TRIAL BY OBJECTS: CHALLENGE AND OPPORTUNITY IN PC SOFTWARE

Our regular money management columnists document the mainstreaming of objects and provide case studies of the two biggest players: Borland International and Microsoft.

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From November 1993 issue

As if there weren't enough challenges in the desktop software business, along comes object orientation. The industry is already enduring falling prices and shrinking margins.

The Windows platform, PacMan-like, is gobbling up tidy businesses in disk utilities, fonts, memory managers, database drivers, and networks, slowly incorporating them into the operating system. And now we have objects changing the very notion of the software package and the application.

Microsoft did not invent object orientation, but as a popularizer of new technologies, the company will make objects the new standard. With Object Linking and Embedding (OLE), Microsoft applications present the user with a vision of a seamlessly interoperating whole: Draw embedded in Word, Chart embedded in Excel, Mail embedded in Word. Applications are no longer comprehensive solutions but specialized cells, each suited to a discrete role. The Windows platform, along with Microsoft "container classes" Word and Excel, is becoming the plasma in which those cells live and communicate.

There will be many discussions of how the object-oriented paradigm will affect the technical side of software development. Here, we'll look at its effect on the business of PC software and software investing. We will consider what object orientation means for today's software start-ups, the ones that will provide all those specialized cells that will work with Word and Excel. We'll also look at the stocks of two companies with a big stake in the new technology: Borland, which has bet its future on objects, and Microsoft, the company currently controlling how objects will be implemented on the desktop and, perhaps, throughout the industry.

Borland, surely the most vocal advocate of object orientation, has found its stock brutalized by the market. But the company is far from alone in its market difficulties. Share prices have declined in all but two of the companies in *The Red Herring*'s Technology 200 PC software group. Lotus and Symantec have advanced, but, on average, PC software stocks have declined over 13% in the period from March 31 to September 15, 1993. While the NASDAQ was rising over 7% in the same period and the Tech 200 rose 15.4%, PC software was losing ground. Even the seemingly invincible Microsoft was feeling the decline, down 17.3%.

Right now, the market doesn't think much of the PC software subsector. Our indicator of negative market sentiment shows a highly negative reading of 70 for the group. The only group that investors hate more is the enterprise computer group, the subject of last month's column. The highly negative reading tells us that a shift in sentiment may be due. Somewhere in the midst of all this bad feeling lies the possibility for turnaround.

Start-Up Objects

When Roger Sippl looks at object-oriented Windows, he doesn't see an environment dominated by Microsoft. He sees an opening into which small companies can move. Sippl, founder of Informix, now heads start-up Very Visual Software, Inc. (San Mateo, CA), a company that builds database front-end development tools designed on the object model. For him, OLE spells opportunity. "If Microsoft truly exposes the surfaces of Excel and Word, as they are doing with OLE, [vendors] can replace a component with a better component, a better graphics component, for example," he says.

The exposed surfaces allow small companies to get into the software business by selling what Sippl calls "families of objects." Instead of requiring an initial capitalization of $20 million, companies can sell objects out of Microsoft Visual Basic catalogs for a fraction of the start-up cost. Despite the formidable risks of competing with Microsoft, Sippl sees object orientation as a great source of competition and innovation. "It lets the Davids in the world pick on the Goliaths," he says.

But the business model that can mean success for new companies like Very Visual Software is not available for established PC software companies. As Roger Sippl puts it, "Object orientation allows a vendor to produce a lot of small products with faster turnaround. But it puts pressure on the big guys."

Borland Under Pressure

Borland is one of those pressured big guys. As an established software maker, Borland lacks the option of remaking itself into a small company selling Visual Basic objects out of a Microsoft catalog. It competes directly with Microsoft in spreadsheets, databases, and languages, which all play on Microsoft Windows turf. Seeking an advantage, Borland began touting objects nearly two years, long before it had any new object-based software to sell. The talk did not help the company. As Bill Gates is reputed to have said in response to Borland's early advocacy of objects, "Object orientation is a technology, not a product."

The market has savaged Borland's stock. From a high of $86.75 in January 1992, share price of Borland (BORL) has plunged to its current $14.00. (All stock prices are as of September 15, 1993.) The question for investors is this: Has Borland reached the end of its decline, making it an attractive value buy? Or do still lower prices lie ahead?

Cycle analysis tells us that Borland stock is nearing a critical bottom juncture. The company has not been trading long enough to establish an overall secular (generation-long) trend line. However, the stock is now nearing the simultaneous bottoms of two shorter cycles: the intermediate (6- to 9-month) cycle and the long-term cycle (begun when the company went public in 1990). Our work shows a slowing in the stock price's decline -- a numerical indication of a pending bottom juncture. But there's still no inflow of capital, and the price is still declining. If the stock holds above $12.50, that would be evidence that Borland has reached its long-cycle bottom. In short, cycle analysis tells us that Borland would be a good buy at something close to $12.50.

Our scenario analysis supports our cycle work in looking for a Borland turnaround -- if only because all the bad news may already be discounted in the stock price. The company has weathered several questionable business decisions; the worst may already be over. As Borland Senior Vice President and CFO Alan Henricks put it, "It has been a challenging last few years."

One highly questionable move was the timing of Borland's decision to rewrite its entire product code base using its own C++ object-oriented language tools. Instead of merely making its Quattro Pro spreadsheet and Paradox database run under Windows, the company took about two years to create all-new, object-oriented versions of its Windows packages. During those two long years, company CEO Philippe Kahn talked incessantly about objects, but Microsoft was busy selling OLE-enabled Word and Excel, and the Redmond giant released the Access database before Paradox for Windows came to market. Borland's Henricks is still defending the C++ decision. "We stuck to our technological vision," he said.

When Paradox for Windows did come to market, it did not provide an upward compatibility path for custom programs developed under Paradox for DOS. Borland, self-proclaimed inventor of the competitive upgrade, had suddenly given its installed base an opportunity to consider alternative products.

This doesn't begin to exhaust the bad news. Recently, the company lost its battle with Lotus over support for 1-2-3 macros in Quattro Pro. But first, of course, was Borland's expensive purchase of Ashton-Tate. Then Gene Wong, head of Borland's successful languages division, defected to Symantec, allegedly taking trade secrets with him. Even if Wong took nothing more than his briefcase, the disruption of Borland's strongest division had to hurt the company. One recent sign of disorder came when the company mistakenly laid off a key C++ language engineer. The engineer's name was similar to that of the person targeted for layoff. By the time Borland realized its mistake, it was too late; the engineer was already working for Microsoft.

Yet, despite all these missteps and near-disasters, Borland is still there. In fact, the company's manager of investor relations, Bonnie Johnson, was close to indignant at any suggestion of Borland's demise. "It never crosses my mind that we won't survive as a company," said Johnson. "If you'd asked me a year ago, I would have said it looked dark. There were layoffs, restructurings, we hadn't released Paradox or Quattro Pro for Windows." But now, she says, "The clouds have cleared."

Indeed, the decision to rewrite their products that had seemed so ill-timed may ultimately help the company recover. Borland starts out with a fresh set of code, and the new code is object oriented, which should be easier to enhance than their older code base. This makes Borland well situated to turn around product versions.

From October to December of this year, the company is planning to release three new versions of Quattro Pro and Paradox, which appear to be well priced and positioned: a DOS version for the bread and butter market, a $49 introductory Windows version, and a more expensive $495 SQL Workgroup Edition of each product.

By quickly turning around new versions, Borland benefits from a business it understands very well: product upgrades. By expanding its range of products, from single-user to higher-end groupware, the company is moving into networked software where, for now, price pressure is less intense. The company's stock may not return anytime soon to the heights of 1992, but we see prospects for better times ahead.

A Cycle History of Microsoft

For the last nineteen months, Microsoft's share price has wandered on a rocky plateau. The company that has been the "winner" stock, the benchmark for the technology revolution, now finds its stock oscillating without overall motion up or down. The market appears to be waiting for some kind of news, but the long-anticipated release of NT did not propel the stock. We wonder if, over time, Microsoft's object technology may have more to do with the company's stock movement than the breathlessly awaited NT.

Microsoft's stock has passed through a series of intermediate moves between $70 and $98 -- falling, rising, then falling again. Currently, it 's near the bottom of this range at $76.50. For any stock, a movement of nearly 30% would be a big one, but it's something of a puzzle for Microsoft, which in the past has already seen two spectacular long-term advances.

Microsoft's cycle history consists of a rising secular uptrend and two long-term cycles bringing it to its current plateau. The secular advance -- the overall "background radiation" influencing the shorter cycles -- began in March 1986, when the share price rose from $2.83 to its current $76.50. This secular advance has spanned two long-term cycles. The first long-term cycle (1986 to 1989) saw the stock price climb by 500% at its peak, while giving back only 33% at the bottom of the cycle in June 1989. The second long-term cycle (1989 to the present and ongoing) saw an even more spectacular advance of 700%. This is the movement that has given Microsoft its popular image as market wonder: it was during this cycle that the stock reached its high of $98 in June 1993.

Since then, Microsoft has reached a key point in its cycle history, retreating 29% to $70.375 in August 1993. This point marks the bottom of an intermediate, 6- to 9-month cycle; it also represents a point along Microsoft's secular trend line. When we look at this intersection of the intermediate low with the secular trend, this question arises: Does this point represent the bottom of the second long-term cycle? Or is the second long-term cycle still declining? This question is not just academic and one only a cycle analyst could love. We are looking at the interactions of all these cycles -- secular, long-term and intermediate -- because we want to know one thing: whether or not Microsoft's stock can return to its former glory-day advances.

The answer may come from the current movement of the share price. If the stock rallies strongly from $70.375, this would tell us that the second long-term cycle has bottomed and that the stock is about to resume its former upward momentum along the slope of the secular uptrend. It would mean that the future can hold more 500% advances for Microsoft.

On the other hand, if the rally is weak, it would tell us that a milder incline marks the slope of secular advance. The second long-term cycle could bottom at either $66 or $55, after which Microsoft stock would advance, but not at the torrid rates of the past. Microsoft's stock would behave less like a hot new technology issue and more like that of a mature "blue chip," advancing at rates more like 200% - 300%, a come-down from former days but a return that would still please most investors.

Microsoft itself has been trying to play down market expectations for its future. Over and over, management has cautioned that the company cannot continue to grow at its former rates. A look at Microsoft from a product and technology standpoint also supports a slower rate of sustained growth. After DOS and Windows, it's not clear that Microsoft can produce new products that move so quickly from introduction to domination.

Recent product debuts have shown Microsoft's vulnerability once it moves away from its strengths on the single-user desktop. Windows for Workgroups is not the Artisoft- and Novell Lite-killer that it set out to be. The older LAN Manager, Microsoft's network operating system, has had such limited acceptance that we could call it a failure. Trying yet another networked product, Microsoft failed to best Lotus' success with Notes.

Nor is NT the blockbuster everyone was expecting. In fact, NT had more impact when it was still a specter haunting the industry than as a real flesh-and-blood product. In beta release, the operating system filled the covers of trade publications. Then NT became real. A flurry of technical reviews pronounced it promising as a platform for database servers but no match for Novell as a file server and nearly useless as today's desktop platform. After nearly two years of fevered coverage in the trades came silence. NT as Not There seemed more interesting than NT as Now There.

This is not to say that NT will not prove successful for Microsoft: it will. But patience must attend that success. NT addresses a mature enterprise market filled with alternative solutions. Corporations have been using Novell networks, UNIX systems and networks, client/server systems attached to aging mainframes -- the whole panoply of technology accumulated over thirty years of automating the enterprise. Corporations are technologically conservative and rightly so. They don't convert systems all at once, especially not to a new, unproven operating platform like NT.

In short, Microsoft has not proved itself a dominating force for the workgroup or enterprise, and its networked products have not moved the stock off its plateau. So where will the company's future growth come from? The answer may lie in objects.

In OLE, Microsoft has no serious rival. Despite efforts from UNIX vendors to promote an object technology called the "Common Object Request Broker Architecture" (CORBA), many analysts and big corporate buyers believe that, ultimately, Microsoft's OLE specification will become the prevailing standard. And when the RED mond company moves to Cairo, the forthcoming object-oriented Windows platform, it could signal a new explosion in software -- one in which Microsoft has an undisputed leadership.

Microsoft's stock is not likely to return to the days of 700% advances; a slower growth scenario for the next long-term cycle seems more realistic. But there are probably many more Roger Sippls and Very Visual Softwares out there -- more of those Davids who see objects as stones to pitch at the Goliaths. Their entry into the field would revitalize both Microsoft and the software industry. As Sippl puts it, "The object revolution allows more credit for innovation. It's a good time to be alive and in business in America."

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