

Datablade slices analysis time

Software companies accustomed to scientific problems are directing their expertise towards the financial industry.

Computing tools have revolutionized the way trading strategies are designed and implemented. This is hardly a secret—the impacts of computing on financial modeling, the burgeoning financial software sector and the success stories of certain small, electronic trading companies are widely known. But computers do not only bring speed and prosperity. As they evolve, they present fresh challenges of their own.

Staff churn rate is causing tangible problems for programming projects throughout finance, regardless of the programming skills of new recruits—because so many programs just don't get finished. New staff often find it easier to start over than to untangle a poorly documented swathe of someone else's code. And where legislation is asking for tighter procedures and means of assigning accountability, it is becoming a major issue. Some believe the answer to all of this is standard software platforms that will ensure anyone can understand and build on the code for a given financial solution.

Predictably, the larger maths and statistics software companies have spotted this opportunity and are jumping on the finance bandwagon. Most of the big packages—such as Matlab from the MathWorks, Wolfram's Mathematica and MathSoft's S-Plus—now offer financial analysis toolboxes. Not surprisingly, it was the new analysts who started the trend, taking their university knowledge and software preferences with them into banks. The benefits offered by such software include a familiar interface, modular code-building tools and supplier support/collaboration opportunities.

While many of these packages offer useful and innovative routines, few can fully address the enormity or requirements of the financial data sets being used for back-testing models. Ten years of tick data, for example, can occupy a terabyte and is not usefully accommodated by a relational

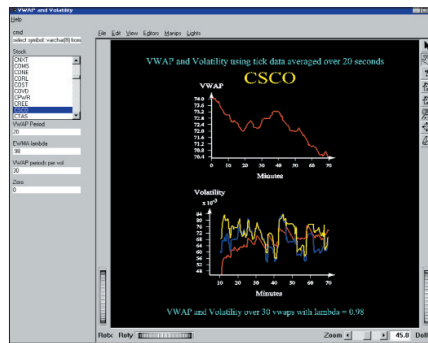


Figure 1. Datablade in action, showing the volume weighted average price of a stock.

database. Connecting to a server to download these data for analysis would normally be prohibitively time-consuming. Two companies addressing this issue are NAG (Numerical Algorithms Group), which has been observing a steady increase in demand for its mathematical software routines among the finance community, and software infrastructure company Informix.

Strategic alliance

With help from Informix's value-added reseller Market Information Services (MIS) (which markets management information systems for trading support and risk management), the companies formed a strategic alliance in the summer of last year that resulted in a new tool for historical analysis of large volumes of time-series data, in the form of the Informix NAG Financial Datablade Module.

The companies based the design of their module on the idea that it is the result that is needed, not the raw data. They have incorporated the analysis functionality into the database server, which enables significant efficiency gains since only the results, not the data, need be downloaded. It also means that an identical analysis can be made available to disparate client processes.

'Companies can save time and money by using NAG functions instead of developing

their own analytics', said Brian Ford, Managing Director of NAG. 'When dealing with large amounts of data, this process can be speeded up greatly by taking the analytics to the data, which is precisely what the Informix NAG Financial Datablade does.'

The Informix NAG Financial Datablade combines the quality and accuracy of the NAG mathematical functions with a sophisticated, extensible object-relational database architecture (the Informix Internet Foundation 2000). This architecture allows new data types to be stored (vectors and matrices), that provide suitable numerical data types for analytical work using the NAG routines and enable the analysis to take place in the same location as the data. (It is assumed that the module is employed alongside the Informix TimeSeries Datablade module to deliver the time-series data.)

The numerical analysis performed by the NAG functions is executed directly by the server process but easily controlled by the user, by means of user defined routines written in C, SPL, Java, etc. The client can be any program and all the client programs can share the same analytical functions. The result, claim the companies, is that the solution can be tailored towards the systems and data held by an organization, as well as the results it needs to produce. According to Terry Ralph, Executive Director, Business Development for Informix: 'There is no other product that can provide the level of flexibility and functionality that we are offering'.

Pricing is on a per seat basis (minimum 10 seats) for small installations or a per CPU basis for larger installations. The real proof of the pudding, of course, is in the eating, and so far so good: David Coward, European IT Director of Tullett & Tokyo Liberty described having gained unparalleled performance for relatively modest investments in hardware. 'We're confident that the combination of MIS, Informix and the NAG Financial Datablade will remain a key part of our strategic product developments,' he said.

A new software design such as this—boasting that it 'makes it quicker to get the answer than the competition can get the data'—could be a taste of things to come.

Further information

www.nag.co.uk
www.informix.com
www.marketinfoserv.com