly five years.

"It also allows us a broader diversity of bets and allows maximum long-short spread," Jacobs explains. "If you invest with 300 firms, you would think the spread from best to worst would be narrower than in a universe ten times that size."

But playing in the smaller-cap markets means confronting enormous volatility — as the firm found to its cost in 1992 and 1993. Even when portfolios are hedged to eliminate the small-cap effect, "you still have the volatility of individual names," Jacobs points out. "They can move away from you before they move in."

Advanced Portfolio Technologies: *Look! No factor risk!*

While Jacobs Levy takes modest, controlled bets on equity factors, Advanced Portfolio Technologies tries to eliminate factor risk entirely, leaving only the risk — and reward — of company-specific attributes. The New York boutique (its initials are a play on arbitrage pricing theory) was founded in 1986 by John Blin, a former finance professor and staff economist for the New York Futures Exchange, and Steve Bender, a onetime mathematician and physicist, to compete with Barra in providing equity-risk-factor models.

In January 1988 Blin and Bender began using those models to create what they consider truly market-neutral portfolios. To the pair, that means more than just stripping out market risk. "Market-neutral is one of the great American lies, like 'the check is in the mail,'" says French-born, English-raised Blin. "We think it should mean neutral to broad themes — to interest rates, oil, the price of goods, all 20 or so equity factors. We try to be pure stock pickers."

That's not entirely possible, he concedes. "You can't balance factors perfectly. Our model is based on statistical estimation." Also, APT's traders may lack the building blocks they need to create an adequately diverse, fully balanced portfolio: They can't always find the stocks they want that perfectly offset all systematic risks.

As a result, the risk in the U.S. portfolio is only about 80 percent stock-specific — risk that the firm also considers opportunity, says Bender. The rest is residual factor risk that can't be hedged completely but that seldom causes problems, he notes. "When we lose money, it's typically because we ranked the stocks wrong," he adds. APT's approach is only as good as its computer's ability to spot differences in value among clusters of stocks that trade together on a given event or bit of news. No model, of course, perfectly predicts stock returns.

In almost six years the U.S. portfolio has returned an average 13.5 percent a year — better than the average historic return for the market — with annualized monthly volatility of 5.8 percent, about one third the historic volatility of the U.S. equity market. But returns have slipped in the past three years, and APT was down 5.32 percent in the first half of 1994 before recovering its losses in the third quarter.

"Our stock-ranking system didn't work as well as it might have in the first half," Bender admits. A likely reason: APT's system tends to pick stocks on which analyst's earnings estimates have been revised upward — but even when these forecasts proved right, many stocks didn't trade up in response this year.

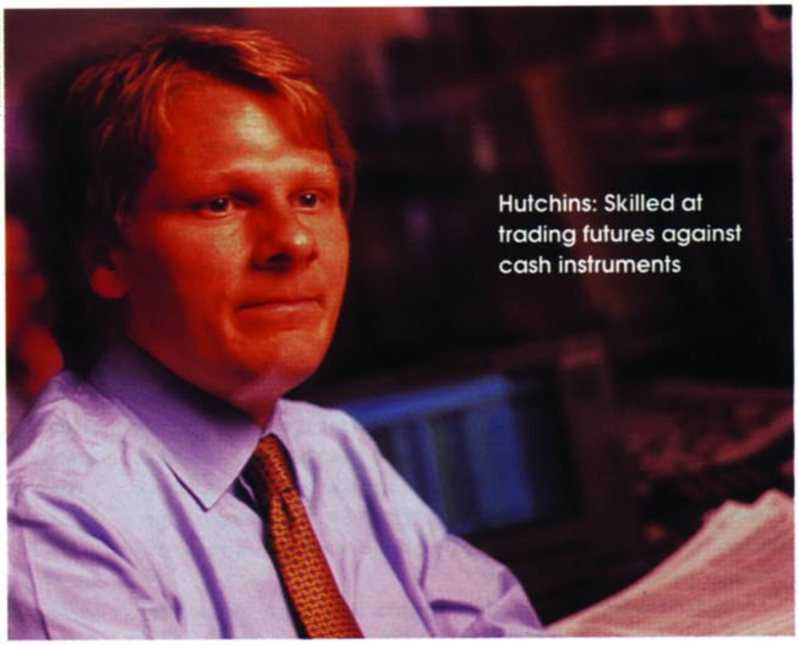
Blin blames APT's longer-term drop in performance on the proliferation of market-neutral players, which makes it tougher to extract value: Many of the 40 or so long-short equity managers are quants who use the same databases — and reach similar conclusions. "I bet not a single one doesn't look at earnings revisions — because it works," Blin notes. "The challenge is to do what not everyone else is [doing]."

As a result, in December 1993 APT became the first manager to run a long-short portfolio in foreign equities. Its first choice: Japan, where market inefficiencies abound but few quants try to exploit them. That worked in APT's favor: Its $60 million Japanese portfolio earned 8.63 percent in its first ten months, with annualized monthly volatility of 3.8 percent — compared with the 16 percent historic volatility of the Topix.

But it's hard to borrow shares in Japan, so APT sometimes can't make its optimal trade. After shorting its four least favored stocks, for instance, it may have to short No. 6 on its list instead of No. 5, which means reoptimizing the portfolio. The lack of borrowable stock will also likely limit APT's ability to expand in Japan, Bender notes: Principal bids from brokers will only get pricier as demand grows. Already trading costs are a high 115 basis points, compared with 30 or less in the U.S. So in 1995 APT plans to tackle the French market.

Fenchurch Capital Management: *A sure bet*

Last year, when most fixed-income managers were hammered, Fenchurch Capital Management's $526 million Gamma fund earned 16.2 percent in the first three quarters. How? Largely by exploiting some of the simplest arbitrages in the bond markets: trading futures against cash instruments. These are also among the lowest-risk trades, because at expiration a future has to settle at the price of the cheapest-to-deliver bond.


Michael Abramson

Hutchins: Skilled at trading futures against cash instruments

Early in the year, for example, Fenchurch spotted an opportunity in Germany, where it's not unusual for the futures contract to trade slightly cheap to cash. But macro hedge funds, expecting Bonn to cut rates, poured into futures, pushing up the two-year Euromarket contract to as much as 35 basis points over some relevant German government note issues. "If you bought the twos and sold Euromarks, you couldn't lose," says Marcus Hutchins, chief trader and president of Fenchurch. "It's hard to point out exactly where we bought in and out and how much we made," he adds. "We rolled into the U.K. and back."

U.S. ten-year-note futures contracts, similarly, were consistently undervalued in 1994, as mortgage securities investors and dealers put on hedges. "It was possible to create basket shorts of ten-year notes in cash against the futures contracts and pick up 3/8 of a price point at any time this year," says Hutchins.

Such trades have earned Hutchins the sobriquet King of the Basis Trade. Fenchurch, a Chicago-based commodity trading adviser, was established in 1985 as a subsidiary of U.K. investment bank Kleinwort Benson. The Gamma fund, listed on the Dublin stock exchange, has earned compound annual returns of 23 percent a year since inception. It's also been the top-performing public fund on a risk-adjusted basis for the five years ended December 1993, according to a Managed Account Reports survey.

Rivals note with envy that Fenchurch's performance has held up even as assets under management soared from just $100 million to $750 million in the past four years (that includes the U.S.-listed Beta fund, which follows roughly the same strategy). Money poured in from insurance companies, non-U.S. banks and U.S. and non-U.S. pension funds, as well as wealthy individuals and fund of funds managers.

Success of this order can kill performance, as funds grow too large to exploit the trades on which they based their early success. Hutchins says he's avoided that problem by finding new niches to exploit. Most dramatically, two years ago Fenchurch moved into European markets, making use of its U.K. parent's expertise. (Kleinwort runs a European bond arbitrage fund in London: the $25 million Kleinwort Benson Bond Arbitrage fund.)

Hutchins's expertise extends beyond simple, low-risk basis trades. Though he seldom does yield-curve plays, he does trade one yield curve against another. "There were times this year when the U.S. curve was too flat or when other yield curves in the world were too steep, according to our proprietary model," he says. He also uses options both to hedge basis trades and to trade the volatility of one part of the curve against another.

He also arbitrages cash options against futures options: When insurance companies sell cash calls on their bond positions to pick up additional yield, the value of cash options often becomes depressed relative to futures options. Hutchins will then buy the cash calls and sell the futures calls. The arbitrage would be even more attractive if a possible change in the cheapest-to-deliver bond temporarily increased the value of futures calls.

The risk in any trade, Hutchins notes, is that a market dislocation worsens to the point that it causes a mark-to-market loss that frightens investors. There's also a broader risk: Since Fenchurch bases many of its trades on historic correlations, some unforeseen market upheaval could upset those correlations — permanently.

Wharton Management Group: *Models plus common sense*

Like Askin Capital Management, which collapsed in a blaze of publicity last year, Wharton Management Group is a market-neutral mortgage player. However, unlike Askin, the firm refused to be mesmerized by model-derived theoretical values and so was able to reap returns of 38 percent in its first 12 months, without a single month's loss.

That's not easy in the model-driven mortgage markets, where traders rely on high-speed computers to figure out how interest rate changes and likely refinancing activity affect the value of 20 or more tranches of a given collateralized mortgage obligation. Nonetheless, says Bruce Lipnick, Wharton's low-key chief executive, "we look at how dealers trade, as well as the pricing model."

New York-based Wharton opened its Milestone Plus Partners fund to capture mortgage mispricings in December 1993. The firm has been running alternative investment schemes since the mid-1970s and was an early market maker on the Chicago Board Options Exchange.

Wharton's returns have put smiles on the faces of Milestone Plus investors — mostly insurance companies seeking to benefit from the mortgage market's distress. So far the fund has garnered just $40 million in capital (Askin's bankruptcy has scared off many potential investors), but Lipnick hopes to raise at most $200 million. "We want to stay nimble and focus on liquidity," he says. Mortgages may be a huge market, but value exists only in small pockets of it.

Wharton tested its practical approach as soon as its fund opened for business. In December 1993 mortgage securities investors were still in shock from the bond market rally that had peaked in October: Holders of interest-only strips, in particular, had been pummeled by an unprecedented wave of refinancings that drastically shortened the stream of interest payments they had purchased. "A lot of people were fleeing the market," Lipnick recalls. "But rates were starting to rise: There was a contrarian opportunity."

Most models rely on two-month-old refinancing data and didn't show the shift, so Wharton checked the old-fashioned way. "We called major mortgage brokers and asked whether they were hiring people," Lipnick says. "They said they were firing. This gave us more confidence that the trend had turned and refinancing wouldn't be as aggressive."

The fund started building a portfolio of IOs, sticking to the least volatile, planned amortization classes, which are protected from prepayment and extension risk as long as rates stay within specified bands. "We were protected from disaster because of the types of positions we were in — and we were always hedged," Lipnick says. The hedges — a mix of futures, options, and principal-only and inverse-floating mortgage securities — dropped less than the PAC IOs jumped, allowing the fund to reap profits of between 4 and 6 percent a month through March 1994.

Sporadically, the fund also bought other beaten-up securities, hoping to resell them quickly. "By April people were liquidating anything that said collateralized mortgage obligation. Some weren't really so esoteric — and were very underpriced," he says.

With refreshing candor, Lipnick says, "You can never stay market-neutral: Because of the optionality in mortgages, you'll always have duration swings as the market moves and you get prepayments." Wharton usually tries to keep the portfolio's duration within a range of plus or minus three years.

Wharton also takes care how — not just how much — it uses margin. "Last year the hedge funds were masters of the universe. This year the margin clerks were the controllers of the universe," Lipnick says. "You can't be in an ivory tower: You have to work with them and talk to them to see what's happening."

In practical terms, that means not trading POs with one bank and IOs with another. Having offsetting positions with the same bank halves the required margin and minimizes the bank's exposure — which in turn helps the trader avoid margin calls that can throw off his hedges. That's something every exchange trader knows — and high-tech quants sometimes forget. **ii**