



BY LAWRENCE M. FISHER

Post-Merger Integration: How NOVARTIS BECAME



No. 1

Once the deal is done, the hard work begins of integrating people, processes and systems, on a global basis.

IN A TIME OF rapid globalization and consolidation, mergers have become almost an inevitable part of doing business, an essential element of corporate survival. But, all too often, these deals fail to result in a whole that is greater than the sum of the parts, or even equal to them. So in joining Sandoz Ltd. and Ciba-Geigy Ltd. to form the world's largest pharmaceutical company, management took a strategic approach. The top executives seized upon the merger as an opportunity to create an entirely new entity, which they called Novartis.

The name change was emblematic of management's desire to create a company that was not only bigger but also different. In addition to dropping the predecessor companies' names, Novartis's management announced the company would spin off

the \$7 billion specialty chemicals businesses that gave Sandoz, Ciba and Geigy their births, and the city of Basel, Switzerland, its prosperous foundation, more than a century ago. Novartis would not only be bigger, but more focused, on life sciences — broadly defined as pharmaceutical, nutrition and agricultural products.

The \$30.09 billion merger of Sandoz and Ciba-Geigy, which was announced in early 1996, came amid a flurry of big deals in the pharmaceutical industry. These included the combination in 1995 of Glaxo with Wellcome in Britain, of Hoechst Roussel with Marion Merrell Dow, and of Pharmacia of Sweden with Upjohn. In 1994, Roche Holding of Switzerland acquired Syntex, and American Home Products bought American Cyanamid. Since the Novartis deal, Roche has an-

nounced it will acquire Boehringer Mannheim G.m.b.H., a large German maker of drugs and diagnostic products, in a deal valued about \$11 billion.

At the time their deal was struck, Sandoz and Ciba were both healthy companies with some market-leading products, including Sandoz's Sandimmune and Neoral for organ transplants and Ciba's Clozaril for schizophrenia. Sandoz was smaller, but growing more rapidly than Ciba-Geigy, which was itself the result of a merger in 1974. Both had promising new drugs in their pipelines that could provide near-term sales growth, and both had strong balance sheets. But neither was a powerhouse.

Sandoz, the world's 14th-largest drug maker in terms of sales, had a 2.1 percent share of the international pharmaceutical market, and Ciba, the



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ninth-largest, an international market share of 2.3 percent. At the time the merger was announced in March 1996, their combined 4.4 percent global share formed the world's second-largest drug company, just behind Glaxo Wellcome. By the time the deal closed in December, the new company had knocked Glaxo from the top spot, according to I.M.S., a company in Totowa, N.J., that monitors pharmaceutical industry sales.

There were, of course, some immediate advantages to getting bigger: redundancies could be eliminated, cost synergies could be realized. And the No. 1 player in any field is better positioned to hire the best people, to form strategic alliances and to make acquisitions at attractive rates. Step 1 for Novartis's management team was to make the most of these synergies.

But getting bigger does not in itself drive shareholder value. In the pharmaceutical industry, creating value means translating breakthrough science into novel new drugs. To create an environment that can foster such innovation, while at the same time implementing the integration of two huge companies, is a challenge. Using the merger as a catalyst for change, Novartis's management called for a companywide review and, where appropriate, the re-engineering of all processes, from research and development to marketing and sales.

"The company has been created not through internal growth or performance that outstretched anybody else in the industry, but in a deal," said Daniel Vasella, Novartis's president, who previously headed the pharma-

ceutical division of Sandoz. "The change process which has to occur is to change it from a leader in size to a leader in performance."

Dr. Vasella, a former hospital physician, estimates that this change will take two years. Such a change "requires a willingness to give up the past; it implies pain," he said. "When you are going through such a merger, people must, A, drive the business, and, B, integrate. That's incremental work at the same time you are trying to reduce head count and drive synergies. So you need to provide encouragement to keep the course."

To support the change process, Novartis revised its compensation system from a traditional seniority-based process of regular increases to a results-oriented package, with special incentives for specific goals. "People have to see wins; they have to see there is something in it for them," Dr. Vasella said. "We want to follow stretch targets and be ambitious. We are going from ambition at the top to ambition within the organization, from the bottom up."

In addition to altering compensation, Novartis encouraged bottom-up ambition by delegating the re-engineering process to division and work-group level managers throughout the company. Managers were encouraged to evaluate their units for opportunities to increase efficiencies and were rewarded where they succeeded, but they were not required to fix what was not broken.

When Sandoz's management first met with its counterparts at Ciba-Geigy, "during negotiations, we didn't want to involve too many people, so

we took a top-down approach," said Raymond Breu, Novartis's chief financial officer. By comparing the income of the pharmaceutical units of Sandoz and Ciba with industry standards, they arrived at goals for reducing costs and jobs (see article, page 74). "Once we could go public, we did a bottom-up confirmation of these numbers," he said.

Worldwide, Novartis deployed 600 task forces, each assigned to find cost synergies in a specific area, to identify possible cuts and to create a time plan. "These were aggregated, bottom up, and only then did we have the confidence it would work," Mr. Breu said. "Our top-down target for cost reduction was 1.8 billion Swiss francs. The bottom-up aggregation was 2 billion," or about \$1.4 billion. He added: "By the time we completed the merger, we had all these plans, done by the responsible managers, not M.B.A. guys. So, on Jan. 1, 1997, we said, 'O.K., do it.'"

Pharmaceutical companies live or die by their research and development, so it is not surprising that these two sectors received the most scrutiny in Novartis's re-engineering. Research discovers new drug candidates, while development shepherds these new chemical or molecular entities through the laboratory and clinical trials that lead to regulatory approval. From discovery to new drug approval often takes 10 years or more, and 9 out of 10 drug candidates fail somewhere along the way. Any increased efficiency in this process would pay disproportionate returns.

Although Ciba-Geigy and Sandoz had faced each other across the Rhine

River for decades, their cultures and structures were very different. Nowhere was this more apparent than in research. Sandoz had a distributed model, with each division responsible for turning science into products, while Ciba-Geigy maintained a central organization, almost like an academic institution, with a charter to do pure research that the divisions could then commercialize.

“Already, before the merger, they saw this doesn’t work, because people are people,” said Paul L. Herrling, Novartis’s head of research, who held

the corresponding position at Sandoz. “Within divisions, you had research which was very tightly controlled because they had to produce products, while the academic research at the core was excellent, but the focus was not on products. So you had two classes of science. We said, in the merger, there has to be one class, so we took the best 60 percent. The other 40 percent were put to work in other parts of the company.”

While that change essentially applied the Sandoz model to the combined company, a second major

change was new to both. Traditionally, Ciba and Sandoz, like many major drug companies, had geographically centered research organizations for the United States, Western Europe and other regions of the globe.

“But science is not local; it’s global,” Dr. Herrling said. “We wanted to reduce hierarchical levels. So in the merger we were able to do something that would otherwise have been difficult: abolish the geographical centers. So a whole level of senior management in research disappeared; worldwide, about 200 people were reassigned.”



In the new model, research is divided into seven therapeutic areas, and the head of each area has global responsibility. “Before, you allocated resources to a geographic area, and they distributed as they wished,” said Dr. Herrling. “Now, we have a strategic plan; we decide on the relative weight of the therapeutic area and fund them accordingly.” Of 165 research projects between Ciba and Sandoz, Novartis kept 150.

One risk of the new system is that “by having these seven areas, you have the risk they will build walls,” Dr.

Herrling said. “So we put in place a horizontal organization that will tear holes in the walls” and find the science common to multiple therapies. “Based on this concept, I think we can increase productivity significantly,” he said.

One effect of the merger was to change the weighting of some of these therapeutic areas — notably in oncology. Although both Sandoz and Ciba-Geigy had strong research efforts in cancer, neither was a leader. But Novartis, through a combination of internal efforts and partnerships with a raft of biotechnology companies, has the

broadest technology base in oncology of any major pharmaceutical company.

“We had in both companies a strong will to make it work in oncology, so it was a natural after the merger that oncology would be high on the list,” said Alex Matter, a medical doctor who is Novartis’s head of oncology research. But the new approach to research brought challenges. “At the outset, Novartis said we are going to be truly globalized,” he said. “This hits these fairly well entrenched local operations; this hits local customs, salaries and promotion hierarchies.



THE VENTURE FUND

Like most mergers, the union of Ciba-Geigy and Sandoz counted on a substantial reduction in the company's head count to drive down costs. Even after a number of large divestitures, the new company, Novartis, planned to trim more than 10,000 jobs worldwide.

But Novartis came together just as a wave of downsizing reached European companies, setting off political and social reactions. Decades of cradle-to-grave security seemed to vanish overnight, and corporate loyalty was strained. Novartis's management decided to take an innovative approach; it created a venture capital fund to help employees whose jobs were cut start their own businesses.

"Management was fully aware the merger would mean 10,000 to 12,000 fewer people in the combined company, and, especially in Switzerland, that would be a problem," said Max R. Kaufman, executive director of the Novartis Venture Fund. He noted that 3,500 of the cuts were planned for Basel, a small city that owes its considerable prosperity to the centurylong growth of chemical and pharmaceutical producers like Ciba, Geigy, Sandoz and Roche.

So at the same time they an-

nounced the merger, Novartis's top executives announced the creation of a fund of 100 million Swiss francs (about \$71 million), with a mission to help the displaced. "We said if they have an idea and the will to start their own company, we will help them to get started," Mr. Kaufmann said. "The merger created a structural change. We have a responsibility to help manage the change, and part of that can be helping create new companies."

Some of the earliest proposals were for the outsourcing of services. Sandoz had already begun decentralizing services like information technology management and human resources and giving them to geographic or product-oriented sectors. Ciba retained central control of most of these services, but Novartis planned to adopt the Sandoz model. In those cases where the sector lacked the critical mass needed to maintain the service, Novartis outsourced, often to a former employee turned entrepreneur.

"A key idea is we would finance part of the need, but not the entire need," Mr. Kaufmann said. "We feel the partners must participate themselves or they won't be as motivated." But the

fledgling companies have found that the Novartis backing helps when talking to banks as well, he said. The financing can be in the form of a grant, a loan with or without interest, or an equity position. For the most risky propositions, the Novartis fund may participate in a partnership with other international venture funds.

The Novartis Venture Fund does not have to answer to investors seeking above-market returns, but neither is it a purely philanthropic organization. So, like any venture capitalist, the first thing Mr. Kaufmann looks for is a coherent business plan. "In some cases, I just have to tell people, 'You are a brilliant scientist, but you do not have the capability to run your own business,'" he said. "In two cases, I told them, 'Why don't you put your skills together with somebody else in the field.'"

The key figure in one of those cases was Helmut Kessmann, a project leader for fungicide discovery at Ciba-Geigy. Mr. Kessmann was not scheduled to be laid off, but he believed that he could create a service business using the technology he had developed at Ciba, which was a system for testing many thousands of compounds at once for potential use

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We have to deal with these local differences; there are huge penalties if you ignore them.”

Another area of difference between Sandoz and Ciba-Geigy was how they managed strategic alliances. Both had created a network of partnerships with small biotechnology companies to augment their internal research efforts. But while Ciba had for the most part taken minority equity positions in its partners and refrained from active management, Sandoz had typically taken larger stakes, often involving board seats, and had in several cases subsequently acquired the companies.

“My conviction has always been that either you do acquisitions or you do licensing deals” without an equity position, Dr. Vasella said. The drawbacks of equity-based partnerships are that “you can only do them at arm’s length, you have the board obligations, you know things you aren’t supposed to know,” he said. “It’s nothing but headaches.”

Nevertheless, Novartis must now manage such partnerships that are the legacy of Ciba’s approach, including its 49.9 percent ownership of the Chiron Corporation of Emeryville, Calif., which Ciba purchased in November 1994 for \$2.1 billion. Three Novartis executives, including its chairman, Alex Krauer, serve on the board of Chiron, which is the world’s second largest biotech company, behind Amgen Inc. Chiron’s chairman, William Rutter, serves on Novartis’s board.

Edward Penhoet, Chiron’s president, said that while Novartis appears to have moved to a management model much more like that of Sandoz, the nature of its partnership has not changed. “Aside from the ownership position, our relationship today feels almost like a licensing deal,” he said. “We work with them very effectively, but it’s not fundamentally different from the way we work with other

merger,” said Stan Crooke, Isis’s chairman and chief executive. “There was a genuine interest in our survival on the part of Ciba’s senior management. I don’t know how that will be with Novartis. It’s too soon to tell. It is something we have to work on.”

The approaches that Sandoz and Ciba-Geigy took to drug development were less divergent than they were in research, yet there were still differences.



companies. They’re good board members, but they not trying to assert day-to-day management in any way.”

For Isis Pharmaceutical Inc. of Carlsbad, Calif., which has been collaborating with Ciba on new types of anticancer drugs, the merger brought a period of indecision. “It seems there’s a bit less latitude in decision making than there was at Ciba; to some extent that’s inevitable after a

But both companies had initiated process improvement programs in development before the merger, which could now be combined.

“Perhaps surprisingly, the differences in development strategies between Ciba and Sandoz were not that great at all,” said Jorg Reinhardt, Novartis’s head of preclinical development and project management. For example, both companies had embarked

on a project to speed the time from new drug discovery to market, from an average of 11.3 years to 7 years, an ambitious goal. "Ciba focused more on the clinical side, Sandoz on the technical side," he said. "In the combination we hope we have the best of both worlds."

One major difference was in how development projects were managed. For each new drug candidate, Sandoz assigned a professional project manager who did nothing but manage that drug's development; Ciba had part-time project managers who also retained line functions, like clinical studies or toxicology work. Novartis has adopted the Sandoz approach.

"You avoid permanent learning and re-education," Mr. Reinhardt said. "It's their job to run the project and if it fails, they get a new project, but they don't have to be trained in what it means to run a project all over again. The global organizations now have recipes, procedures that are the same for all projects all over the world."

At the same time it was revising its project management procedures, the Novartis development team evaluated the 85 drugs in its combined portfolio, terminating 15 of them. "The natural thought after a merger is, 'Oh my God, what do I have to give up?'" Mr. Reinhardt said. "There was actually nothing to give up in the development portfolio in terms of overlap, so we had the luxury of looking over the portfolio for what we wanted to keep."

The resulting development portfolio is third in size behind American Home Products and Glaxo Wellcome, just ahead of Merck, and it fits Novartis's strategy of doing more with less.

"Over the last six or seven years, we have reduced the number of compounds selected for development by 40 percent, without reducing the output" of successful drugs, Mr. Reinhardt said.

Mr. Reinhardt describes the merger not as a difficult time, but as a learning experience. "Obviously, it takes a lot of energy and time to combine two cultures, with still some different ways of working," he said. "The additional workload, to adapt your processes, new standard operating procedures, to get buy-in, that is the challenging part. If you are positive about it, it's like joining a new company."

For Wayne P. Yetter, who came to Novartis after the merger as chief executive of the Novartis Pharmaceutical Corporation in the United States, the experience was one of literally joining a new company. "When I came on board in January, the executive committee still identified very much with Ciba or Sandoz, and there was a lot of 'we did it this way at Ciba,' or 'we did it that way at Sandoz,'" he said. "Six months later, we were really one team."

Helping cement the process was the introduction of two new drugs: Diovan, for high blood pressure, in March, and Femara, for advanced breast cancer, in October. Exelon, a new drug for Alzheimer's disease, currently awaits approval in the United States. "There's nothing like working on a common project to pull people together," Mr. Yetter said. "My head of marketing was from Ciba, and my head of field operations from Sandoz, and they really had to be joined at the hip."

The United States pharmaceutical

market presented a mixture of challenge and opportunity for the new company. Although Novartis ranked first in global market share, it was only in seventh place in the United States. And despite some market-leading products, it lacked a \$1 billion American product, like Lilly's anti-depressant drug Prozac or Merck's cholesterol-lowering agents Mevacor and Zocor. Just 35 percent of Novartis's pharmaceutical revenue came from the United States, compared with roughly 50 percent for Glaxo or Merck.

But with three new drugs ready to introduce and more on the way, the potential for growth was strong. So even as it trimmed its head count by 10 percent companywide, Novartis nearly doubled its United States field sales force, to 2,600. "Basically, we had to look at the opportunities," Dr. Vasella said. "Since we had, and continue to have, a large portfolio either on the way to launch or in growth phase, it was clear we had some opportunities to grow and to grow profitably."

Novartis does not break out sales by country but said that the company's 12 percent growth in pharmaceutical sales in the first nine months was led by an outstanding performance in the United States. And Mr. Yetter said he was confident that year-end figures from I.M.S. would show that Novartis has gained market share in the United States. Following the positive results in the United States, the company has since increased sales personnel in eight other countries.

"The United States was the largest and the earliest, and the results there encouraged others to come forward

and make proposals," Dr. Vasella said. "We are very restrictive in approving new hires, but in countries where they can make a business case for increasing head count, we are proceeding."

When they came together, Sandoz and Ciba-Geigy had 134,000 employees between them. About 40,000 workers left in the spinoff of Ciba Specialty Chemicals and the sales of Sandoz's Master Builders Technologies, a producer of chemicals for the construction industry, to SKW Trostberg A.G., a subsidiary of the German energy company Viag, and its North American corn herbicide business to the

German chemical maker BASF A.G.

Of the remaining 94,000 employees, the company said that it wanted to reduce the head count by 10,000 to 12,000 and that it wanted to accomplish 60 percent of these cuts by the end of 1997, 70 percent by the end of 1998 and 80 percent by the end of 1999. By September about 7,500 positions had been eliminated, but the company had increased its sales force by 2,000 for a net loss of 5,500. By the end of the year, Dr. Vasella said, the effort was right on target.

Most of the synergies realized to date have been within the pharma-

ceutical business, which generates roughly two-thirds of Novartis's revenues and nearly three-fourths of its operating profit. The challenge now is to identify and realize cross-sector synergies among pharmaceutical, nutrition and agribusiness. The merger made Novartis by far the largest producer of plant protection chemicals, with a large business in seeds as well. The new company is also No. 2 worldwide in medical nutrition products and in baby nutrition, through its ownership of the Gerber Company, which Sandoz acquired in 1994.

Historically, these businesses did

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as drugs or plant protection chemicals. This technology, known as high-throughput screening, has already spawned one publicly traded company in the United States, Aurora Biosciences, but in Switzerland, Mr. Kessmann could find no venture capital.

That was before the creation of the Novartis Venture Fund, which after considering Mr. Kessmann's proposal and linking him with another engineer provided the fledgling company with one million Swiss francs. "It was clear, without the support of Novartis's management, we had no chance," Mr. Kessmann said. The first, but not exclusive, customer for the new company, Discovery Technologies, was Novartis. "We tell people we're funded by Novartis,

but it's important that Novartis has no one on the board," he said. "I think it's a unique situation, and I hope we justify the trust."

One disappointment for Novartis is that more people like Mr. Kessmann have not stepped forward. As of mid-October, the Novartis Venture Fund had created 22 companies, half of them in Switzerland, the other half scattered around the globe. It has distributed 20 million of the 100 million Swiss francs. The companies range from single-person shops to 20 employees.

"What still needs to change here is the attitude of the whole culture, the attitude that it is better to stay in a big company," Mr. Kaufmann said. "You know, if you fail in the U.S., that's not a problem. If the same thing happens in

Switzerland, that's a catastrophe. There are some mental changes that have to occur, and we have to foster those changes."

As it turns out, attrition and a generous early-retirement program have made layoffs unnecessary, at least in Basel. This will make it possible for the fund to help more Novartis employees not affected by the merger and even to finance outside projects.

"There's a certain window; after two years the direct impact of the merger is over," Mr. Kaufmann said. "Then we will open up the fund to third-party projects, with a concentration in life sciences, and projects spun out of universities. We want now to promote the idea of an innovation center here in Basel." 

not communicate with one another, but that is changing. In agriculture, for example, the drive to reduce the use of chemicals creates an opportunity for bioengineered products. A technology like gene transfer, which the Novartis pharmaceutical unit is exploring for use in treating cancer and genetic diseases, could be used to create crop plants with greater pest resistance.

"We think that companies that do not have basic biotech know-how will not be able to play this game in the long term," said Wolfgang Samo, Novartis's head of agribusiness. Already there are links with animal care, including a blood-pressure drug for dogs. "There is always pressure to drive down the cost of drugs, but in the case of pets, nobody asks someone what he spends on his dog," he said.

Today, the link between drugs and nutritional products is primarily a matter of distribution, but Dr. Vasella said this will change, with the advent of functional foods — foods that lower cholesterol or blood sugar, for

example. Nutritionals with a health claim "will be very close to a pharmaceutical, and a perfect fit for us," he said. "It is an R&D effort, which is closer to pharmaceutical, and it will face regulatory review, which is a barrier to competition. This is a segment that will grow."

While it is too early to evaluate these long-term goals, Novartis's financial performance since the merger seems to validate Dr. Vasella's approach. Sales and earnings growth have exceeded the predecessor companies' rates and surpassed the estimates of financial analysts in the United States and Europe. As a result, Novartis's market valuation has grown more rapidly than the market as a whole or other pharmaceutical companies (see Exhibit I).

In the first half of 1997, Novartis's net income totaled 3.1 billion Swiss francs, or about \$2.2 billion, a gain of 27 percent over the comparable figure a year earlier. Operating income climbed by 25 percent, to 4 billion

Swiss francs, despite major investments in new product introductions. Sales rose 19 percent, to 16.56 billion Swiss francs. Novartis did not release third quarter earnings, but did report a 21 percent gain in nine-month sales, to 23.9 billion Swiss francs. Without the effect of currency fluctuation, sales growth equaled 8 percent.

"The biggest surprise is their ability to deliver better-than-expected top-

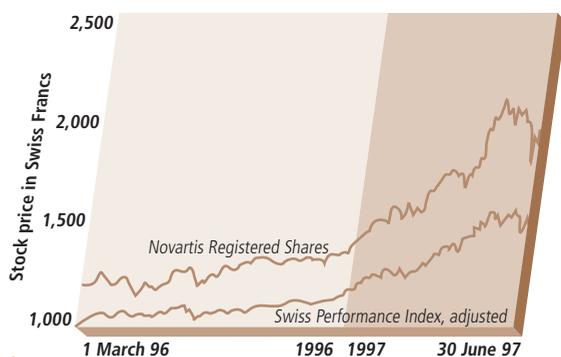
line sales in pharmaceuticals," said David Molowa, a securities analyst who covers Novartis for Bear Stearns in New York. "This company has outperformed the market since its inception. It's definitely a case of one plus one equals three or four. The best thing they've done is keep the momentum of their business in the face of integrating the two companies."

Internally, executives credit the success of the integration so far to the speed and decisiveness with which it was executed. "The real ingredient was one of very rapid decisions in the management structure, so there was not a prolonged period of insecurity," Mr. Breu, the chief financial officer, said.

Communication from the top was also important. "Vasella is very inspiring, and he's a real leader, so the rest of us see that and feel we must do the same," said Miguel Bernabeau, Novartis's head of transplantation. "He's also a person you can reach at any time, and he knows what you're talking about."

At 44, Dr. Vasella is one of the youngest executives managing a major pharmaceutical company, and he looks forward to taking Novartis into the next century. From some point in the future, "I hope we will look back at a period in which we brought really innovative products to market, which changed people's lives," he said. "For now we have to implement what we've started on. From here to really being done, it all is simply hard work. Are we there? No. Will we be there in time? I am confident the answer is yes." SB

EXHIBIT I BEATING THE MARKET



Source: Novartis, Ltd.

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