

For our eyes only?

A reflexive secrecy appears to have taken hold of bank quantitative research. Emanuel Derman remembers a time when quants were more likely to share their thinking for the greater good of the industry, and wonders whether firms who keep their models a secret really gain any benefit

During the past year, I've occasionally invited quantitative acquaintances from Wall Street firms to speak to the students in my class about the models used by practitioners. Though some quants agree to give a talk, many tell me they aren't allowed to or, worse, that they would be embarrassed to even ask for permission to do so. More and more, I've noticed a strong pressure on people in research to discourage or even prevent them from communicating with the outside world. Hardly anyone talks about this; it's just assumed to be the natural state of affairs.

It wasn't always this way – investment banks used to be a source of really original, big-picture ambitious research. When I entered the field in



1985, I was impressed by the high-quality quantitative research emerging from Wall Street. The bond portfolio analysis group at Salomon Brothers, in particular, wrote reports that set the standard for analysing new fixed-income instruments. Publications like theirs are much rarer now, and that's a pity.

There are good and bad reasons for restricting publication. One of the worst ones is the simple desire for control. When I worked at Salomon Brothers in the late 1980s, soon after participating in the development of the Black-Derman-Toy model, I was invited to speak about the model at an academic conference in Canada.

My erstwhile boss refused to allow me to attend. "No point in helping the competition," he told me. It was nonsense; there was really no harm in giving a talk to academics about a model

I had co-developed at Goldman, a model already in the public domain. Simply put, he thought he owned me, and I suppose I thought so too.

Another bad reason is the notion that quants should be invisible to the outside world. It doesn't take much analysis to figure out the beneficiaries of that argument.

Why do firms invest in quantitative research? The obvious answer is that it can lead to trading strategies that make money and, money being the point of the game, those strategies are worth keeping confidential. You have to be in the business for a while before you realise that it's not that easy to make money off models. Unique and profitable trading strategies are rare.

This isn't the most original of industries. Hedge funds all go long the 10-year and short the two-year at the same time. Everyone buys and hedges theoretically cheap convertibles, and everyone will get out of them together, no doubt. And who isn't trying to hire someone who can do capital structure arbitrage?

Research has a second purpose: helping yourself by helping clients. For Salomon Brothers, when it ruled the fixed-income roost, publication was a very smart strategy: clients who learned to think about swaps or option-adjusted spread from Salomon's reports tended to use Salomon's metrics to rank the universe of fixed-income securities. Consequently, dependent on these gauges, they gave Salomon their business. The truth is that Wall Street makes much of its safe money by intermediating between customers with different risk preferences or investment constraints.

There's a third motivation for research, too: adding to the world's knowledge. Knowledge isn't a zero-sum game, for a firm or an industry. If Miller and Modigliani, Markowitz, Sharpe, Lintner and Treynor, Black, Scholes and Merton, or Ross had suppressed their discoveries, the world would be a poorer place, in both senses of the word. Research makes possible fresh products and new activities that need different resources; in that way it provides new opportunities for everyone, not just its creators.

I'm not arguing that all research should be open and nothing should be proprietary. Be secretive if you have a model that may generate a profit that could vanish were you to share it.

But don't be reflexively secretive. I've seen

people suppress supposed small advances in the valuation formulas for barrier or quanto options that their managers imagined were infinitely valuable and known to no-one else. It wasn't so. As great a believer as I am in modelling, I think that's giving models too much power.

Though there are exceptions (Barra and KMV, for example), the graveyard of financial services is littered with the tiny corpses of corporations who thought that what the world needed was a better model they could charge for. And, even in the case of success stories like Barra and KMV, much of what is being paid for is infrastructure and organisation, a system rather than an isolated model. Financial models get their power from being embedded in frameworks, which, well

The graveyard of financial services is littered with the tiny corpses of corporations who thought that what the world needed was a better model they could charge for

constructed, subtly impose a discipline of thought and behaviour that makes traders think and act responsibly.

Personally, I collaborated in the writing of many research reports on the Street, and I'm certain that their dissemination did the firms I worked for much good and no harm. Whenever possible, I believe, we owe it to ourselves and the world to spread ideas. It would be nice if secrecy could be the considered exception rather than the automatic rule. ■

Emanuel Derman is a professor at Columbia University and a risk adviser to Prisma Capital Partners. His book, *My Life as a Quant: Reflections on Physics and Finance*, will be published by Wiley in autumn 2004. You can reach him at emanuel@ederman.com