



startup

because you can.

One of the wonderful things about starting any new venture is the freedom. To have big ideas, breathe life into them, and build them. From scratch. That freedom is appealing, but exists – practically speaking – for relatively few.

Until now.

Because whether you're two friends tinkering in a garage, or you work inside one of the most venerable enterprises on earth, the rise of a globally connected world offers a truly rare opportunity: the chance to start something totally new.

This is what we believe at IBM. And it is the core idea we are taking to customers (and pursuing ourselves): how to seize this unique moment and rethink what you do, reconceive what you offer and, along the way, reinvent who you are.

Start up. In the networked world, everyone can. The details are unique for each customer. But the steps – the basics of e-business – are surprisingly consistent. We think there are five. They're also a way of understanding what we're doing, investing in and building across IBM today. It all begins with a commitment, a decision to...

1. Join the MOVEMENT

A few years ago, it was clear the Net was coming. But at that time it wasn't clear if it would be much more than a planetary chat room and an electronic newsstand. However, back then, IBM was saying the Net would become much more than those things. We said that it would not just change technology. It would spark an all-out revolution in the way the world works.

Many of our customers held the same view. They saw a chance to reinvent everything

from the way governments deliver services to citizens and students access the wisdom of university faculties, to the way physicians treat patients and enterprises of all kinds serve customers of all kinds.

It's a powerful idea. And like all new ideas, you can ponder it and possibly miss something big. Or you can start experimenting, learn, and push it for all it's worth. You can be part of the movement.

Gary Briggs
e-business marketing strategist

NT



consider **the facts**

The Internet is the epicenter of change today...

It took radio nearly 40 years to reach 50 million people. TV took 13 years. Cable TV, 10. Not six years after the birth of the World Wide Web, more than 140 million people are online – and some estimate that **50,000 new users** – workers, students, buyers, sellers, patients and citizens – come online every day in the United States alone. They use the Net both as a medium and as a destination – the largest, most restless, round-the-clock marketplace the world's ever seen.

because the incentives are irresistible...

The Net dissolves barriers that once limited market access and opportunity. It creates new ways to achieve global reach, find new customers, improve service, conceive and deliver new offerings. It fundamentally alters the economics of transactions. The cost of basic banking transactions drops from **\$1 to one cent** on the Net. Companies that once spent \$35 to process an expense form do it for less than \$5 using intranets.

creating opportunities for all businesses and institutions...

We're watching the creation of nothing less than a new economy. By one estimate, Internet commerce grew from \$12 billion in 1997, to more than \$30 billion last year, and will surpass **\$425 billion by 2002**. You can find other estimates that see a **\$1 trillion marketplace in the same timeframe**. What's harder to measure – but even more significant – is the value of the Net as it transforms the internal operations of organizations and redefines the important work of noncommercial institutions.

(and for the information technology industry).

Our industry is growing about 10 percent a year, and spending on e-business hardware, software and services is growing twice that fast. At these rates, the overall information technology industry should reach **\$1.6 trillion by the year 2002**, and e-business will account for \$600 billion of that total.

all can play

ONE GREAT THING about experience: you learn. We've worked on nearly 18,000 network computing engagements with customers large and small, in all sorts of industries. From this work we've learned that while online retail sales – "e-tailing," as some call it – is exploding, it's just one aspect of e-business. Prime movers in this revolution also include universities, hospitals, government agencies and nonprofit institutions that embrace the Net to transform what they do. And some of the most astounding results (and returns on investment) come when customers build e-business solutions inside their enterprises to unlock the ideas of their own people. Here, a handful of e-business pioneers.

STATE OF ARIZONA

ServiceArizona is used by 7,000 Arizona residents a month to renew vehicle licenses online, saving the state \$325,000 a year. Online renewals cost the state \$1.60 versus \$6.60 for an in-person transaction.
www.servicearizona.ihost.com

AIR CANADA

Site provides travelers with the convenience of secure online ticketing for 545 global destinations. First-year bookings soared to 25 times the anticipated volume, and Air Canada is seeing major reductions in distribution costs – its second largest expense.
www.aircanada.ca

SAAB CARS USA

Extranet connects 225 dealers and 20 service centers. Dealers and technicians go online to order parts, trace deliveries, check warranties and maintain service histories. Saab estimates this Web-based system will lift productivity by up to 25 percent at each dealership.
www.saabusa.com

FEDERATED DEPARTMENT STORES

In 1998, Federated Department Stores created its online subsidiary, macys.com. The site offers 250,000 items for sale, from socks to diamonds. In the fourth quarter, volume increased 700 percent and traffic across the site jumped 550 percent.
www.macys.com

RECREATION EQUIPMENT INC. (REI)

REI's fastest-growing business: online sales. E-commerce revenues rose 360 percent over 1997. Revenue through the Web site exceeded per-store volumes generated by most of the chain's largest physical stores, and online orders averaged twice the amount of traditional purchases.
www.rei.com

SHELL CHEMICALS

This extranet application automates delivery of chemical products, allowing for just-in-time shipments to customers, electronic billing and payment. Sales of chemicals increased at 45 percent of Shell Chemicals' accounts, and its customers eliminate costly excess inventory. www.shellchemicals.com

AMWAY OF AUSTRALIA

8,000 distributors now access sales and product information over the Net. In its first year, the Web system reduced order processing costs by nearly \$2 per order. www.amway-au.com

SCHNEIDER AUTOMATION

A global extranet at Schneider Automation, the U.S. subsidiary of France's Groupe Schneider, gives sales and service staff in 130 countries instant access to customer and product information. The industrial automation equipment manufacturer says the networked application was instrumental in a 60 percent jump in customer satisfaction. www.schneiderautomation.com

TIENDAS E. WONG

Peru's first online supermarket offers 15,000 items for sale. Operating costs are half those of traditional stores, and profit margins from online sales are 35 percent higher. www.ewong.com

LEHIGH VALLEY SAFETY SUPPLY

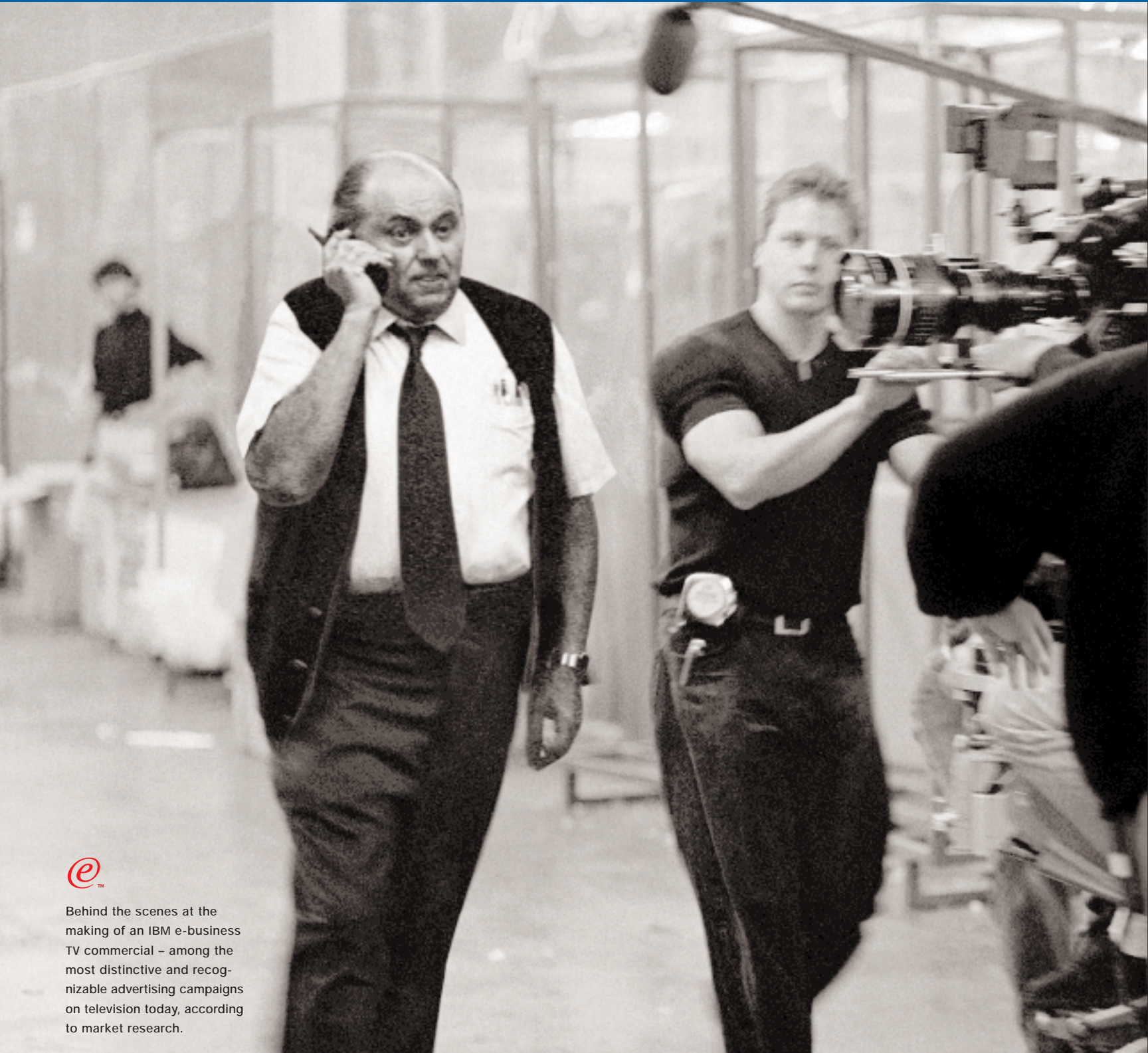
This small business once sold industrial work boots off a truck in a few eastern U.S. states. Its Web site now lists 250 varieties of boots and fields orders from Malaysia, Pakistan, Thailand and offshore oil rigs. www.safetyshoes.com

M.D. ANDERSON CANCER CENTER

This secure Net-based disease management tool at this Texas hospital allows doctors to track treatment outcomes and measure appropriateness of tests, prescriptions and procedures. For one major surgical procedure, test costs were reduced 35 percent, and the length of patient hospital stays came down 30 percent. www.mdanderson.org

KOREAN NATIONAL OPEN UNIVERSITY

More than 200,000 students – at 13 regional and 31 remote education centers throughout the Republic of Korea – use the Web and digital library technology. The Web site will soon hold 10,000 hours of broadcast lectures and learning materials. www.knou.ac.kr/imsi1.htm



Behind the scenes at the making of an IBM e-business TV commercial – among the most distinctive and recognizable advertising campaigns on television today, according to market research.



it's called **e-business**

BUT IT'S A LOT MORE THAN A NAME, or the tag line in an ad campaign. It's true that over the last two years we've invested hundreds of millions of dollars to promote our point of view on what the Net is all about. And our ads do introduce a lot of customers to the idea of e-business. But that's just where the conversation starts.

When customers decide to use the Net to transform time-honored ways of working, they have to ask and answer some very big questions. Where do we start? What kind of applications and infrastructure should we build? How are we going to use all the

information we'll capture – analyze it, extract new insights and apply them?

So in 1998, we started to move beyond broadband marketing to define in detail the business and technology implications involved in becoming an e-business. We created a methodology – a model describing the nature of this transformation – and we began taking it to customers and business partners. The response has been encouraging, as more and more customers are joining the movement – the e-business movement.

Suzanne O'Connell
industry solutions expert



2.

LEA

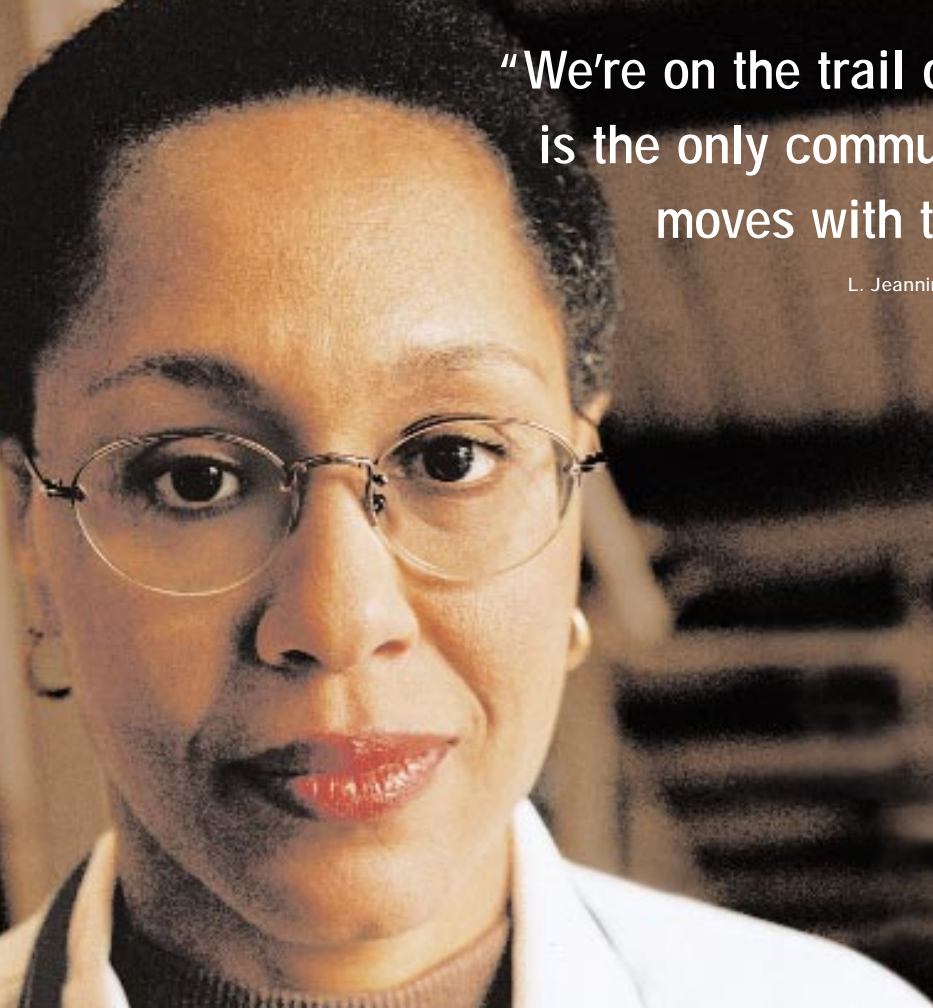
Because in a movement like this one – global, hair-trigger fast and playing out on largely uncharted terrain – **there will be leaders.** People with some courage, and a restless bone or two.

Be one OF THE LEADERS

We consider ourselves fortunate to count thousands of them among our customers. They're captains of industry – or plan to be soon. And they're worth watching.

They're found across all industries, and their organizations come in all sizes. But they have a lot in common. They don't settle for incremental improvement. They dream about breakthroughs, and search for entirely new models – new ways to build competitive advantage, sell, enter markets, learn, and win.


They share one more trait. A sense that in this movement, disproportionate rewards will be earned by those who strike first.



"We're on the trail of a killer. The Internet is the only communications medium that moves with the **URGENCY WE NEED.**"

L. Jeannine Bookhardt-Murray, M.D., HIV Treatment Data Project

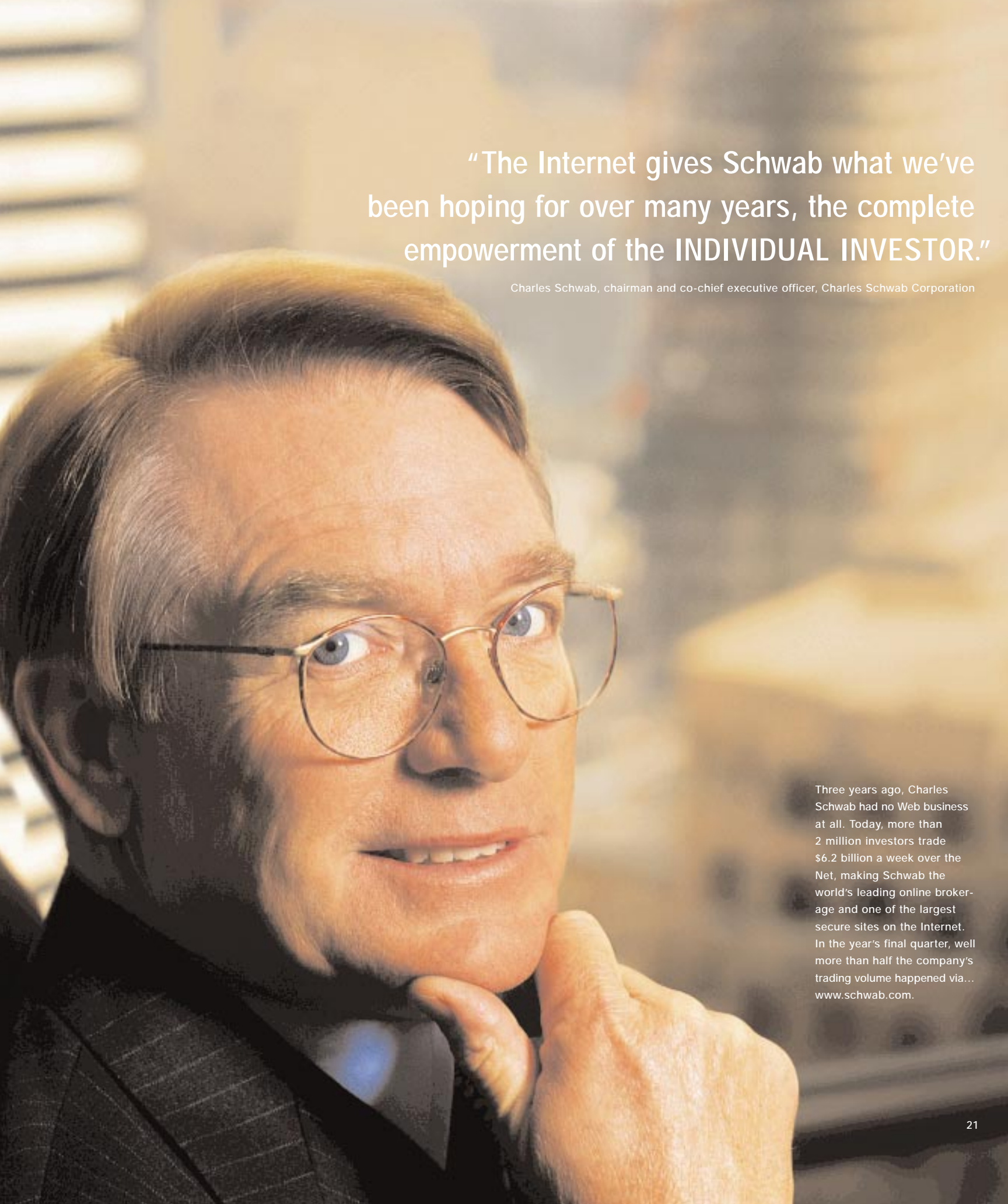
In the battle against HIV and AIDS, researchers are learning that combinations of drugs succeed where individual medications fail. The HIV Treatment Data Project is a collaboration between the American Association of Health Plans and Lotus to create a safe, secure Web site where information on possible drug therapies is compiled and shared. The results are instantly available to doctors and researchers who have committed themselves to end this modern plague.



Chrysler generated more than \$2 billion in cost savings in 1998 with a Net-based application that tightened the partnership with its suppliers by inviting them to offer cost-saving ideas. The suppliers weighed in with more than 13,000 suggestions. In three out of four cases, Chrysler took action – and shared some of the savings with the idea's originator.

"We turned to the Net to create the world's most **PRODUCTIVE** suggestion box, and speeded up the implementation of a ton of great ideas."

Susan Unger, chief information officer, DaimlerChrysler



“The Internet gives Schwab what we’ve been hoping for over many years, the complete empowerment of the **INDIVIDUAL INVESTOR.**”

Charles Schwab, chairman and co-chief executive officer, Charles Schwab Corporation

Three years ago, Charles Schwab had no Web business at all. Today, more than 2 million investors trade \$6.2 billion a week over the Net, making Schwab the world’s leading online brokerage and one of the largest secure sites on the Internet. In the year’s final quarter, well more than half the company’s trading volume happened via... www.schwab.com.


“The old model of TEACHING built around the ‘sage on the stage’ has to be rethought – has been rethought – and I don’t think there’s any going back.”

Dr. Rafael Rangel, chancellor, Monterrey Institute of Technology






With 30 campuses in Mexico and seven field offices across Latin America, the Monterrey Institute of Technology knows the value of distance learning. Mexico's largest private university uses a Collaborative Education System (based on Lotus LearningSpace software) to support 2,500 courses at 81 remote sites – and to put digitally delivered education within the reach of some 43,000 students.

A man wearing a tweed suit, a red tie, a yellow cardigan, and a tweed hat stands in a field of tall, dry grass. He is smiling and has his hands in his pockets.

In the quaint Scottish hamlet of Lugton, a four-person cooperative called Scottish Craft Brewers is online with an e-business Web site and is fulfilling orders from around the world. They built the site – and its secure ordering system – in hours. Since August, sales are up nearly 1,000 percent.

“The RESPONSE is almost frightening. I thought it would die off after Christmas, but it just keeps coming. I shipped to Slovakia, and I don’t even know where that is.”

Christopher Lynas, director, Scottish Craft Brewers Cooperative. www.lugton.co.uk



“It’s true that we’re not a big company, and we’re no bigger in terms of staffing than we were before we put up the Web site. If this is **DAVID VERSUS GOLIATH**, then we’re David.com.”

Lynne and Alan Kuwahara, owners, Hawaiian Greenhouse. www.hawaiian-greenhouse.com

On the volcanic plains of the big island of Hawaii, the Kuwahara family has grown and sold world-class tropical flowers since 1965. But when massive international growers started to squeeze its sales, Hawaiian Greenhouse turned first to mail order, and then to the Internet. Today, 10 percent of all new orders originate on the Net and this small family business has found a way to compete with the big boys.

We're watching the end of the PC era. That's important. **But the PC isn't going to dry up and blow away.** Its role is being redefined to serve as a key point of access to the Net – but not the only point of access.

3. Get BIG (and SMALL)

A panoply of new network access appliances is coming to augment the world of PCs – hand-held computers, Web-enabled TVs, screenphones. By some projections, these new devices will account for 40 percent of all devices connected to the Net by 2002. This will bring computing and the Net to millions of new users quickly. IBM will build some of these devices, but our main play will be the technologies – like chips and disk drives – that power them.

We think things get even more interesting at the other end of the network connection. As personal computing is redefined, customers are rediscovering the importance

of enterprise computing to handle their escalating e-business workload – everything from industrial-strength software like transaction systems and databases to highly reliable, secure, scalable servers.

As a result of these shifts, value is being redefined in information technology. It's changing where customers invest, and it's changing what leading technology companies work on. At IBM, this view of the future of computing is shaping all our product development plans, from supercomputers to ThinkPads, as well as our work in creating the core underlying technologies that power them.



Mark Anzani
S/390 hardware
developer

personal **computing** is being redefined...



(From left to right) **Aptiva**: award-winning PC family delivers superior technology – both for the under-\$1,000 market and for those seeking the power and performance of a 450-megahertz processor and DVD multimedia. **ThinkPad iSeries**: introduced in October, it quickly became our fastest-selling notebook ever. **CrossPad**: jointly developed by IBM and Cross Pen Computing Group, it creates a digital copy of handwritten notes. **Screenphone**: we’re working with companies like Deutsche Telekom to build new computing and communications devices and

new ways to conduct networked transactions. **WorkPad**: it adds IBM technology to the base 3Com product, enhancing PC-syncing and network functions. **Smart Card**: applications range from secure user authentication to “e-cash” – and we’re working on Java-based solutions. **Wearable PC**: in September, IBM researchers in Japan prototyped a computer with the power of a ThinkPad 560 yet small enough to carry in your pocket; the main unit attaches to a headset with a one-inch display and a hand-held controller with a “TrackPoint” and microphone.

MAKE NO MISTAKE. There will still be PCs – millions and millions of them. But the PC is going to be joined, augmented (and ultimately outnumbered) by a vast array of information appliances, a few of them shown here. This will bring computing and access to the Net to hundreds of millions of

people very quickly. IBM will build some of these devices, but our presence will be most evident under the covers – in the leading-edge chips and disk drives (like those at the bottom of this page) that will power all these new personal computing devices.



IBM UNDER THE COVERS



Microdrive (shown actual size)

The world's smallest and lightest hard disk drive debuted in September. The Microdrive holds 200 times more data or images than a floppy disk, and stakes out a leadership position in the market for compact storage devices for digital cameras, cellular phones and hand-held computers.



Silicon-on-insulator

In August, IBM announced a breakthrough in semiconductor technology that "turbo-charges" transistors so that they can run faster or use less power. This advance paves the way for development of more efficient hand-held computing devices and more powerful network-based computers.



Silicon germanium

In October, we announced production of chips using our patented silicon germanium manufacturing process. Virtually every telecommunications company is racing to incorporate silicon germanium to reduce production costs and sharpen the performance of high-speed data links, cell phones, pagers, and other wired and wireless products.

RS/6000 This line of UNIX-based systems reaches from workstations to the most powerful computers on earth – the SP-class supercomputers. In 1998, the SP line recorded major wins at the U.S. National Weather Service and the San Diego Supercomputing Center.

because **enterprise** computing is being rediscovered

WHEN YOU TAKE A BUSINESS TO THE NET, you stake a lot on the strength of your information technology infrastructure. Things like your reputation, brand and customer relationships. Your online systems have to be able to handle – not just the population of employees inside your business – but the population, period. And never go down.

So critical e-business applications have to run on enterprise servers and equally burly software called “middleware.” In combination, they make sure your application (and your reputation) can handle unprecedented stress, unpredictable spikes in usage, and that you’re ready when the world comes calling.

HARD FACTS ABOUT ENTERPRISE SOFTWARE

IBM ranks among the leaders in each of the key middleware segments, and our products run on all the industry’s leading operating systems – including HP-UX, Solaris, Windows NT, AIX, OS/2, OS/400 and OS/390.

MESSAGING AND COLLABORATION

Lotus Notes and Domino are leaders and enjoy double-digit growth rates. New installations totaled more than 14 million in 1998.

APPLICATION DEVELOPMENT

To become an e-business, a customer must extend its investment in existing technology to the Internet. In 1998, we maintained our number-one position in application development software and tools, such as VisualAge for Java.

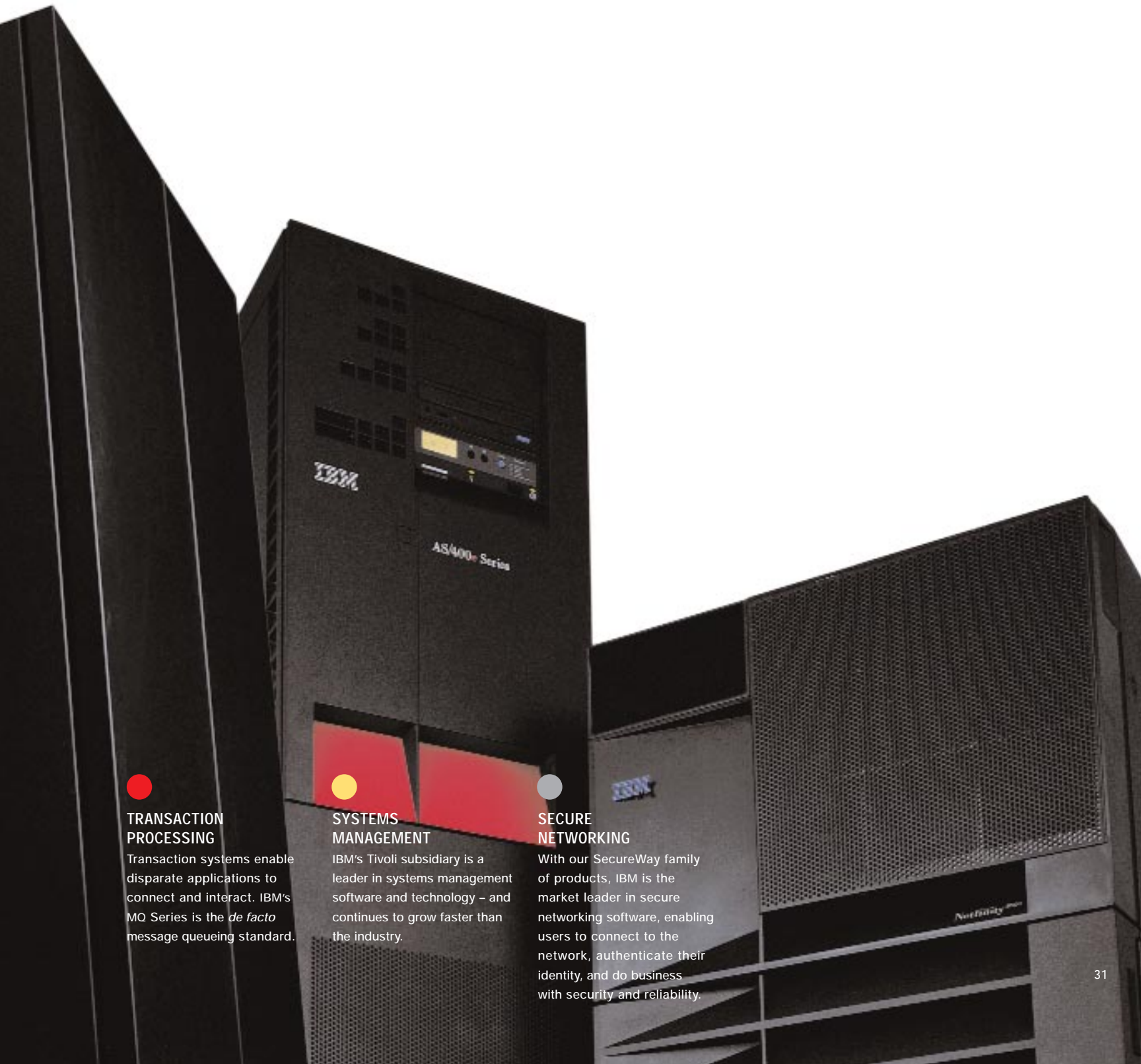
DATA MANAGEMENT

More than 70 percent of the world’s data resides on IBM systems. IBM’s DB2 Universal Database is a top choice among customers, and grew faster than the industry in 1998.

S/390 The workhorse and performance leader among enterprise servers. Last year, we cracked the performance milestone of 1,000 MIPS (millions of instructions per second) and notched more than 350 competitive wins.

AS/400 It's quick to deploy and easy to run (requiring little or no support staff). That's one reason 20 percent of new orders in the fourth quarter of 1998 were from new customers. We shipped AS/400s in record numbers last year, and delivered a 94 percent performance improvement.

NETFINITY In 1998 – its first full year in the marketplace – Netfinity set industry performance standards and began delivering enterprise-class technology to the industry-standard marketplace.



TRANSACTION PROCESSING

Transaction systems enable disparate applications to connect and interact. IBM's MQ Series is the *de facto* message queueing standard.



SYSTEMS MANAGEMENT

IBM's Tivoli subsidiary is a leader in systems management software and technology – and continues to grow faster than the industry.



SECURE NETWORKING

With our SecureWay family of products, IBM is the market leader in secure networking software, enabling users to connect to the network, authenticate their identity, and do business with security and reliability.

4. Get even BIGGER and DISAPPEAR

Even as they carve out a place in the world of e-business, the leaders – our customers – cast an eye over the horizon, **searching for the next big movements.** We're looking with them. And right now, we see two.

The first is called Pervasive Computing. It is the inevitable extension of the networked world – to connect not just individuals and institutions, but lots of everyday things that will contain a little embedded computing and networking capability.

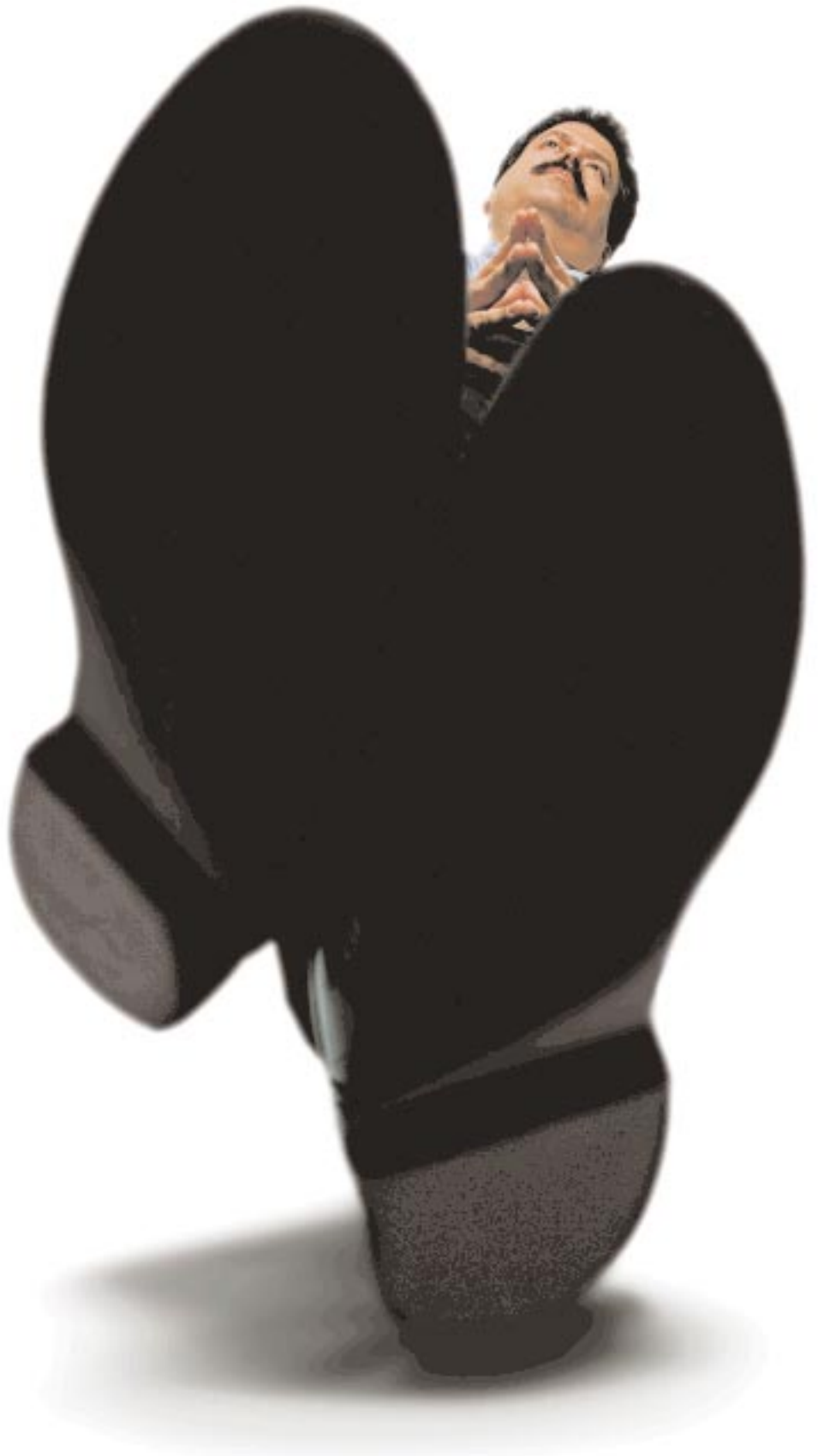
The second trend is at the other end of the wire, what we call Deep Computing. It's the union of ultrafast processors with advanced algorithms and software to

create very powerful systems that can attack problems and challenges previously beyond computing's reach.

For us, pinpointing the next shift is fundamental to our business. It's why we invest billions in exploratory research and technology development every year. This isn't a dreamy, speculative look ahead. We see what we are uniquely able to see – and, often, see first.

R

Bernie Meyerson
IBM Fellow and pioneer of silicon germanium





computing takes on the **mysterious**...

MEN WALKED on the moon three decades ago, but there have remained myriad challenges beyond the reach of technology - problems too expensive or too time-consuming to be practically solved with even the most powerful computers. But now that's changing. A new capability began with Deep Blue, a chess-playing supercomputer that could consider 200 million possible moves per second, coupled with analytical software so sophisticated some said it began to mimic the workings of the human mind. Today, the lessons of that chess

match are helping us create a new market opportunity we call Deep Computing.

This capability is now being applied to monumental challenges - endeavors far more important than chess: modeling financial markets and weather patterns, challenges in biomedicine, data mining and genomics. In the area of pharmaceutical research, for example, Deep Computing allows researchers to reduce significantly the time required to design new drugs.

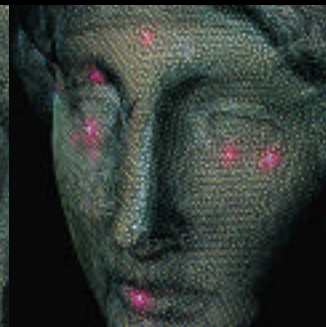
Michelangelo's second Pietà is a work of undeniable sorrow – said to be unique in its ability to move people to tears. Perhaps that dark power overcame the sculptor the day he took hammer in hand and smashed chunks out of the work he intended as his tomb monument. He was stopped by a servant. The piece was never completed, but was repaired by an undistinguished sculptor.



Now, IBM researchers and art historian Jack Wasserman are using Deep Computing techniques to create a near-perfect replica – a digital one – based on analysis of nearly 2 billion bits of data. They hope their work will lead to new theories about Michelangelo's concepts of proportion and dimension, and what the work looked like before pieces were reattached.

A special six-lens camera originally designed for cosmetic surgeons captures hundreds of digital mesh "shape photos." From these, a computer using a special mathematical algorithm reconstructs a wireframe model of the sculpture. Though crude, this model contains millions of points and triangles to define surface contours.

Mastering the geometric complexity of the Florentine Pietà generates new techniques for digitizing very large real-world objects. These techniques allow scholars to make computer models of objects to which they ordinarily would have no access, and to examine them in exquisite detail.





the **unthinkable**...

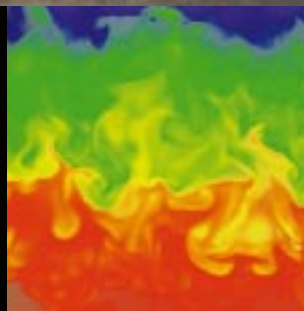
PERHAPS EVEN MORE PROFOUND than what Deep Computing lets us do, is what it lets us avoid. For the first time, these technologies allow us to create digital solutions where the physical alternatives are no longer acceptable. With these tools, thoughtful

people have a way to solve problems that aren't merely hard, or time-consuming, or expensive. They can apply massive amounts of computing power to address some of the previously intractable quandaries of humankind.

The first atmospheric test of a thermonuclear device near the Enewetak atoll in the Pacific Ocean, in 1952.



3.88
trillion calculations per
SEC



4.00
TERAFLOPS, ON THE WAY TO
100

In the fall of 1998, IBM delivered an RS/6000 SP – the world’s fastest computer, twice as fast as any previously built – jointly developed with the U.S. Department of Energy’s Lawrence Livermore National Laboratory.

How powerful? Capable of performing nearly 4 trillion calculations per second – more than a person with a hand calculator could perform in 63,000 years. Another way to look at it: the supercomputer known as “Blue Pacific” is 50 times faster than Deep Blue, the supercomputer that defeated chess grandmaster Garry Kasparov.

In the post-Cold War era, this is the kind of entry-level computing power the experts in charge of nuclear arsenals need. It allows them to run highly complex simulations that certify the safety, security and reliability of the stockpiles – without performing live tests.

“Before we had this technology, calculations of the complexity required for stockpile stewardship were absolutely impossible.” – Dr. David Nowak, Accelerated Strategic Computing Initiative Program Leader, Lawrence Livermore National Laboratory.

Next up: development of a follow-on RS/6000 SP for the U.S. Department of Energy to model nuclear reactions more fully. It will approach 100 trillion calculations per second – dwarfing the 4 trillion possible with Blue Pacific.



and becomes **invisible**

THE EVOLUTION of information technology is as irresistible as a force of nature. The basic elements of computing – processors, storage, memory – all grow inexorably faster, smaller and cheaper. That renders a few things pretty clear.

One is that e-business is just phase one of this

networked transformation. What's next is an explosion – from a world of a million e-businesses, and a billion connected users to a trillion connected things – cars, clothes, household appliances, machine tools, each emitting a little information and all of them interwoven in the global information infrastructure.

Imagine intelligent vending machines sending regional distribution centers reports on what kind of soda is selling, what's not, even the optimal time to send a route driver to empty the coin box.



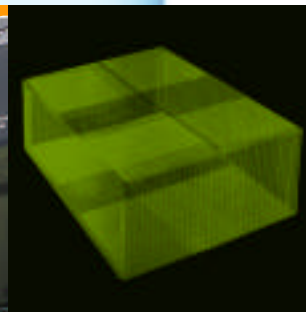
YOUR HOME

Home buyers can now move into a clean, spacious... computing device. We're working with partners in the home construction industry and with Bell Atlantic in the United States to deliver IBM Home Director, which integrates everything from Internet access to control of security and lighting systems, heating and air conditioning – all from any PC or TV screen.



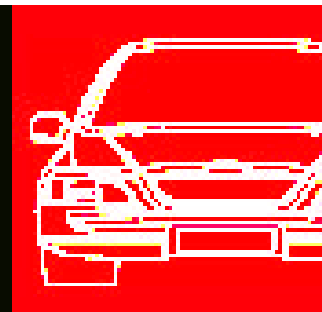
YOUR GROCERIES

Even the weekly ritual of grocery shopping is being transformed. Safeway UK and IBM are piloting handheld devices that let shoppers make up grocery lists and submit the order from home. The supermarket fills the order and has it ready for pick-up. Or shoppers can cruise store aisles scanning groceries and tracking their total. Customers like the convenience. The supermarket likes the fact that high-spending families are doing more of their shopping with Safeway.



YOUR PACKAGE

Today, you can track the status of any overnight package from depot to depot. Tomorrow, parcels with embedded computing and communications capability might be tracked mile by mile, street by street and block by block, until they reach your door – and you.



YOUR CAR

We're working with automakers to prototype wireless links from the car to the Net, combined with IBM voice technology to give drivers e-mail (voice-activated), driving directions and updates on road conditions. Onboard sensors would alert drivers – and the nearest service center – if a problem were brewing. And imagine the benefits to automakers when these links beam continuous information on engine performance directly to manufacturing and product development.

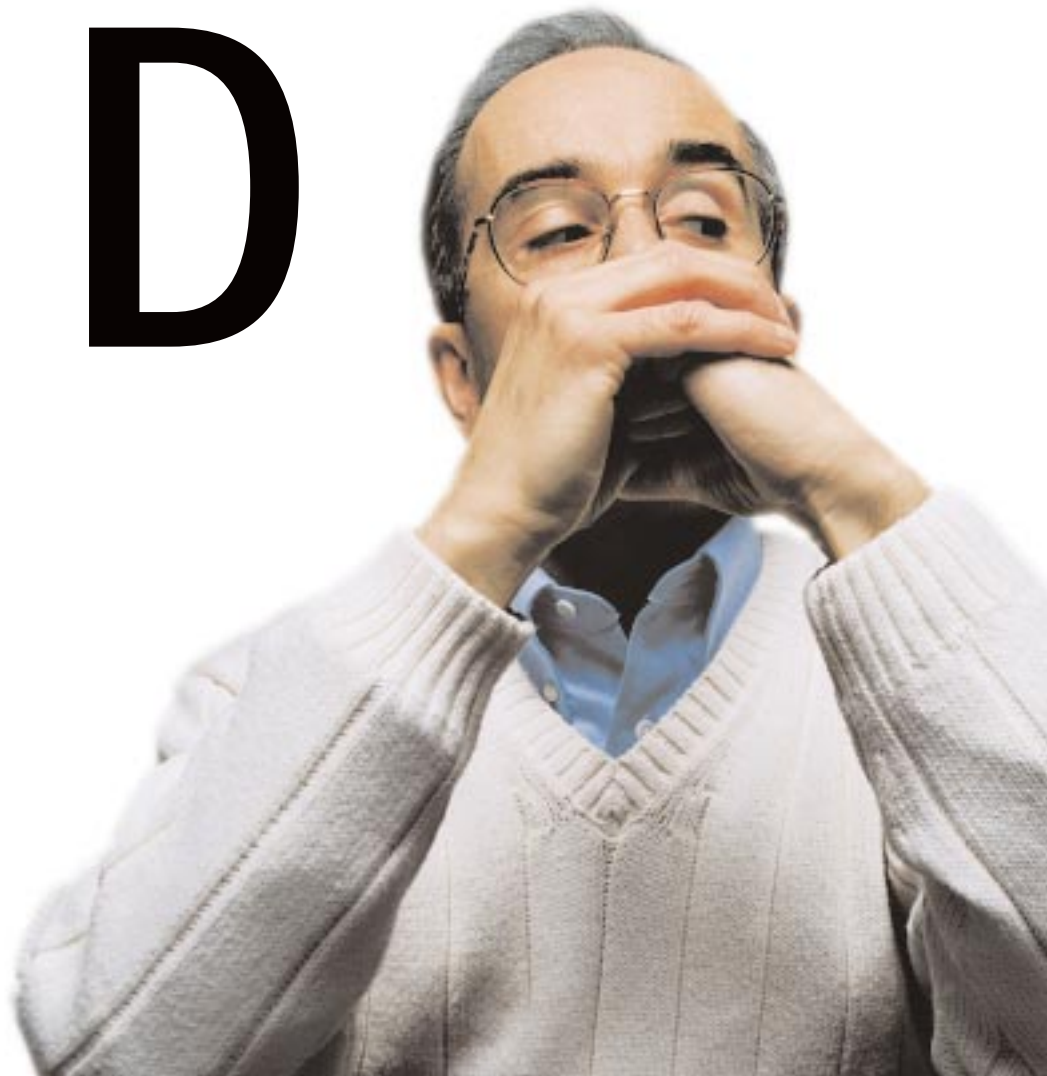
There is a relentless drive in the information technology industry to make things more powerful, less expensive – and always faster. **But for customers, the most important measure of speed isn't found in the machines.** It's in how fast marketplace opportunity arises, and vanishes – and with it, the chance to lead.

5. Fast FORWARD

The question they ask is: If everyone has access to the same technology (and they do), what's the real source of competitive advantage? Here's the surprising answer they get from the world's largest information technology company: there is no unique competitive advantage in technology alone.

Today, real advantage is found only when technologies are applied to solve problems, to create new capabilities for customers, quickly and cost-effectively. This requires skills, insight and knowledge – in other words, great people. This is the intensely human business of information technology services. It is the fastest-growing segment of our industry and, not coincidentally, the fastest-growing business in IBM.

ARD



Anthony Rizzi
global services professional



close the gap

CUSTOMERS SPENT ABOUT \$1 BILLION A DAY on information technology services in 1998. Why? Because there's a yawning void between a big idea - or even a well-crafted strategy - and marketplace execution. To get from one to the other, as quickly and cost-effectively as possible, customers increasingly draw on service

providers like IBM Global Services for assistance in areas spanning consulting and systems integration, application development and Web site hosting. We believe this trend will continue, for some of the reasons described here.

The world is embracing new models.

New models of retailing, distribution, banking, education. One consultancy estimates that customers will dedicate fully half their e-business investments to services that help them make their moves to the Net. Over the past year, IBM has introduced more than 30 new e-business services - from Web site hosting, to e-commerce, to offerings for employee training and knowledge management.

Demand outstrips supply.

It's a persistent dilemma that's getting more acute. Many of our customers lack the in-house information technology staff they need, and they can't hire sufficient skills. In the United States alone, want ads for hundreds of thousands of information technology jobs are going unanswered. IBM's 126,000 services professionals - who garnered the industry's top customer satisfaction ratings - are ready to help, and we're hiring more every week.



Strategic partnerships catch on.

Customers seeking a competitive edge often decide to concentrate on their core business, and entrust the management of the information technology infrastructure to an expert partner. This model, strategic "outsourcing," is well known in the United States. And it's now sparking the imagination of customers like Cable and Wireless in the United Kingdom, Daiwa Bank in Japan and Caricentro in Italy. Of 38 outsourcing contracts we signed last year worth \$100 million or more, nearly half were with customers outside the United States, more than double the percentage of two years ago.

A premium on security and privacy.

When businesses send valuable intellectual property over the Net, they have to know they can control access to their content, validate the ID of all participants in the transaction and provide a high level of security for the data. That's why five major music labels are using the IBM Electronic Music Management System to test the highly secure sale and digital distribution of CD-quality music over the Internet. This is just one of many IBM e-business solutions across dozens of industries – all backed by services that make e-commerce safe, secure and very real.



Speed without sacrifice.

Speed or customization? It's not an either-or decision. Through thousands of services engagements, we build insights in one industry, and use them to create tested, proven solutions that can be replicated (and customized) in others – to get our customers going very quickly. In fact, seven of our 10 fastest-growing global offerings – built around opportunities like enterprise resource planning – are less than two years old.



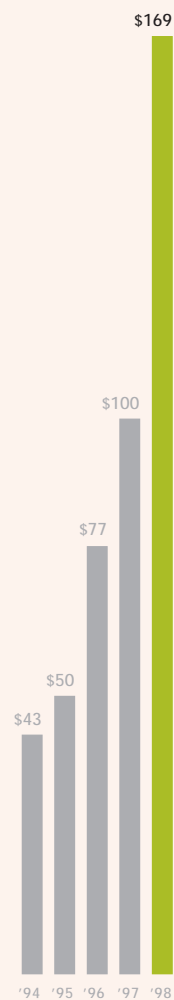
Not by services alone.

Customers who engage with our services business find they've also tapped a direct pipeline to solutions development teams in 26 industries, as well as the resources of IBM Research. Often, this can provide a competitive edge for our customers – and for IBM. Monsanto's decision to sign a long-term, strategic outsourcing agreement with IBM was based, in part, on the opportunity it saw to team up its genomics scientists with our pattern recognition researchers.

Five years at IBM. Of course, IBM is no startup, and we had our initial public offering more than 80 years ago. But in many ways our story over the last five years testifies to the transformational nature of our times.

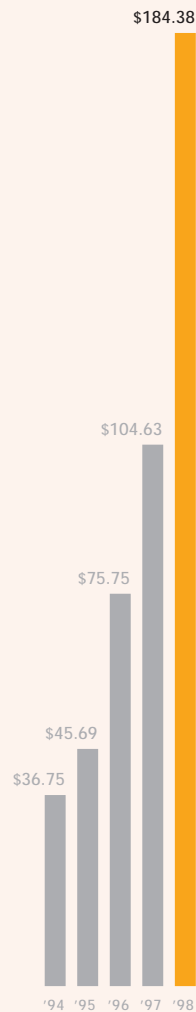
creating
shareholder value

IBM MARKET VALUE
(\$ in billions)



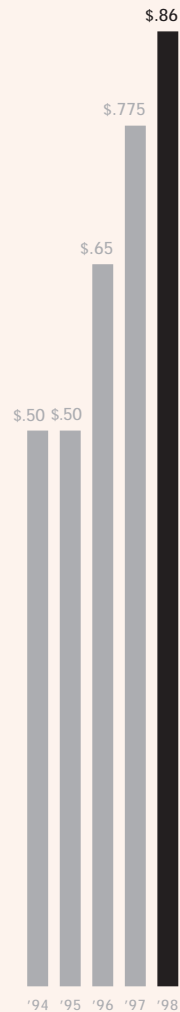
STOCK PERFORMANCE

Year-end closing prices adjusted to reflect a two-for-one split of the common stock effective May 9, 1997 (\$ per share)



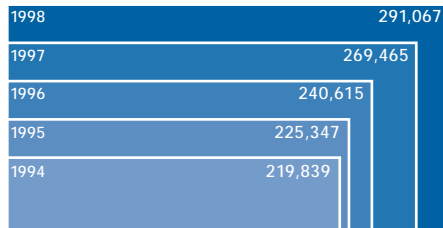
DIVIDENDS

Adjusted to reflect a two-for-one split of the common stock effective May 9, 1997 (\$ per share)



the new blue workforce

NUMBER OF EMPLOYEES



WOMEN AND MINORITY EXECUTIVES AT IBM

Since 1994, the number of women executives worldwide has **increased 128 percent**. And the number of minority executives in the United States has **increased by 84 percent**.

EMPLOYEE GIVING

Individual employees in the United States contributed more than \$190 million from 1994-1998 through matching grants and donations to nonprofit organizations and educational institutions.
(*\$ in millions*)



PERFORMANCE-BASED PAY

In order to attract and retain the best professionals, IBM has increased its investments in performance-based pay programs.

Variable Pay

IBM employees share in the company's success through IBM's variable pay program. Variable pay is a pool of cash distributed to employees, based on the performance of the company, each business unit and each individual employee. Since 1994, the variable pay pool **has grown by more than 60 percent**, to \$1.6 billion in 1998.

Stock Options

The number of employees receiving stock options has grown substantially from 1994 to 1998. IBM nearly doubled the number of employees who were granted stock options in 1996, doubled that number again in 1997, and then **tripled it in 1998**. Options give a significant financial incentive to employees whose skills and expertise are critical to IBM's business.

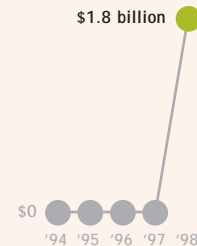
IBM as e-business

FROM A STANDING START in 1997, IBM turned itself into a multibillion dollar e-business during 1998, taking core business processes – like the way we sell and the way we buy – to the Net.

IBM E-COMMERCE REVENUES



IBM E-PROCUREMENT WEB PURCHASES



IN DECEMBER 1998 ALONE, IBM bought more than **\$600 million** in goods and services over the Internet.

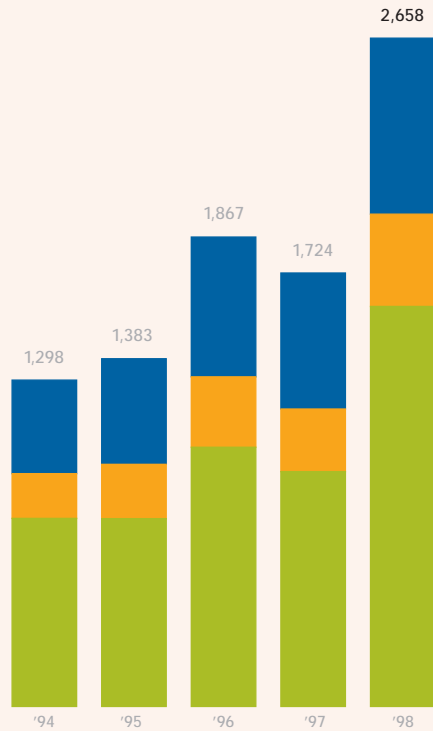
By streamlining procurement processes and taking them to the Web, IBM will **save \$240 million this year**.

In 1998, more than 14 million customer questions and problems were resolved via online support systems, **avoiding more than \$300 million** in call-center and field-specialist support costs.

investing in innovation

TOTAL IBM U.S. PATENTS

● Software ● Network Computing ● Other



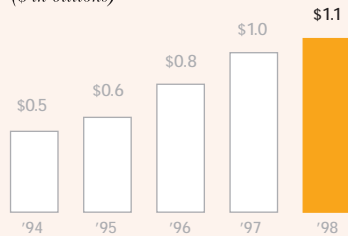
RESEARCH AND DEVELOPMENT INVESTMENTS

(\$ in billions)



INTELLECTUAL PROPERTY AND LICENSING ROYALTIES

(\$ in billions)



RESEARCH LABORATORIES

Three new laboratories were opened in the past five years.



reengineering IBM

\$9.5 BILLION
IN SAVINGS

Since 1993, IBM's reengineering efforts have generated \$9.5 billion in overall savings.

FROM **4** YEARS
TO **16** MONTHS

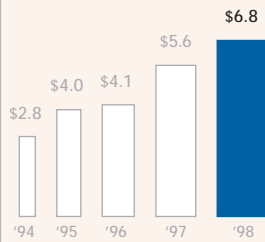
Hardware development cycle time has been reduced from 4 years to 16 months, and for some products, it's as fast as 6 months.

NEARLY **1/3** LESS

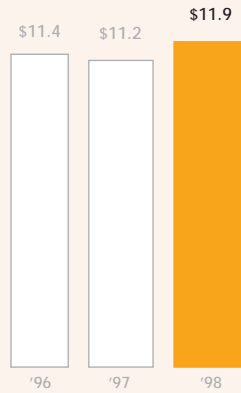
Since 1993, IBM's internal information technology expenses have been reduced by nearly a third.

engines of growth

TOTAL OEM HARDWARE REVENUE (*\$ in billions*)

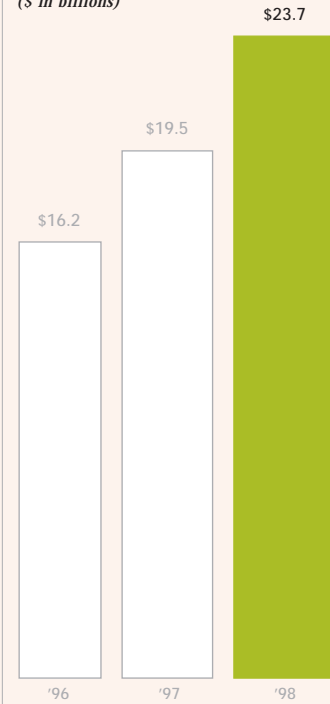


SOFTWARE REVENUE (*\$ in billions*)

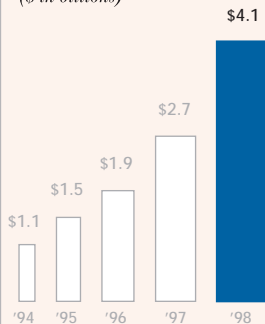


SERVICES REVENUE

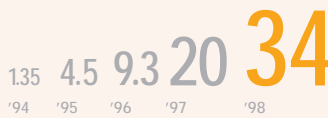
*Excluding maintenance.
(\$ in billions)*



OEM STORAGE REVENUE (*\$ in billions*)

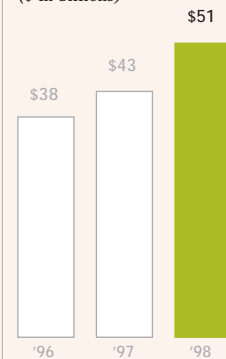


WORLDWIDE LOTUS NOTES SEATS (*in millions*)



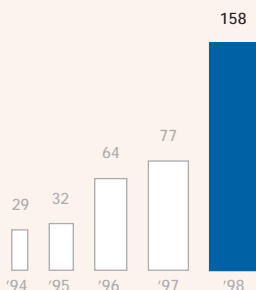
SERVICES BACKLOG

*End of year, excluding maintenance.
Backlog represents the total amount
of revenue remaining on signed contracts.
(\$ in billions)*



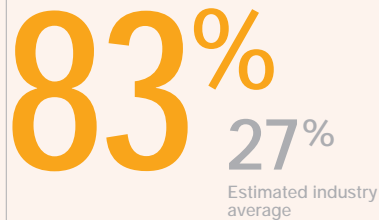
NUMBER OF OEM CUSTOMER DESIGNS IN ASICs

Since 1994, the number of customer designs in ASICs (Application-Specific Integrated Circuits) has grown at an annual rate of 52 percent.

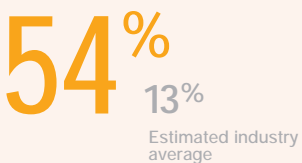


TIVOLI DISTRIBUTED SYSTEMS MANAGEMENT PERCENTAGE REVENUE GROWTH (1996-1998)

compound growth rate

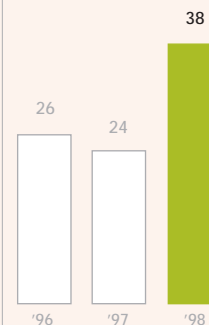


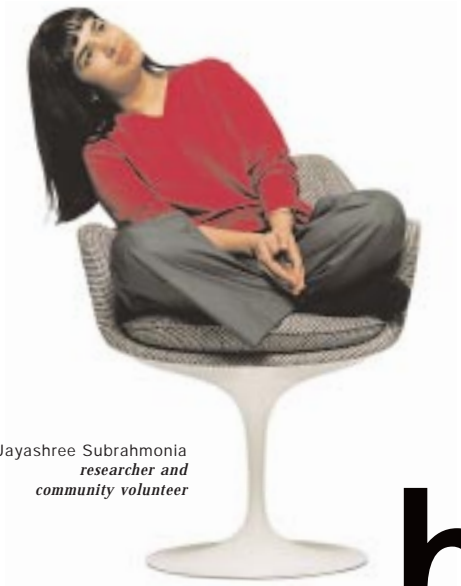
DISTRIBUTED DATABASE MANAGEMENT REVENUE GROWTH (1997-1998)



NUMBER OF SIGNED STRATEGIC OUTSOURCING DEALS VALUED AT MORE THAN \$100 MILLION

Excluding maintenance.





Jayashree Subrahmonia
*researcher and
community volunteer*

because we CAN



Chieko Asakawa
*member of the team behind Home Page Reader
technology for the blind*

AT IBM, we believe leadership is earned in multiple dimensions – marketplace performance, customer satisfaction, innovation, growth. But we also know that being a company that matters in the world means stepping up to the truly important problems we face as people.

For 16-year-old Nathaniel Marquez, the problem was how to solve thousands of painful puzzles he encountered every day in the form of written words. Extremely bright but severely dyslexic, Nathaniel struggled through elementary and middle school. Frustration turned to embarrassment and then resignation – until an elegant little speech recognition program called IBM ViaVoice created an outlet for his ideas, and allowed Nathaniel's creative thinking to become stories, essays and term papers.

Today, IBM technologies are at work meeting many special needs – of the blind and visually impaired, and the deaf and hard of hearing – for people inside our company and far beyond its borders. This belief – that our technologies can help all people contribute to their fullest potential – is one dimension of our definition of leadership. There are others.

In 1998, we increased the number of women executives in IBM by 18 percent; we increased the number of minority executives by more than 15 percent in the United States. Our commitment to workforce diversity was recognized last year when U.S. President Clinton presented Lou Gerstner with the first annual Ron Brown Award for Corporate Leadership.

IBM is perennially one of the world's most generous corporations. We dedicated \$116 million last year to benefit people in need. Individual employees contributed nearly \$44 million through matching grants, and donations to nonprofit organizations and educational institutions.

Our most visible commitment to the communities where we live and work is IBM's Reinventing Education initiative – which was recognized last year in a Harvard Business School case study as a model for corporate philanthropy in education. The program contributes \$35 million to 15 school districts and six states in the United States alone, and was expanded in 1998 to include projects in Brazil, British Columbia, India, Ireland, Italy and Vietnam. Last year, IBM and the United Way of America launched the KidSmart Early Learning Program, a project to install computer learning centers in more than 1,000 nonprofit preschool sites across the United States.

At the heart of IBM's philanthropic activities are IBM people, who last year volunteered 4 million hours of service to local causes – from tutoring youngsters in math and science to teaching PC skills to single parents. Our people understand that, in a world still beset by timeless and intractable problems, we are in a position to help. In fact, we are products of a corporate culture that was built to do just that.

company mission

At IBM, we strive to lead in the creation, development and manufacture of the industry's most advanced information technologies, including computer systems, software, networking systems, storage devices and microelectronics.

We translate these advanced technologies into value for our customers through our professional solutions and services businesses worldwide.



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Responsibility for the integrity and objectivity of the financial information presented in this Annual Report rests with IBM management. The accompanying financial statements have been prepared in conformity with generally accepted accounting principles, applying certain estimates and judgments as required.

IBM maintains an effective internal control structure. It consists, in part, of organizational arrangements with clearly defined lines of responsibility and delegation of authority, and comprehensive systems and control procedures. We believe this structure provides reasonable assurance that transactions are executed in accordance with management authorization, and that they are appropriately recorded, in order to permit preparation of financial statements in conformity with generally accepted accounting principles and to adequately safeguard, verify and maintain accountability of assets. An important element of the control environment is an ongoing internal audit program.

To assure the effective administration of internal control, we carefully select and train our employees, develop and disseminate written policies and procedures, provide appropriate communication channels, and foster an environment conducive to the effective functioning of controls. We believe that it is essential for the company to conduct its business affairs in accordance with the highest ethical standards, as set forth in the IBM Business Conduct Guidelines. These guidelines,


translated into numerous languages, are distributed to employees throughout the world, and reemphasized through internal programs to assure that they are understood and followed.

PricewaterhouseCoopers LLP, independent accountants, is retained to examine IBM's financial statements. Its accompanying report is based on an examination conducted in accordance with generally accepted auditing standards, including a review of the internal control structure and tests of accounting procedures and records.

The Audit Committee of the Board of Directors is composed solely of outside directors, and is responsible for recommending to the Board the independent accounting firm to be retained for the coming year, subject to stockholder approval. The Audit Committee meets periodically and privately with the independent accountants, with our internal auditors, as well as with IBM management, to review accounting, auditing, internal control structure and financial reporting matters.



Louis V. Gerstner, Jr.
Chairman of the Board and
Chief Executive Officer



Douglas L. Maine
Senior Vice President and
Chief Financial Officer

To the Stockholders and Board of Directors of International Business Machines Corporation:

In our opinion, the accompanying consolidated financial statements, appearing on pages 64 through 89, present fairly, in all material respects, the financial position of International Business Machines Corporation and its subsidiaries at December 31, 1998 and 1997, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.



PricewaterhouseCoopers LLP
1301 Avenue of the Americas
New York, NY 10019
January 21, 1999

Overview

IBM's financial results for 1998 demonstrated the value and strength of the company's portfolio of businesses. The company achieved good results despite a number of challenges throughout the year: weakness in Asia, ongoing softness in memory chip prices, continued pricing pressures across many of its product lines, product transitions in the Server segment and weakness in Latin America during the second half of the year. Despite all of these factors, the company achieved overall strong performance, especially from its Global Services segment, Software segment and hard disk drive (HDD) products of the Technology segment. The AS/400 product line, when viewed on a combined software and hardware basis, had good year-over-year performance. On a geographic basis, good results within North America and Europe were somewhat offset by weakness in Asia and Latin America.

The company's financial results showed improved revenue growth and a more balanced performance between gross profit and expense in the second half of the year versus the first half of 1998. This improved performance led to a diluted earnings per share growth of about 17 percent in the second half of the year, versus a decline of about 1 percent in the first half of the year when compared to the same periods of 1997.

The company reported revenue of \$81.7 billion—a record for the fourth consecutive year; while net income of \$6.3 billion yielded a record \$6.57 earnings per share of common stock—assuming dilution. The company funded investments of approximately \$20 billion in capital expenditures, research and development, strategic acquisitions and repurchases of common stock.

Challenges

While good progress was made in 1998, there are a number of uncertainties facing the company in 1999: the continued weak economies in Asia and Latin America, continued price pressure in the information technology industry, particularly within the fiercely competitive Personal Systems segment and the microelectronics unit of the Technology segment, and how the "Year 2000 issue" will affect customer purchases. The company's focus in 1999 will be to increase revenue with particular emphasis on addressing customers' needs to build integrated e-business solutions through the use of the company's hardware, services, software and technology. In addition, the company plans to continue to invest judiciously, reduce infrastructure and optimize the deployment of the company's employees and resources to maintain or improve its pre-tax profits.

Forward-looking and Cautionary Statements

Certain statements contained in this Annual Report may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve a number of risks, uncertainties and other factors that could cause actual results to differ materially, as discussed more fully elsewhere in this Annual Report and in the company's filings with the Securities and Exchange Commission, including the company's 1998 Form 10-K to be filed on or about March 26, 1999.

Results of Operations

(Dollars in millions except per share amounts)

	1998	1997	1996
Revenue	\$ 81,667	\$ 78,508	\$ 75,947
Cost	50,795	47,899	45,408
Gross profit	30,872	30,609	30,539
Gross profit margin	37.8%	39.0%	40.2%
Total expense	21,832	21,582	21,952
Income before			
income taxes	\$ 9,040	\$ 9,027	\$ 8,587
Net income	\$ 6,328	\$ 6,093	\$ 5,429
Earnings per share of			
common stock—basic	\$ 6.75	\$ 6.18	\$ 5.12
Earnings per share of			
common stock—			
assuming dilution	\$ 6.57	\$ 6.01	\$ 5.01

Revenue in 1998 grew 4.0 percent as reported and 6.2 percent when currency impacts are removed. This increase was primarily driven by growth in the Global Services segment, HDD storage products of the Technology segment, and middleware software offerings including those from Tivoli Systems, Inc. (Tivoli) of the Software segment.

The following table provides the company's percentage of revenue by segment and illustrates the continuing shift toward a greater percentage of the company's revenue being derived from the Global Services and Software segments.

	1998	1997	1996
Hardware segments	43.4%	46.7%	48.2%
Global Services segment	35.4	32.1	29.4
Software segment	14.5	14.2	15.0
Global Financing segment	3.5	3.6	4.0
Enterprise Investments			
segment/Other	3.2	3.4	3.4
Total	100.0%	100.0%	100.0%

The overall gross profit margin at 37.8 percent decreased 1.2 points from 1997, following a 1.2 point decrease in 1997 versus 1996. The declines were primarily the result of the company's continued shift to global services in 1998 and 1997. The Global Services segment has a lower gross profit margin than the company's Server segment (S/390, AS/400 and RS/6000), which has been declining as a percentage of total revenue over the past three years.

The 1998 revenue from the United States was \$35.3 billion, an increase of 8.1 percent from 1997. Revenue from Europe/Middle East/Africa was \$26.0 billion, up 8.6 percent (up about 9 percent in constant currency). Asia Pacific revenue fell 9.4 percent (down about 1 percent in constant currency) to \$13.8 billion, while revenue from Latin America was \$3.3 billion, a decline of 9.2 percent (down about 7 percent in constant currency) versus 1997. Revenue from Canada was \$3.3 billion, an increase of 6.8 percent (up about 14 percent in constant currency) compared to 1997.

Information about the company's operating segments can be found in note Y, "Segment Information," on pages 84 through 89. This note provides additional information, including a description of the products and services of each segment, as well as financial data pertaining to each segment.

The following discussion is based on the Consolidated Financial Statements found on pages 64 through 68, which reflect, in all material respects, the company's segment results on an external basis.

Hardware Segments

(Dollars in millions)	1998	1997	1996
Revenue	\$ 35,419	\$ 36,630	\$ 36,634
Cost	24,214	23,473	22,888
Gross profit	\$ 11,205	\$ 13,157	\$ 13,746
Gross profit margin	31.6%	35.9%	37.5%

Revenue from Hardware segments decreased 3.3 percent (down about 2 percent in constant currency) from 1997, after being essentially flat in 1997 versus 1996. Gross profit dollars from Hardware segments declined 14.8 percent from 1997, following a decrease of 4.3 percent in 1997 from 1996.

Technology segment revenue increased 7.3 percent in 1998 versus 1997, following an increase of 8.2 percent in 1997 compared to 1996. The increases were driven by continued strong growth in HDD storage products, which are primarily sold to Original Equipment Manufacturers (OEMs) for use in their product offerings, storage tape products, and growth in custom logic products. These increases were partially offset by

lower dynamic random access memory (DRAM) revenue due to the continued industry-wide pricing pressures and lower revenue from high-end storage products. The company continues to evaluate various alternatives to mitigate the impact of memory price pressures on the results of the company. These alternatives include, among other actions, realigning alliance structures, rebalancing sources of supply and redirecting product focus.

Server segment revenue decreased 5.9 percent in 1998 from 1997, following a decrease of 7.7 percent in 1997 versus 1996. The declines were driven by lower revenue from S/390, AS/400 and RS/6000. While S/390 revenue declined, total delivery of computing power increased over 60 percent as measured in MIPS (millions of instructions per second) versus last year. AS/400 and RS/6000 were impacted by the effect of product transitions late in 1998, as well as anticipation by customers of early 1999 product announcements.

Personal Systems segment revenue declined 10.9 percent in 1998 from 1997, following an increase of 3.3 percent in 1997 versus 1996. The decline in 1998 versus 1997 was driven by lower revenue from both commercial and consumer personal computers. Although Personal Systems segment revenue declined for the full year, the second half of 1998 showed improved performance when compared to the first half of the year. The increase in revenue in 1997 over 1996 was driven by higher commercial personal computer revenue and increased general-purpose display revenue.

The decrease in the 1998 Hardware segments' gross profit dollars was driven primarily by lower margins associated with Personal Systems segment products. This was a result of severe price reductions, partially offset by cost improvements. In addition, gross profit dollars for the Technology segment were lower due to the year-to-year price reductions in DRAMs. The decrease in gross profit margin over the periods continues to be driven by the shift in the company's revenue to lower gross profit products, such as personal computers, OEM semiconductors and HDDs, as well as price pressures. The overall Hardware segments' gross profit dollars and margin continue to be adversely impacted by pricing pressures across most products.

Global Services Segment

(Dollars in millions)	1998	1997	1996
Revenue	\$ 28,916	\$ 25,166	\$ 22,310
Cost	21,125	18,464	16,270
Gross profit	\$ 7,791	\$ 6,702	\$ 6,040
Gross profit margin	26.9%	26.6%	27.1%

The Global Services segment revenue increased 14.9 percent in 1998 (up about 18 percent in constant currency) from 1997 and 12.8 percent in 1997 over 1996. The increases were driven by all major categories of services. Strategic outsourcing was a major contributor to the growth. Strategic outsourcing is the management of all or part of our customer's business processes, technology operations, network operations and data. The company's IT consulting and systems integration offerings also had strong growth. Systems integration services assist companies to bridge the gap between current capabilities and future business requirements by modifying their existing applications and integrating new ones.

Another category of service offerings which demonstrated significant growth in 1998 was product support services. These services identify systems-related requirements and determine more efficient solutions. The major offering categories in this area are hardware and software support, business recovery services, systems management and networking services, and site and connectivity services.

E-business spans many of the Global Services segment offerings already mentioned and played a key role in its 1998 growth. The company's e-business services offerings include: e-business strategy and planning; e-commerce services for Web selling, e-payments, e-procurement, security and privacy; e-business enablement services involving applications, information use and messaging; learning services such as distributed learning; and hosted business applications such as network-delivered applications, Web hosting and Web infrastructure outsourcing.

In 1998, the company signed services contracts worth \$33 billion, increasing the backlog to \$51 billion. The company continued to meet the growing demand for its services by hiring about 18,000 employees in 1998 and over 15,000 employees in each of 1997 and 1996.

Revenue and profitability increases in these services categories were partially offset by lower revenue associated with maintenance offerings. The maintenance portion of the Global Services segment continues to be affected by price reductions on maintenance offerings. The focus on stabilizing maintenance revenues led to identification of many new opportunities in this business. While maintenance gross profit dollars are declining as a result of lower revenue, the decrease was partially offset by cost efficiencies achieved in 1998. These productivity improvements have sustained the gross profit margin despite competitive pressures and overall declining revenue. The effect of lower maintenance revenues was to reduce the overall Global Services profit margins, but this impact was more than offset by increases in services profitability and the sustained margins of the maintenance business.

Software Segment

(Dollars in millions)	1998	1997	1996
Revenue	\$ 11,863	\$ 11,164	\$ 11,426
Cost	2,260	2,785	2,946
Gross profit	\$ 9,603	\$ 8,379	\$ 8,480
Gross profit margin	80.9%	75.1%	74.2%

Software segment revenue increased 6.3 percent in 1998 (up about 9 percent in constant currency) from 1997, following a decline of 2.3 percent from 1996. The revenue increase in 1998 was driven by growth in the company's middleware products consisting of data management, transaction processing, Tivoli systems management, and messaging and collaboration. In addition, operating systems software grew slightly year over year primarily as a result of strong AS/400 revenue. The decrease in 1997 versus 1996 of 2.3 percent was a result of lower operating system revenue associated with S/390 products. This decrease was partially offset by increased revenue for middleware products, especially systems management software from Tivoli.

Software segment gross profit dollars increased 14.6 percent in 1998 from 1997, following a decrease of 1.2 percent in 1997 from 1996. The improvement in gross profit dollars was the result of less amortization cost of previously deferred development spending. This is the result of more software spending being expensed in the period incurred, and less being capitalized in relation to historical levels. In 1997, this improvement was more than offset by the decline in revenue versus 1996.

Global Financing Segment

(Dollars in millions)	1998	1997	1996
Revenue	\$ 2,877	\$ 2,806	\$ 3,054
Cost	1,494	1,448	1,481
Gross profit	\$ 1,383	\$ 1,358	\$ 1,573
Gross profit margin	48.1%	48.4%	51.5%

Global Financing segment revenue increased 2.5 percent in 1998 (up about 5 percent in constant currency) from 1997, following a decrease of 8.1 percent in 1997 versus 1996. The revenue increase in 1998 over 1997 was due to improved used equipment sales and growth in software and services financing, offset by a decline in working capital financing and decreased interest income. The revenue decline in 1997 versus 1996 was attributable to lower used equipment sales and decreases in both working capital financing and interest income.

Gross profit dollars increased 1.8 percent in 1998 versus 1997, following a decrease of 13.7 percent in 1997 from 1996. The increase in 1998 versus 1997 was primarily due to increased revenue and a higher gross profit margin in the U.S. markets. The decrease in 1997 versus 1996 reflects a trend towards financing a greater volume of low-end products and faster

growth in the more competitive U.S. markets. See note Y, "Segment Information," on pages 84 through 89 for more detailed information on the Global Financing segment.

Enterprise Investments Segment/Other			
(Dollars in millions)	1998	1997	1996
Revenue	\$ 2,592	\$ 2,742	\$ 2,523
Cost	1,702	1,729	1,823
Gross profit	\$ 890	\$ 1,013	\$ 700
Gross profit margin	34.3%	36.9%	27.7%

Information, including a description of the company's Enterprise Investment segment, can be found in note Y, "Segment Information," on pages 84 through 89.

The revenue from the Enterprise Investments segment/Other decreased 5.5 percent (down about 3 percent in constant currency) from 1997, following an increase of 8.7 percent in 1997 from 1996. The decrease was primarily a result of lower software revenue, partially offset by higher revenue from point-of-sale terminals. The increase in 1997 versus 1996 was driven by higher software and point-of-sale terminal revenue. The gross profit dollars from the Enterprise Investments segment/Other decreased 12.1 percent in 1998 versus 1997, following an increase of 44.7 percent in 1997 versus 1996. The decline in 1998 gross profit dollars was primarily driven by the lower software revenue versus 1997, while the increase in 1997 versus 1996 was due to lower software costs.

Operating Expenses			
(Dollars in millions)	1998	1997	1996
Selling, general and administrative	\$ 16,662	\$ 16,634	\$ 16,854
Percentage of revenue	20.4%	21.2%	22.2%
Research, development and engineering	\$ 5,046	\$ 4,877	\$ 5,089
Percentage of revenue	6.2%	6.2%	6.7%

Selling, general and administrative (SG&A) expense was essentially flat in 1998 versus 1997 and declined 1.3 percent in 1997 from 1996. The company continued its focus on reducing infrastructure costs with particular emphasis on expenses not related to revenue, e.g., non-customer travel and contracted services, while reallocating its resources to allow for investment in growth segments of the business. These actions yielded a 0.8 percentage point improvement in the expense-to-revenue ratio in 1998 and a 1.0 percentage point improvement in 1997.

The company continues to focus on productivity, expense controls and prioritization of spending in order to improve its expense-to-revenue level.

Research, development and engineering expense increased 3.5 percent in 1998 from 1997, following a decrease of 4.2 percent

in 1997 from 1996. The increase reflects the company's continued investments in high-growth opportunities like e-business, Java, Tivoli systems management and HDD products, as well as the impact of additional expenses associated with new acquisitions. The decline in 1997 versus 1996 was a result of \$435 million of purchased in-process research and development being recorded in 1996 for the Tivoli and Object Technology International, Inc. acquisitions.

The company's ongoing research and development efforts have resulted in the company being granted 2,658 patents in 1998, placing it number one in patents granted in the U.S. for the sixth consecutive year. The application of these technological advances has enabled the company to transform this research and development into new products. Examples of these efforts are numerous patents directly related to two major chip breakthroughs announced last year, silicon germanium and silicon-on-insulator. Both technologies will be crucial in the industry's development of a new class of "pervasive computing" devices, handheld and embedded products such as smart phones and internet appliances that business professionals and consumers will rely on for easy access to e-business data and services. In addition, the use of copper in place of aluminum in the making of integrated circuits was introduced into new products in 1998.

On a constant currency basis, SG&A expense increased approximately 2.1 percent in 1998 versus 1997, and Research, development and engineering expense increased approximately 3.9 percent.

See note Y, "Segment Information," on pages 84 through 89 for additional information regarding each segment's pre-tax income, as well as the methodologies employed by the company to allocate shared expenses to the segments.

Provision for Income Taxes

The provision for income taxes resulted in an effective tax rate of 30 percent for 1998, as compared to the 1997 effective tax rate of 33 percent and a 1996 effective tax rate of 37 percent. Adjusting for purchased in-process research and development which had no corresponding tax effect, the 1996 effective tax rate would have been 35 percent. The reduction in the 1998 and 1997 tax rate reflects the company's continued expansion into markets with lower effective tax rates.

The company accounts for income taxes under Statement of Financial Accounting Standards (SFAS) 109, "Accounting for Income Taxes," which provides that a valuation allowance should be recognized to reduce the deferred tax asset to the amount that is more likely than not to be realized. In assessing the likelihood of realization, management considered estimates of future taxable income, which are based primarily on recent financial performance.

Fourth Quarter

For the quarter ended December 31, 1998, the company had revenue of \$25.1 billion, an increase of 5.9 percent (up about 5 percent in constant currency) over the same period of 1997. Net income in the fourth quarter was \$2.3 billion (\$2.47 per common share—assuming dilution), compared with net income of \$2.1 billion (\$2.11 per common share—assuming dilution) in the fourth quarter of 1997.

Fourth quarter revenue from the United States was \$10.3 billion, an increase of 8.0 percent from the same period of 1997. Revenue from Europe/Middle East/Africa was \$8.7 billion, up 12.5 percent. Revenue from Canada was \$996 million, up 8.3 percent. Asia Pacific revenue fell 3.4 percent to \$4.2 billion, while revenue from Latin America fell 21.7 percent to \$929 million.

Excluding the effects of currency translation, Europe/Middle East/Africa grew 9 percent, Canada increased 12 percent, Asia Pacific declined 6 percent and Latin America declined 19 percent versus the fourth quarter of 1997.

The Hardware segments revenue was essentially flat with the year-ago period at \$11.4 billion. Declines were driven by the Server segment, due to lower S/390, AS/400 and RS/6000 revenue in 1998 versus 1997. Shipments of S/390 computing power increased by approximately 60 percent, as measured in MIPS, though S/390 revenue declined. These decreases were offset by higher revenue from the Technology and Personal Systems segments. The Technology segment increases were driven by higher HDD revenue. The Personal Systems segment increases were due to higher commercial personal computer revenue, partially offset by lower consumer personal computer revenue.

Global Services segment revenue grew 14.1 percent versus the fourth quarter of 1997. Global Services revenue grew by more than \$1 billion compared to last year's fourth quarter, and the company's services unit signed more than \$9 billion in new services contracts in the quarter. Maintenance offerings revenue continued to decline when compared to the fourth quarter of 1997.

Software segment revenue increased 9.1 percent versus the fourth quarter of 1997. The increase was driven primarily by strength in database, transaction processing and Tivoli systems management products.

Global Financing segment revenue increased 2.5 percent versus the fourth quarter of 1997, and the Enterprise Investments segment/Other revenue increased 5.6 percent compared with 1997's fourth quarter.

The company's overall gross profit margin in the fourth quarter was 39.0 percent, compared to 40.1 percent in the year-earlier period.

Total fourth-quarter 1998 expenses were essentially flat year over year. The expense-to-revenue ratio in the fourth quarter of 1998 was 25.9 percent compared to 27.4 percent in the year-earlier period.

The company's tax rate was 28.9 percent in the fourth quarter, compared to 30.5 percent in the fourth quarter of 1997. The 1998 fourth quarter tax rate reflects the net effect of the company's transfer of certain intellectual property rights to several subsidiaries and the related valuation allowance impacts. See note Q, "Taxes," on pages 77 and 78 for additional information.

The company spent approximately \$1.6 billion on share repurchases in the fourth quarter. The average number of shares outstanding in the fourth quarter of 1998 was 919.8 million, compared to 964.8 million in the year-earlier period. The average number of shares outstanding for purposes of calculating diluted earnings was 947.2 million in the fourth quarter of 1998 versus 990.7 million in the fourth quarter of 1997.

Financial Condition

The company continued to make significant investments during 1998 to fund future growth and increase shareholder value, expending \$5.6 billion for research, development and engineering, \$4.8 billion for plant and other property, including machines used in managed operations services offerings, \$1.7 billion for machines on operating leases with customers, \$0.7 billion for strategic acquisitions and \$6.9 billion for the repurchase of the company's common shares. The company had \$5.8 billion in cash, cash equivalents and marketable securities on hand at December 31, 1998.

The company has access to global funding sources. During 1998, the company issued debt in a variety of geographies to a diverse set of investors. Significant funding was issued in the United States, Japan and Europe. Funding was obtained across the range of debt maturities, from short-term commercial paper to long-term debt. More information about company debt is provided in note K, "Debt," on page 73.

In December 1993, the company entered into a \$10 billion committed global credit facility to enhance the liquidity of funds. This facility was amended in February 1997, and extended to February 2002. As of December 31, 1998, \$8.8 billion was unused and available.

The company had an outstanding balance at December 31, 1998 and 1997, of \$0.9 billion in assets under management from the securitization of loans, leases and trade receivables. For additional information see note J, "Sale and Securitization of Receivables," on page 73.

The major rating agencies have continued their review of the company's financial condition. In February 1998, Standard and

Poor's upgraded its credit ratings for the company and its rated subsidiaries' senior long-term debt to A+ from A, and on IBM's preferred stock to A from A-. They also affirmed the commercial paper rating at A-1.

Moody's Investors Service rates the senior long-term debt of the company and its rated subsidiaries as A1, the commercial paper as Prime-1, and the company's preferred stock as "a1."

Fitch Investors Service rates the company and its rated subsidiaries' senior long-term debt as AA-, commercial paper as F-1+, and preferred stock as A+.

Duff & Phelps rates the company and its rated subsidiaries' senior long-term debt as A+, commercial paper as Duff 1, and the company's preferred stock as A.

Cash Flows

The company's cash flows from operating, investing and financing activities, as prescribed by generally accepted accounting principles and reflected in the Consolidated Statement of Cash Flows on page 68, are summarized in the following table:

(Dollars in millions)	1998	1997	1996
Net cash provided from (used in):			
Operating activities	\$ 9,273	\$ 8,865	\$ 10,275
Investing activities	(6,131)	(6,155)	(5,723)
Financing activities	(4,993)	(3,090)	(3,952)
Effect of exchange rate changes on cash and cash equivalents	120	(201)	(172)
Net change in cash and cash equivalents	\$ (1,731)	\$ (581)	\$ 428

WORKING CAPITAL

(Dollars in millions)	1998	1997
At December 31:		
Current assets	\$ 42,360	\$ 40,418
Current liabilities	36,827	33,507
Working capital	\$ 5,533	\$ 6,911
Current ratio	1.15:1	1.21:1

Current assets increased \$1.9 billion, driven primarily by increases in accounts receivable relative to strong year-end global financing volumes and in prepaid expenses due to increases in net deferred tax assets. The company ended 1998 with inventories of \$5.2 billion, near last year's levels which were the lowest since 1983, due to continued focus on inventory management process improvements, notably in the Personal Systems segment. These improvements have enabled the company's inventory turn rate to increase from 4.9 in 1997 to 5.3 in 1998.

Current liabilities increased \$3.3 billion from year-end 1997 with increases of \$0.7 billion in taxes payable, \$0.7 billion in short-term debt and \$1.9 billion in other current liabilities (increases in accounts payable (\$1.0 billion), compensation and benefits (\$0.5 billion), and deferred income (\$0.7 billion), and a \$0.3 billion decrease in other accrued expenses and liabilities). The increase in taxes payable primarily reflects improvements in the company's operating results in certain geographies. Short-term debt essentially increased to support the growth of global financing assets. The increase in other current liabilities was primarily attributable to the effect of currency rate translation (\$1.0 billion) on non-U.S. balances, and by considerable year-end business activity relative to deferred income, mainly advanced billings for software.

Investments

The company's investments for plant, rental machines and other property were \$6.5 billion for 1998, a decrease of \$0.3 billion from 1997. The company continues to invest significantly in its rapidly growing services business, principally in the management of customers' information technology, and in manufacturing capacity for HDDs and microelectronics.

In addition to software development expenses included in Research, development and engineering, the company capitalized \$0.3 billion of software costs during both 1998 and 1997. Amortization of capitalized software costs amounted to \$0.5 billion for 1998, a decrease of \$0.5 billion from 1997. This decrease in the level of costs amortized is a result of more software spending being expensed in the period incurred, and less being capitalized in relation to historical levels.

Investments and sundry assets were \$23.5 billion at the end of 1998, an increase of \$1.6 billion from 1997, primarily the result of increases in prepaid pension assets and non-current customer loan receivables. See note H, "Investments and Sundry Assets," on page 72 for additional information.

DEBT AND EQUITY

(Dollars in millions)	1998	1997
Non-global financing debt	\$ 1,659	\$ 3,102
Global financing debt	27,754	23,824
Total debt	\$ 29,413	\$ 26,926
Stockholders' equity	\$ 19,433	\$ 19,816
Debt/capitalization	60.2%	57.6%
EBITDA/interest expense	8x	8x
Non-global financing:		
Debt/capitalization	9.9%	16.1%
EBITDA/interest expense	15x	14x
Global financing debt/equity	6.5:1	6.5:1

Total debt increased \$2.5 billion from year-end 1997, driven by an increase of \$3.9 billion in debt to support the growth in global financing assets, offset by a \$1.4 billion decrease in debt not related to the Global Financing segment.

Stockholders' equity declined \$0.4 billion to \$19.4 billion at December 31, 1998. The company's ongoing stock repurchasing program (see note O, "Stockholders' Equity Activity," on pages 76 and 77) basically offset the \$6.3 billion of net income for the year.

Non-global financing earnings before interest and taxes plus depreciation and amortization (EBITDA) to non-global financing interest expense, adjusted for future gross minimum rental commitments, was 15x and 14x in 1998 and 1997, respectively. While the company does not calculate EBITDA on a segment basis, it is a useful indicator of the company's ability to service its debt.

Currency Rate Fluctuations

The company's results are affected by changes in the relative values of non-U.S. currencies to the U.S. dollar. At December 31, 1998, currency changes resulted in assets and liabilities denominated in local currencies being translated into more dollars. The currency rate changes also resulted in an unfavorable impact on revenue of approximately 2 percent, 5 percent and 3 percent, respectively, in 1998, 1997 and 1996.

In high-inflation environments, translation adjustments are reflected in period income, as required by SFAS 52, "Foreign Currency Translation." Generally, the company limits currency risk in these countries by linking prices and contracts to U.S. dollars, by financing operations locally and through foreign currency hedge contracts.

The company uses a variety of financial hedging instruments to limit specific currency risks related to global financing transactions and the repatriation of dividends and royalties. Further discussion on currency and hedging appears in note M, "Financial Instruments," on pages 74 and 75.

Market Risk

In the normal course of business, the financial position of the company is routinely subjected to a variety of risks. In addition to the market risk associated with interest rate and currency movements on outstanding debt and non-U.S. dollar denominated assets and liabilities, other examples of risk include collectibility of accounts receivable and recoverability of residual values on leased assets.

The company regularly assesses these risks and has established policies and business practices to protect against the adverse effects of these and other potential exposures. As a result, the company does not anticipate any material losses in these areas.

The company's debt in support of the global financing business and the geographic breadth of the company's operations contain an element of market risk from changes in interest and currency rates. The company manages this risk, in part, through the use of a variety of financial instruments including derivatives, as explained in note M, "Financial Instruments," on pages 74 and 75.

For purposes of specific risk analysis, the company uses sensitivity analysis to determine the impact that market risk exposures may have on the fair values of the company's debt and other financial instruments.

The financial instruments included in the sensitivity analysis consist of all of the company's cash and cash equivalents, marketable securities, long-term non-lease receivables, investments, long-term and short-term debt and all derivative financial instruments. Interest rate swaps, interest rate options, foreign currency swaps, forward contracts and foreign currency option contracts constitute the company's portfolio of derivative financial instruments.

To perform sensitivity analysis, the company assesses the risk of loss in fair values from the impact of hypothetical changes in interest rates and foreign currency exchange rates on market sensitive instruments. The market values for interest and foreign currency exchange risk are computed based on the present value of future cash flows as impacted by the changes in rates attributable to the market risk being measured. The discount rates used for the present value computations were selected based on market interest and foreign currency exchange rates in effect at December 31, 1998 and 1997. The differences in this comparison are the hypothetical gains or losses associated with each type of risk.

Information provided by the model used does not necessarily represent the actual changes in fair value that the company would incur under normal market conditions because, of necessity, all variables other than the specific market risk factor are held constant. In addition, the model is constrained by the fact that certain items are specifically excluded from the analysis while the financial instruments relating to the financing or hedging of those items are included by definition. Excluded items include leased assets, forecasted foreign currency cash flows, and the company's net investment in foreign operations. As a consequence, reported changes in the values of some financial instruments impacting the results of the sensitivity analysis are not matched with the offsetting changes in the values of the items that those instruments are designed to finance or hedge.

The results of the sensitivity analysis at December 31, 1998 and December 31, 1997, are as follows:

Interest Rate Risk: As of December 31, 1998, a 10 percent decrease in the levels of interest rates with all other variables held constant would result in a decrease in the fair value of the company's financial instruments of \$396 million, as compared to \$369 million as of December 31, 1997. Conversely, as of December 31, 1998, a 10 percent increase in the levels of interest rates with all other variables held constant would result in an increase in the fair value of the company's financial instruments of \$354 million, as compared to \$341 million as of December 31, 1997. Changes in the relative sensitivity of the fair value of the company's financial instrument portfolio for these theoretical changes in the level of interest rates are primarily driven by changes in the company's debt maturity and interest rate profile and amount. In 1998 versus 1997, the reported change in interest rate sensitivity is primarily due to an overall increase in the amount of debt outstanding.

Foreign Currency Exchange Rate Risk: As of December 31, 1998, a 10 percent movement in the levels of foreign currency exchange rates against the U.S. dollar with all other variables held constant would result in a decrease in the fair value of the company's financial instruments of \$1,317 million or an increase in the fair value of the company's financial instruments of \$1,535 million, as compared to a decrease of \$809 million or increase of \$981 million as of December 31, 1997. The change in the relative sensitivity of the fair market value of the company's financial instrument portfolio to the level of foreign currency exchange rates is primarily driven by an increase in the use of foreign currency swaps and other finan-

cial instruments designed to hedge the company's net foreign investments in accordance with the company's established risk management practices. As the impact of offsetting changes in the fair market value of the company's net foreign investments is not included in the sensitivity model, these results are not indicative of an increase in the company's actual exposure to foreign currency exchange rate risk.

Financing Risks

Global financing is an integral part of the company's total worldwide offerings. Inherent in global financing are certain risks, including credit, interest rate, currency and residual value. The company manages credit risk through comprehensive credit evaluations and pricing practices. To manage the risks associated with an uncertain interest rate environment, the company pursues a funding strategy of substantially matching the terms of its debt with the terms of its assets. Currency risks are managed by denominating liabilities in the same currency as the assets.

Residual value risk is managed by developing projections of future equipment values at lease inception, reevaluating these projections periodically, and effectively deploying remarketing capabilities to recover residual values and potentially earn a profit. Remarketing efforts have consistently generated profits. The following table depicts an approximation of the unguaranteed residual value maturities for the company's sales-type leases, as well as a projection of the remaining net book value of machines on operating leases at the end of the lease terms as of December 31, 1996, 1997 and 1998. The following table excludes approximately \$52 million of estimated residual value associated with non-information technology equipment.

(Dollars in millions)	Total			Run Out of 1998 Balance			
	1996	1997	1998	1999	2000	2001	2002 and beyond
Sales-type leases	\$ 471	\$ 563	\$ 685	\$ 167	\$ 261	\$ 226	\$ 31
Operating leases	480	701	731	291	285	139	16
Total residual value	\$ 951	\$ 1,264	\$ 1,416	\$ 458	\$ 546	\$ 365	\$ 47

Divestitures/Acquisitions

In December 1998, the company and AT&T announced that AT&T will acquire IBM's Global Network business for \$5 billion in cash. In addition, the two companies have agreed to enter into outsourcing contracts with each other. The company will outsource a significant portion of its global networking needs to AT&T. AT&T will outsource certain applications processing and data center management operations to the company. About 5,000 IBM employees will join AT&T as part of the acquisition and more than 2,000 AT&T employees will be offered positions with the company.

The company believes that this transaction, in its entirety, will not have a significant impact on the company's 1999 ongoing operational results. The company and AT&T expect the acquisition to conclude in the various geographies throughout 1999, following clearance by U.S. regulatory authorities and certain regulatory authorities outside the U.S.

The company awarded AT&T Solutions a contract valued at \$5 billion over five years for a significant portion of the company's own global networking needs, making it the single

largest networking outsourcing contract ever awarded. In addition, AT&T and the Global Services unit have reached an agreement for services valued at about \$4 billion over the next 10 years. As part of the agreement, the company will manage AT&T's applications processing (including billing, service-order processing, scheduling of installation and maintenance) for customers of AT&T's business long-distance services. In addition, the company will assume management of AT&T data processing centers, which operate corporate information systems such as accounts payable and receivable and employee payroll and benefits.

In January 1998, the company acquired Software Artistry, Inc., a leading provider of both consolidated service desk and customer relationship management solutions for distributed enterprise environments. In March 1998, the company acquired CommQuest Technologies, Inc., a company that designs and markets advanced semiconductors for wireless communications applications, such as cellular phones and satellite communications.

On April 16, 1997, the company purchased a majority interest in NetObjects, a leading provider of website development tools for designers and intranet developers. In September 1997, the company acquired the 30 percent equity interest held by Sears in Advantis, the U.S. network services arm of the IBM Global Network. Advantis is now 100 percent owned by the company. In December 1997, the company acquired Eastman Kodak's share of Technology Service Solutions (TSS), which was formed in 1994 by the company and Eastman Kodak. TSS is now a wholly owned subsidiary of the company, offering comprehensive services solutions to its customers. In December 1997, the company acquired Unison Software, Inc., a leading developer of workload management software.

On March 1, 1996, the company acquired all outstanding shares of Tivoli for approximately \$800 million (\$716 million in net cash). The company engaged a nationally recognized, independent appraisal firm to express an opinion on the fair market value of the assets of the acquisition to serve as a basis for allocation of the purchase price to the various classes of assets. The company recorded \$280 million of goodwill, \$103 million of other assets and expensed \$417 million of purchased in-process research and development as a result of the appraisal.

In 1996, the acquisition of Object Technology International, Inc. for approximately \$50 million resulted in a valuation of purchased in-process research and development amounting to \$18 million, bringing the total amount of purchased in-process research and development in 1996, included in Research, development and engineering expense in the Consolidated Statement of Earnings, to \$435 million.

Employees

	1998	1997	1996	Percentage Changes	
				1998-97	1997-96
IBM/wholly owned subsidiaries	291,067	269,465	240,615	8.0	12.0
Less than wholly owned subsidiaries	21,704	20,751	28,033	4.6	(26.0)
Complementary	36,900	43,000	37,000	(14.2)	16.2

As of December 31, 1998, employees of the company and its wholly owned subsidiaries increased 21,602 over 1997, of which approximately 18,000 were in the Global Services segment. Increases were also significant in the Tivoli organization, as well as in the storage business, due to the addition of new manufacturing capacity in the company's emerging markets.

The increase in employees in the less than wholly owned subsidiaries over last year reflects continued growth in the company's Global Services segment, notably Australia and India. Entities in emerging geographic markets such as China increased as well. Partially offsetting the increase was a number of less than wholly owned subsidiaries that were divested during the year or converted to a wholly owned status.

The company's complementary workforce is an approximation of equivalent full-time employees hired under temporary, part-time and limited-term employment arrangements to meet specific business needs in a flexible and cost-effective manner.

Year 2000

The "Year 2000 issue" arises because many computer hardware and software systems use only two digits to represent the year. As a result, these systems and programs may not process dates beyond 1999, which may cause errors in information or systems failures. Assessments of the potential effects of the Year 2000 issues vary markedly among different companies, governments, consultants, economists and commentators, and it is not possible to predict what the actual impact may be. Given this uncertainty, the company recognizes the need to remain vigilant and is continuing its analysis, assessment, conversion and contingency planning for the various Year 2000 issues, across its business.

With respect to its internal systems, the potential Year 2000 impacts extend beyond the company's information technology systems to its manufacturing and development systems and physical facilities. The company has been addressing these issues using the same five-part methodology it recommends to its customers: (1) assessment and strategy; (2) detailed analysis and planning; (3) implementation; (4) maintaining readiness of converted systems; and (5) project office management. The company has completed most conversion and testing efforts, with extended system integration testing and contingency planning projects scheduled throughout 1999. The company estimates that at the conclusion of its various Year 2000 efforts, including conversion, testing and contingency planning, it will have spent a total of approximately \$575 million over a multi-year period. Although the company believes its efforts will be successful, any failure or delay could result in the disruption of business and in the company incurring substantial expense. To minimize any such potential impact, the company has initiated a global contingency planning effort designed to support critical business operations.

As part of its ordinary course product development efforts, the company's current product and service offerings have been designed by it to be Year 2000 ready. The Year 2000 readiness of the company's customers varies, and the company continues actively to encourage its customers to prepare their own systems, making available a broad array of product, service and educational offerings to assist them (see the IBM Year 2000 Home Page at <http://www.ibm.com/IBM/year2000/>). Efforts by customers to address Year 2000 issues may absorb

a substantial part of their information technology budgets in the near term, and customers may either delay or accelerate the deployment and implementation of new applications and systems. While this behavior may increase demand for certain of the company's products and services, including its Year 2000 offerings, it could also soften demand for other offerings or change customer buying practices from past trends. These events could affect the company's revenues or change its revenue patterns.

The company is also continuing its assessment of the Year 2000 readiness of its key suppliers in an effort to establish that the company has adequate resources for required supplies and components. With respect to third-party products the company may remarket or provide with the company's offerings (such as third-party software pre-loaded on the company's personal computers), the company relies on its business partners and other third parties to be responsible for the Year 2000 readiness of their offerings. A failure of the company's suppliers, business partners and other third parties to address adequately their Year 2000 readiness could affect the company's business. As part of its contingency planning efforts, the company is identifying alternate sources or strategies where necessary if significant exposures are identified.

Further, some commentators believe that a significant amount of litigation will arise from Year 2000 issues. The company continues to believe that it has good defenses to any such claims brought against it.

Finally, the Year 2000 presents a number of other risks and uncertainties that could affect the company, including utilities and telecommunications failures, competition for personnel skilled in the resolution of Year 2000 issues, and the nature of government responses to Year 2000 issues, among others. While the company continues to believe that the Year 2000 matters discussed above will not have a material impact on its business, financial condition or results of operations, it remains uncertain whether or to what extent the company may be affected.

The Year 2000 statements set forth above are designated as "Year 2000 Readiness Disclosures" pursuant to the Year 2000 Information and Readiness Disclosure Act (P.L. 105-271).

CONSOLIDATED STATEMENT OF EARNINGS International Business Machines Corporation and Subsidiary Companies

(Dollars in millions except per share amounts)

For the year ended December 31:	Notes	1998	1997*	1996*
Revenue:				
Hardware segments		\$ 35,419	\$ 36,630	\$ 36,634
Global Services segment		28,916	25,166	22,310
Software segment		11,863	11,164	11,426
Global Financing segment		2,877	2,806	3,054
Enterprise Investments segment /Other		2,592	2,742	2,523
Total revenue		81,667	78,508	75,947
Cost:				
Hardware segments		24,214	23,473	22,888
Global Services segment		21,125	18,464	16,270
Software segment		2,260	2,785	2,946
Global Financing segment		1,494	1,448	1,481
Enterprise Investments segment /Other		1,702	1,729	1,823
Total cost		50,795	47,899	45,408
Gross profit		30,872	30,609	30,539
Operating expenses:				
Selling, general and administrative	R	16,662	16,634	16,854
Research, development and engineering	S	5,046	4,877	5,089
Total operating expenses		21,708	21,511	21,943
Operating income		9,164	9,098	8,596
Other income, principally interest		589	657	707
Interest expense	L	713	728	716
Income before income taxes		9,040	9,027	8,587
Provision for income taxes	Q	2,712	2,934	3,158
Net income		6,328	6,093	5,429
Preferred stock dividends		20	20	20
Net income applicable to common shareholders		\$ 6,308	\$ 6,073	\$ 5,409
Earnings per share of common stock—basic	T	\$ 6.75	\$ 6.18	\$ 5.12
Earnings per share of common stock—assuming dilution	T	\$ 6.57	\$ 6.01	\$ 5.01

Average number of common shares outstanding:

Basic: 1998–934,502,785; 1997–983,286,361; 1996–1,056,704,188

Assuming dilution: 1998–960,065,235; 1997–1,010,934,942; 1996–1,079,708,904

* Reclassified to conform to 1998 presentation.

The notes on pages 69 through 89 of the 1998 IBM Annual Report are an integral part of this statement.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION International Business Machines Corporation and Subsidiary Companies

(Dollars in millions)

At December 31:	Notes	1998	1997*
Assets			
Current assets:			
Cash and cash equivalents		\$ 5,375	\$ 7,106
Marketable securities	M	393	447
Notes and accounts receivable—trade, net of allowances		18,958	16,850
Sales-type leases receivable		6,510	5,720
Other accounts receivable		1,313	1,256
Inventories	F	5,200	5,139
Prepaid expenses and other current assets		4,611	3,900
Total current assets		42,360	40,418
Plant, rental machines and other property	G	44,870	42,133
Less: Accumulated depreciation		25,239	23,786
Plant, rental machines and other property—net		19,631	18,347
Software, less accumulated amortization (1998—\$12,516; 1997—\$12,610)		599	819
Investments and sundry assets	H	23,510	21,915
Total assets		\$ 86,100	\$ 81,499
Liabilities and Stockholders' Equity			
Current liabilities:			
Taxes	Q	\$ 3,125	\$ 2,381
Short-term debt	K & M	13,905	13,230
Accounts payable		6,252	5,215
Compensation and benefits		3,530	3,043
Deferred income		4,115	3,445
Other accrued expenses and liabilities		5,900	6,193
Total current liabilities		36,827	33,507
Long-term debt	K & M	15,508	13,696
Other liabilities	N	12,818	12,993
Deferred income taxes	Q	1,514	1,487
Total liabilities		66,667	61,683
Contingencies	P		
Stockholders' equity:	O		
Preferred stock, par value \$.01 per share		247	252
Shares authorized: 150,000,000			
Shares issued (1998—2,546,011; 1997—2,597,261)			
Common stock, par value \$.50 per share		10,121	8,601
Shares authorized: 1,875,000,000			
Shares issued (1998—926,869,052; 1997—969,015,351)			
Retained earnings		10,141	11,010
Treasury stock, at cost (shares: 1998—962,146; 1997—923,955)		(133)	(86)
Employee benefits trust (shares: 1998—10,000,000; 1997—10,000,000)		(1,854)	(860)
Accumulated gains and losses not affecting retained earnings		911	899
Total stockholders' equity		19,433	19,816
Total liabilities and stockholders' equity		\$ 86,100	\$ 81,499

* Reclassified to conform to 1998 presentation.

The notes on pages 69 through 89 of the 1998 IBM Annual Report are an integral part of this statement.

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY International Business Machines Corporation and Subsidiary Companies

(Dollars in millions)	Preferred Stock	Common Stock	Retained Earnings	Treasury Stock	Employee Benefits Trust	Accumulated Gains and Losses Not Affecting Retained Earnings	Total
1996*							
Stockholders' equity, January 1, 1996	\$ 253	\$ 7,488	\$ 11,630	\$ (41)	\$ —	\$ 3,093	\$ 22,423
Net income plus gains and losses not affecting retained earnings:							
Net income			5,429				\$ 5,429
Gains and losses not affecting retained earnings (net of tax):							
Foreign currency translation adjustments (net of tax expense of \$19)						(635)	(635)
Net unrealized gains on marketable securities (net of tax expense of \$71)						111	111
Total gains and losses not affecting retained earnings							(524)
Subtotal: Net income plus gains and losses not affecting retained earnings							\$ 4,905
Cash dividends declared—common stock			(686)				(686)
Cash dividends declared—preferred stock			(20)				(20)
Common stock purchased and retired (97,951,400 shares)		(710)	(5,046)				(5,756)
Common stock issued under employee plans (19,694,458 shares)		811	(13)				798
Purchases (8,914,332 shares) and sales (7,584,432 shares) of treasury stock under employee plans—net			(105)	(94)			(199)
Tax effect—stock transactions		163					163
Stockholders' equity, December 31, 1996	253	7,752	11,189	(135)	—	2,569	21,628
1997*							
Net income plus gains and losses not affecting retained earnings:							
Net income			6,093				\$ 6,093
Gains and losses not affecting retained earnings (net of tax):							
Foreign currency translation adjustments (net of tax expense of \$24)						(1,610)	(1,610)
Net unrealized losses on marketable securities (net of tax benefit of \$37)						(60)	(60)
Total gains and losses not affecting retained earnings							(1,670)
Subtotal: Net income plus gains and losses not affecting retained earnings							\$ 4,423
Cash dividends declared—common stock			(763)				(763)
Cash dividends declared—preferred stock			(20)				(20)
Common stock purchased and retired (68,777,336 shares)		(565)	(5,455)				(6,020)
Preferred stock purchased and retired (13,450 shares)	(1)						(1)
Common stock issued under employee plans (19,651,603 shares)		985	(2)				983
Purchases (3,850,643 shares) and sales (5,105,754 shares) of treasury stock under employee plans—net			(32)	49			17
Employee benefits trust (10,000,000 shares)					(860)		(860)
Tax effect—stock transactions		429					429
Stockholders' equity, December 31, 1997	\$ 252	\$ 8,601	\$ 11,010	\$ (86)	\$ (860)	\$ 899	\$ 19,816

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY International Business Machines Corporation and Subsidiary Companies

(Dollars in millions)	Preferred Stock	Common Stock	Retained Earnings	Treasury Stock	Employee Benefits Trust	Accumulated Gains and Losses Not Affecting Retained Earnings	Total
1998							
Stockholders' equity, December 31, 1997	\$ 252	\$ 8,601	\$ 11,010	\$ (86)	\$ (860)	\$ 899	\$ 19,816
Net income plus gains and losses not affecting retained earnings:							
Net income			6,328				\$ 6,328
Gains and losses not affecting retained earnings (net of tax):							
Foreign currency translation adjustments (net of tax benefit of \$45)						69	69
Net unrealized losses on marketable securities (net of tax benefit of \$36)						(57)	(57)
Total gains and losses not affecting retained earnings							12
Subtotal: Net income plus gains and losses not affecting retained earnings							\$ 6,340
Cash dividends declared—common stock			(814)				(814)
Cash dividends declared—preferred stock			(20)				(20)
Common stock purchased and retired (56,996,818 shares)		(556)	(6,291)				(6,847)
Preferred stock purchased and retired (51,250 shares)	(5)						(5)
Common stock issued under employee plans (14,850,519 shares)		709	(1)				708
Purchases (4,163,057 shares) and sales (4,124,866 shares) of treasury stock under employee plans—net			(71)	(47)			(118)
Fair value adjustment of employee benefits trust		1,002			(994)		8
Tax effect—stock transactions		365					365
Stockholders' equity, December 31, 1998	\$ 247	\$ 10,121	\$ 10,141	\$ (133)	\$ (1,854)	\$ 911	\$ 19,433

* Reclassified to conform to 1998 presentation.

The notes on pages 69 through 89 of the 1998 IBM Annual Report are an integral part of this statement.

CONSOLIDATED STATEMENT OF CASH FLOWS International Business Machines Corporation and Subsidiary Companies

(Dollars in millions)

For the year ended December 31:	1998	1997	1996*
Cash flow from operating activities:			
Net income	\$ 6,328	\$ 6,093	\$ 5,429
Adjustments to reconcile net income to cash provided from operating activities:			
Depreciation	4,475	4,018	3,676
Amortization of software	517	983	1,336
Effect of restructuring charges	(355)	(445)	(1,491)
Deferred income taxes	(606)	358	11
Gain on disposition of fixed and other assets	(261)	(273)	(300)
Other changes that (used) provided cash:			
Receivables	(2,736)	(3,727)	(650)
Inventories	73	432	196
Other assets	880	(1,087)	(545)
Accounts payable	362	699	319
Other liabilities	596	1,814	2,294
Net cash provided from operating activities	9,273	8,865	10,275
Cash flow from investing activities:			
Payments for plant, rental machines and other property	(6,520)	(6,793)	(5,883)
Proceeds from disposition of plant, rental machines and other property	905	1,130	1,314
Acquisition of Tivoli Systems, Inc.	—	—	(716)
Investment in software	(250)	(314)	(295)
Purchases of marketable securities and other investments	(4,211)	(1,617)	(1,613)
Proceeds from marketable securities and other investments	3,945	1,439	1,470
Net cash used in investing activities	(6,131)	(6,155)	(5,723)
Cash flow from financing activities:			
Proceeds from new debt	7,567	9,142	7,670
Short-term borrowings less than 90 days—net	499	(668)	(919)
Payments to settle debt	(5,942)	(4,530)	(4,992)
Preferred stock transactions—net	(5)	(1)	—
Common stock transactions—net	(6,278)	(6,250)	(5,005)
Cash dividends paid	(834)	(783)	(706)
Net cash used in financing activities	(4,993)	(3,090)	(3,952)
Effect of exchange rate changes on cash and cash equivalents	120	(201)	(172)
Net change in cash and cash equivalents	(1,731)	(581)	428
Cash and cash equivalents at January 1	7,106	7,687	7,259
Cash and cash equivalents at December 31	\$ 5,375	\$ 7,106	\$ 7,687
Supplemental data:			
Cash paid during the year for:			
Income taxes	\$ 1,929	\$ 2,472	\$ 2,229
Interest	\$ 1,605	\$ 1,475	\$ 1,563

* Reclassified to conform to 1998 presentation.

The notes on pages 69 through 89 of the 1998 IBM Annual Report are an integral part of this statement.

A Significant Accounting Policies**Principles of Consolidation**

The consolidated financial statements include the accounts of International Business Machines Corporation and its controlled subsidiary companies, which are majority owned. Investments in business entities in which IBM does not have control, but has the ability to exercise significant influence over operating and financial policies (generally 20–50 percent ownership), are accounted for by the equity method. Other investments are accounted for by the cost method.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying disclosures. Although these estimates are based on management's best knowledge of current events and actions the company may undertake in the future, actual results ultimately may differ from the estimates.

Revenue**HARDWARE**

Revenue from hardware sales or sales-type leases is recognized when the product is shipped. Revenue from rentals and operating leases is recognized monthly as the fees accrue.

SERVICES

Revenue from time and material service contracts is recognized as the services are provided. Revenue from fixed price long-term service contracts is recognized over the contract term based on the percentage of services provided during the period compared to the total estimated services provided over the entire contract. Losses on fixed price contracts are recognized during the period in which the loss first becomes apparent. Revenue from maintenance is recognized over the contractual period or as the services are performed. Revenue in excess of billings on service contracts are recorded as unbilled receivables and included in trade accounts receivable. Billings in excess of revenue recognized on service contracts are recorded as deferred income until the above revenue recognition criteria are met.

SOFTWARE

Revenue from one-time charge licensed software is recognized when the program is shipped, provided the company has vendor-specific objective evidence of the fair value of each element of the software offering. A deferral is recorded for post-contract customer support and any other future deliverables included within the contract arrangement. This deferral is earned over the support period or as contract elements are delivered. Revenue from monthly software licenses is recognized as license fees accrue.

FINANCING

Revenue from financing is recognized at level rates of return over the term of the lease or receivable.

Revenue for all categories is reduced for estimated customer returns, allowances and anticipated price actions.

Income Taxes

Income tax expense is based on reported income before income taxes. Deferred income taxes reflect the impact of temporary differences between assets and liabilities recognized for financial reporting purposes and such amounts recognized for income tax purposes. In accordance with Statement of Financial Accounting Standards (SFAS) 109, "Accounting for Income Taxes," these deferred taxes are measured by applying currently enacted tax laws.

Translation of Non-U.S. Currency Amounts

Assets and liabilities of non-U.S. subsidiaries that operate in a local currency environment are translated to U.S. dollars at year-end exchange rates. Income and expense items are translated at average rates of exchange prevailing during the year. Translation adjustments are recorded in Accumulated gains and losses not affecting retained earnings within stockholders' equity.

Inventories and plant, rental machines and other non-monetary assets and liabilities of non-U.S. subsidiaries and branches that operate in U.S. dollars, or whose economic environment is highly inflationary, are translated at approximate exchange rates prevailing when acquired. All other assets and liabilities are translated at year-end exchange rates. Inventories charged to cost of sales and depreciation are translated at historical exchange rates. All other income and expense items are translated at average rates of exchange prevailing during the year. Gains and losses that result from translation are included in net income.

Financial Instruments

In the normal course of business, the company uses a variety of derivative financial instruments for the purpose of currency exchange rate and interest rate risk management. In order to qualify for hedge accounting, the company requires that the derivative instruments used for risk management purposes effectively reduce the risk exposure that they are designed to hedge. For instruments associated with the hedge of anticipated transactions, hedge effectiveness criteria also require that the occurrence of the underlying transactions be probable. Instruments meeting these hedging criteria are formally designated as hedges at the inception of the contract. Those risk management instruments not meeting these criteria and considered ineffective as hedges are accounted for at fair

value with changes in fair value recognized immediately in net income. Refer to note M, "Financial Instruments," on pages 74 and 75 for descriptions of the major classes of derivative financial instruments used by the company, including the specific methods used to account for them.

In assessing the fair value of its financial instruments, both derivative and non-derivative, the company uses a variety of methods and assumptions that are based on market conditions and risks existing at each balance sheet date. Quoted market prices or dealer quotes for the same or similar instruments are used for the majority of marketable securities, long-term investments and long-term debt. Other techniques, such as option pricing models, estimated discounted value of future cash flows, replacement cost and termination cost, are used to determine fair value for the remaining financial instruments. These values represent a general approximation of possible value and may never actually be realized.

Cash Equivalents

All highly liquid investments with a maturity of three months or less at date of purchase are carried at fair value and considered to be cash equivalents.

Marketable Securities

Marketable securities included within current assets represent highly liquid securities with a maturity less than one year. The company's marketable securities are considered available for sale and are reported at fair value with changes in unrealized gains and losses, net of applicable taxes, recorded in Accumulated gains and losses not affecting retained earnings within stockholders' equity. Realized gains and losses are calculated based on the specific identification method.

Inventories

Raw materials, work in process and finished goods are stated at the lower of average cost or net realizable value.

Depreciation

Plant, rental machines (computer equipment used internally or as part of managed operations contracts) and other property are carried at cost and depreciated over their estimated useful lives using the straight-line method.

The estimated useful lives of depreciable properties are generally as follows: buildings, 50 years; building equipment, 20 years; land improvements, 20 years; plant, laboratory and office equipment, 2 to 15 years; and computer equipment, 1.5 to 5 years.

Software

Costs related to the conceptual formulation and design of licensed programs are expensed as research and development. Costs incurred subsequent to establishment of technological feasibility to produce the finished product are capitalized. The annual amortization of the capitalized amounts is the greater of the amount computed based on the estimated revenue distribution over the products' revenue-producing lives, or the straight-line method, and is applied over periods ranging up to four years. Periodic reviews are performed to ensure that unamortized program costs remain recoverable from future revenue. Costs to support or service licensed programs are charged against income as incurred, or when related revenue is recognized, whichever occurs first.

Retirement Plans and Nonpension Postretirement Benefits

Current service costs of retirement plans and postretirement healthcare and life insurance benefits are accrued in the period. Prior service costs resulting from amendments to the plans are amortized over the average remaining service period of employees expected to receive benefits. Assuming thresholds established in SFAS 87, "Employers' Accounting for Pensions," are met, unrecognized net gains and losses are amortized to service cost over the average remaining service life of employees expected to receive benefits. See note W, "Retirement Plans," on page 81 through 83 and note X, "Nonpension Postretirement Benefits," on pages 83 and 84 for further discussion.

Goodwill

Goodwill is charged to net income on a straight-line basis over the periods estimated to be benefited, generally not exceeding five years. Reviews to evaluate recoverability of this goodwill are conducted periodically.

Common Stock

Common stock refers to the \$.50 par value capital stock as designated in the company's Certificate of Incorporation.

Earnings Per Share of Common Stock

Earnings per share of common stock is computed by dividing net income after deduction of preferred stock dividends by the weighted-average number of common shares outstanding for the period. Earnings per common share of stock—assuming dilution reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock which would then share in the net income of the company. See note T, "Earnings Per Share of Common Stock," on page 79 for further discussion.

B Accounting Changes**Standards Implemented**

The company implemented new accounting standards in 1998, 1997 and 1996. None of these standards had a material effect on the financial position or results of operations of the company.

Beginning with the first quarter of 1998, the company adopted SFAS 130, "Reporting Comprehensive Income," which established standards for reporting and displaying comprehensive income and its components. The disclosures required by SFAS 130 are presented in the Accumulated gains and losses not affecting retained earnings section in the Consolidated Statement of Stockholders' Equity on pages 66 and 67 and in note O, "Stockholders' Equity Activity," on pages 76 and 77.

Effective December 31, 1998, the company adopted SFAS 131, "Disclosures About Segments of an Enterprise and Related Information," which establishes standards for reporting operating segments and disclosures about products and services, geographic areas and major customers. See note Y, "Segment Information," on pages 84 through 89 for further information.

Effective December 31, 1998, the company adopted SFAS 132, "Employers' Disclosures about Pensions and Other Postretirement Benefits," which established expanded disclosures for defined benefit pension and postretirement benefit plans. See note W, "Retirement Plans," on pages 81 through 83 and note X, "Nonpension Postretirement Benefits" on pages 83 and 84 for the required disclosures.

On January 1, 1998, the company adopted the American Institute of Certified Public Accountants Statement of Position (SOP) 97-2, "Software Revenue Recognition." This SOP provides guidance on revenue recognition for software transactions. It requires deferral of some or all of the revenue related to a specific contract depending on the existence of vendor-specific objective evidence and the ability to allocate the total fee to all elements within the contract. The portion of the fee allocated to an element is recognized as revenue when all of the revenue recognition criteria have been met for that element.

In December 1997, the company implemented SFAS 128, "Earnings Per Share" (EPS). This standard prescribes the methods for calculating basic and diluted EPS and requires dual presentation of these amounts on the face of the earnings statement. No restatement of EPS, for either basic or diluted, was required for amounts reported previously in the company's filings with the U.S. Securities and Exchange Commission.

Effective January 1, 1997, the company implemented SFAS 125, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities." This standard provides accounting and reporting standards for transfers and servicing of financial assets and extinguishments of liabilities. The company was generally in compliance with this standard prior to adoption.

In 1996, the company adopted SOP 96-1, "Environmental Remediation Liabilities." This SOP provides guidance on the recognition, measurement, display and disclosure of environmental remediation liabilities. See note N, "Other Liabilities and Environmental," on page 76 for further information. The company was generally in compliance with this standard prior to adoption.

In 1996, the company implemented the disclosure-only provisions of SFAS 123, "Accounting for Stock-Based Compensation." See note V, "Stock-Based Compensation Plans," on pages 79 through 81 for further information.

New Standards to be Implemented

In June 1998, the Financial Accounting Standards Board issued SFAS 133, "Accounting for Derivative Instruments and Hedging Activities." This statement establishes accounting and reporting standards for derivative instruments. It requires an entity to recognize all derivatives as either assets or liabilities in the Statement of Financial Position and measure those instruments at fair value. Additionally, the fair value adjustments will impact either stockholders' equity or net income depending on whether the derivative instrument qualifies as a hedge and, if so, the nature of the hedging activity. The company will adopt this new standard as of January 1, 2000. Management does not expect the adoption to have a material impact on the company's results of operations, however, the impact on the company's financial position is dependent upon the fair values of the company's derivatives and related financial instruments at the date of adoption.

During 1998, the American Institute of Certified Public Accountants issued SOP 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use." The statement requires the capitalization of internal use computer software costs if certain criteria are met. The capitalized software costs will be amortized on a straight-line basis over the useful life of the software. The company will adopt the statement as of January 1, 1999. The adoption of the statement is not expected to have a material impact on the company's financial statements.

C Subsequent Events

Stock Split

On January 26, 1999, the IBM Board of Directors declared a two-for-one common stock split, subject to the approval of stockholders of an increase in the number of common shares authorized from 1,875 million to 4,687.5 million. The record date for the split will be on May 10, 1999, with distribution of the split shares expected to follow on May 26, 1999. Earnings per share calculations included in this report have not been restated to reflect this proposed stock split.

Debt Offering

On February 1, 1999, the company issued \$600 million of 5 3/8% notes due February 1, 2009. The net proceeds from the issuance of this debt will be used for general corporate purposes.

D Divestitures

In December 1998, IBM and AT&T announced that AT&T will acquire IBM's Global Network business for \$5 billion in cash. In addition, the two companies have agreed to enter into outsourcing contracts with each other. This subject is discussed further on pages 61 and 62 under the section entitled "Divestitures/Acquisitions" in the Management Discussion.

E Common Stock Split

On April 29, 1997, the stockholders of the company approved amendments to the Certificate of Incorporation to increase the number of authorized shares of common stock from 750 million to 1,875 million, which was required to effect a two-for-one stock split approved by the company's Board of Directors on January 28, 1997. In addition, the amendments served to reduce the par value of the common stock from \$1.25 to \$.50 per share. Stockholders of record at the close of business on May 9, 1997, received one additional share for each share held. All share and per share data prior to the second quarter of 1997 presented in the Consolidated Financial Statements and footnotes of this Annual Report reflect the two-for-one stock split.

F Inventories

(Dollars in millions)

At December 31:	1998	1997
Finished goods	\$ 1,088	\$ 1,090
Work in process and raw materials	4,112	4,049
Total	\$ 5,200	\$ 5,139

G Plant, Rental Machines and Other Property

(Dollars in millions)

At December 31:	1998	1997
Land and land improvements	\$ 1,091	\$ 1,117
Buildings	11,088	11,208
Plant, laboratory and office equipment	27,025	25,015
	39,204	37,340
Less: Accumulated depreciation	22,463	21,680
	16,741	15,660
Rental machines	5,666	4,793
Less: Accumulated depreciation	2,776	2,106
	2,890	2,687
Total	\$ 19,631	\$ 18,347

H Investments and Sundry Assets

(Dollars in millions)

At December 31:	1998	1997
Net investment in sales-type leases*	\$ 14,384	\$ 13,733
Less: Current portion—net	6,510	5,720
	7,874	8,013
Deferred taxes	2,921	3,163
Prepaid pension assets	4,836	3,828
Customer loan receivables— not yet due	3,499	2,741
Installment payment receivables	1,087	977
Alliance investments:		
Equity method	420	484
Other	138	236
Goodwill, less accumulated amortization (1998, \$2,111; 1997, \$1,717)	945	950
Marketable securities—non-current	281	295
Other investments and sundry assets	1,509	1,228
Total	\$ 23,510	\$ 21,915

* These leases relate principally to IBM equipment and are generally for terms ranging from three to five years. Net investment in sales-type leases includes unguaranteed residual values of approximately \$685 million and \$563 million at December 31, 1998 and 1997, respectively, and is reflected net of unearned income at those dates of approximately \$1,600 million for both years. Scheduled maturities of minimum lease payments outstanding at December 31, 1998, expressed as a percentage of the total, are approximately as follows: 1999, 48 percent; 2000, 31 percent; 2001, 15 percent; 2002, 5 percent; and 2003 and beyond, 1 percent.

I Lines of Credit

The company maintains a \$10.0 billion committed global credit facility. Unused committed lines of credit from this global facility amounted to \$8.8 billion and \$9.2 billion at December 31, 1998 and 1997, respectively. The company's other committed and uncommitted lines of credit amounted to \$5.2 billion at December 31, 1998 and 1997. The unused portion of those lines amounted to \$4.3 billion and \$3.9 billion at December 31, 1998 and 1997, respectively. Total unused lines of credit at December 31, 1998 and 1997, amounted to \$13.1 billion. Interest rates on borrowings vary from country to country depending on local market conditions.

J Sale and Securitization of Receivables

At year-end 1998 and 1997, the company had a net balance of \$0.9 billion in assets under management from the securitization of loans, leases and trade receivables. The company received total cash proceeds of approximately \$2.4 billion and \$3.0 billion in 1998 and 1997, respectively, from the sale and securitization of these receivables and assets. No material gain or loss resulted from these transactions. Recourse amounts associated with the aforementioned sale and securitization activities are expected to be minimal, and adequate reserves are in place to cover potential losses.

K Debt

Short-term debt

(Dollars in millions)

At December 31:	1998	1997
Commercial paper	\$ 4,885	\$ 4,583
Short-term loans	6,370	5,699
Long-term debt: Current maturities	2,650	2,948
Total	\$ 13,905	\$ 13,230

The weighted-average interest rates for commercial paper at December 31, 1998 and 1997, were approximately 5.7 percent and 5.8 percent, respectively. The weighted-average interest rates for short-term loans at December 31, 1998 and 1997, were approximately 5.3 percent and 5.5 percent, respectively.

Long-term debt

(Dollars in millions)

At December 31:	Maturities	1998	1997*
U.S. Dollars:			
Debentures:			
6.22%	2027	\$ 500	\$ 500
6.5%	2028	700	—
7.0%	2025	600	600
7.0%	2045	150	150
7.125%	2096	850	850
7.5%	2013	550	550
8.375%	2019	750	750
Notes: 6.7% average	2000-2013	2,695	2,674
Medium-term note			
program: 5.8% average	1999-2013	4,885	4,472
Other: 6.5% average	1999-2012	1,514	1,319
		13,194	11,865
Other currencies			
(average interest rate at December 31, 1998, in parentheses):			
Japanese yen (3.1%)	1999-2014	3,866	3,944
Canadian dollars (5.7%)	1999-2003	672	407
German marks (4.9%)	1999-2002	120	111
Swiss francs (2.5%)	2001	91	85
U.K. pounds (7.9%)	1999-2004	25	28
Other (11.9%)	1999-2026	221	235
		18,189	16,675
Less: Net unamortized discount			
		31	31
		18,158	16,644
Less: Current maturities			
		2,650	2,948
Total		\$ 15,508	\$ 13,696

Annual maturities in millions of dollars on long-term debt outstanding at December 31, 1998, are as follows: 1999, \$2,650; 2000, \$5,120; 2001, \$1,491; 2002, \$1,676; 2003, \$1,116; 2004 and beyond, \$6,136.

* Reclassified to conform to 1998 presentation.

L Interest on Debt

Interest paid and accrued on borrowings of the company and its subsidiaries amounted to \$1,585 million in 1998, \$1,596 million in 1997 and \$1,565 million in 1996. Of these amounts, \$28 million in 1998, \$32 million in 1997 and \$31 million in 1996 were capitalized. The remainder was charged to the cost of rentals and financing in the amounts of \$844 million in 1998, \$836 million in 1997 and \$818 million in 1996, or interest expense in the amounts of \$713 million in 1998, \$728 million in 1997 and \$716 million in 1996. The decrease in total interest expense in 1998 versus 1997 was due primarily to lower average interest rates, partially offset by higher levels of debt. The increase in total interest expense in 1997 versus 1996 was primarily due to higher levels of debt, partially offset by lower interest rates. The average interest rate for total debt was 5.7 percent, 6.4 percent and 7.0 percent in 1998, 1997 and 1996, respectively. These rates include the results of currency and interest rate swaps applied to the debt described in note K, "Debt," on page 73.

M Financial Instruments

The company maintains portfolios of financial instruments both on- and off-balance sheet.

Financial Instruments On-Balance Sheet (excluding derivatives)

Financial assets with carrying values approximating fair value include cash and cash equivalents, marketable securities, notes and other accounts receivable and other investments. Financial liabilities with carrying values approximating fair value include accounts payable and other accrued expenses and liabilities, and short-term and long-term debt.

The following table summarizes the company's marketable securities and other investments, all of which were considered available for sale.

MARKETABLE SECURITIES AND OTHER INVESTMENTS

(Dollars in millions)	Carrying Value	
	1998	1997
At December 31:		
Current marketable securities:		
U.S. government securities	\$ 15	\$ 93
Time deposits and other bank obligations	335	181
Non-U.S. government securities and other fixed-term obligations	43	173
Total	\$ 393	\$ 447
Marketable securities—non-current:*		
U.S. government securities	\$ —	\$ 54
Time deposits and other bank obligations	271	183
Non-U.S. government securities and other fixed-term obligations	10	58
Total	\$ 281	\$ 295
Other investments:*		
Alliance investments—Other	\$ 138	\$ 236

* Included within Investments and sundry assets on the Consolidated Statement of Financial Position (See note H on page 72).

Financial Instruments Off-Balance Sheet (excluding derivatives)

IBM has guaranteed certain loans and financial commitments of affiliates. The approximate amount of these financial guarantees were \$1,158 million and \$861 million at December 31, 1998 and 1997, respectively. Additionally, the company is responsible for fulfilling financial commitments associated with certain contracts to which it is a party. These commitments, which in the aggregate were approximately \$1,600 million and \$600 million at December 31, 1998 and 1997, respectively, are not expected to have a material adverse effect on the company's financial position or results of operations.

The company's dealers had unused lines of credit available from IBM for working capital financing of approximately \$3.6 billion and \$2.1 billion at December 31, 1998 and 1997, respectively.

Derivative Financial Instruments

The company has used derivative instruments as an element of its risk management strategy for many years. Although derivatives entail a risk of nonperformance by counterparties, the company manages this risk by establishing explicit dollar and term limitations that correspond to the credit rating of each carefully selected counterparty. The company has not sustained a material loss from these instruments nor does it anticipate any material adverse effect on its results of operations or financial position in the future.

The following table summarizes the notional value, carrying value and fair value of the company's derivative financial instruments on- and off-balance sheet. The notional value at

December 31 provides an indication of the extent of the company's involvement in such instruments at that time, but does not represent exposure to market risk.

(Dollars in millions)	At December 31, 1998			At December 31, 1997		
	Notional Value	Carrying Value	Fair Value	Notional Value	Carrying Value	Fair Value
Interest rate and currency contracts	\$ 31,484	\$ (485)	\$ (427)	\$ 24,774	\$ 29	\$ 84
Option contracts	9,021	67	45	14,211	41	193
Total	\$ 40,505	\$ (418)	\$ (382)*	\$ 38,985	\$ 70	\$ 277*

Bracketed amounts are liabilities.

* The estimated fair value of derivatives both on- and off-balance sheet at December 31, 1998 and 1997, consists of assets of \$486 million and \$581 million and liabilities of \$868 million and \$304 million, respectively.

A significant portion of the company's derivative transactions relates to the matching of liabilities to assets associated with both its global financing business and its non-global financing business. The company issues debt, using the most efficient capital markets and products, which may result in a currency or interest rate mismatch with the underlying assets. Interest rate swaps or currency swaps are then used to match the interest rates and currencies of its debt to the related assets. These swap contracts principally mature within five years. Interest and currency rate differentials accruing under these interest rate and currency swap contracts are recognized over the life of the contracts in interest expense.

The company uses internal regional centers to manage the cash of its subsidiaries. These regional centers principally use currency swaps to convert cash flows in a cost-effective manner, predominantly for the company's European subsidiaries. The terms of the swaps are generally less than one year. The effects of these contracts are recognized over the life of the contract in interest expense.

The company also utilizes currency swaps and other foreign currency contracts in order to hedge the foreign currency exposures of certain of the company's net investments in foreign subsidiaries. The currency effects of these hedges are reflected in the Accumulated gains and losses not affecting retained earnings section of Stockholders' equity, offsetting a portion of the translation of net assets.

When the terms of an underlying instrument are modified, or if it ceases to exist, all changes in fair value of the swap contract are recognized in income each period until it matures.

Additionally, the company uses derivatives to limit its exposure to loss resulting from fluctuations in foreign currency exchange rates on anticipated cash transactions among foreign subsidiaries and the parent company. The company receives significant intracompany royalties and net payments for goods and services from its non-U.S. subsidiaries. In anticipation of these foreign currency flows, and given the volatility of the currency markets, the company selectively employs foreign currency options to manage the currency risk. The terms of these instruments are generally less than one year.

For purchased options that hedge qualifying anticipated transactions, gains and losses are deferred and recognized in net income in the same period that the underlying transaction occurs, expires or is otherwise terminated. At December 31, 1998 and 1997, there were no material deferred gains or losses. The premiums associated with entering into these option contracts are generally amortized over the life of the options and are not material to the company's results. Unamortized premiums are included in prepaid assets. For purchased options that hedge anticipated transactions which do not qualify for hedge accounting, gains and losses are recorded in net income as they occur on a mark-to-market basis. All written options are marked to market monthly and are not material to the company's results.

The company also enters into transactions to moderate the impact that an appreciation of the dollar relative to other currencies would have on the translation of foreign earnings. These transactions do not qualify as hedges for accounting purposes, and their foreign exchange gains and losses are recorded in net income as they occur.

N Other Liabilities and Environmental

Other liabilities consists principally of accruals for nonpension postretirement benefits for U.S. employees (\$6.6 billion) and nonpension postretirement benefits, indemnity and retirement plan reserves for non-U.S. employees (\$1.4 billion). More detailed discussion of these liabilities appears in note X, "Nonpension Postretirement Benefits," on pages 83 and 84, and note W, "Retirement Plans," on pages 81 through 83.

Also included are non-current liabilities associated with infrastructure reduction and restructuring actions taken in 1993 and prior. As a result, amounts representing postemployment preretirement accruals in the amount of \$793 million and \$681 million (net of sublease receipts) for accruals for leased space that the company has vacated are included.

The company employs extensive internal environmental protection programs that are primarily preventative in nature. The cost of these ongoing programs is recorded as incurred.

The company continues to participate in environmental assessments and cleanups at a number of locations, including operating facilities, previously owned facilities and Superfund sites. The company accrues for all known environmental liabilities for remediation costs when a cleanup program becomes probable and costs can be reasonably estimated. In addition, estimated environmental costs associated with post-closure activities, such as the removal and restoration of chemical storage facilities and monitoring, are accrued when the decision is made to close a facility. The total amounts accrued, which do not reflect any insurance recoveries, were \$238 million and \$243 million at December 31, 1998 and 1997, respectively.

The amounts accrued do not cover sites that are in the preliminary stages of investigation where neither the company's percentage of responsibility nor the extent of cleanup required has been identified. Estimated environmental costs are not expected to materially impact the financial position or results of the company's operations in future periods. However, environmental cleanup periods are protracted in length, and environmental costs in future periods are subject to changes in environmental remediation regulations.

O Stockholders' Equity Activity

Stock Repurchases

The Board of Directors from time to time has authorized the company to repurchase IBM common stock. The company repurchased 57,384,100 common shares at a cost of \$6.9 billion and 81,505,200 common shares at a cost of \$7.1 billion in 1998 and 1997, respectively. The repurchases resulted in a reduction of \$28,498,409 and \$34,388,668 in the stated capital (par value) associated with common stock in 1998 and 1997, respectively. In 1997, 10 million repurchased shares were used to establish the Employee Benefits Trust (see below). In 1998 and 1997, 387,282 and 2,727,864 shares, respectively, were issued as a result of acquisitions. The rest of the repurchased shares were retired and restored to the status of authorized but unissued shares. At December 31, 1998, approximately \$2.8 billion of Board authorization for repurchases remained. The company plans to purchase shares on the open market from time to time, depending on market conditions.

In 1995, the IBM Board of Directors authorized the company to purchase all of its outstanding Series A 7 1/2 percent preferred stock. During 1998 and 1997, the company repurchased 51,250 shares at a cost of \$5.5 million and 13,450 shares at a cost of \$1.4 million, respectively. This resulted in a \$512.50 and \$134.50 (\$.01 par value per share) reduction in the stated capital associated with preferred stock as of December 31, 1998 and 1997, respectively. The repurchased shares were retired and restored to the status of authorized but unissued shares. The company plans to purchase remaining shares on the open market and in private transactions from time to time, depending on market conditions.

Employee Benefits Trust

Effective November 1, 1997, the company created an employee benefits trust to which the company contributed 10 million shares of treasury stock. The company is authorized to instruct the trustee to sell shares from time to time and to use proceeds from such sales, and any dividends paid on such contributed stock, toward the partial satisfaction of the company's future obligations under certain of its compensation and benefits plans, including its retiree medical plans. The shares held in trust are not considered outstanding for earnings per share purposes until they are committed to be released. The shares will be voted by the trustee in accordance with its fiduciary duties. As of December 31, 1998 and 1997, no shares have been committed to be released.

At December 31, 1998, the company adjusted its valuation of the employee benefits trust to fair value. This adjustment solely impacted line items within stockholders' equity and did not affect total stockholders' equity or net income.

Accumulated Gains and Losses Not Affecting Retained Earnings

(Dollars in millions)	Foreign Currency Items (Net of Tax)	Net Unrealized Gains (Losses) on Marketable Securities (Net of Tax)	Total Gains and Losses Not Affecting Retained Earnings (Net of Tax)
Beginning balance, January 1, 1996	\$ 3,036	\$ 57	\$ 3,093
Change for period	(635)	111	(524)
Ending balance, December 31, 1996	2,401	168	2,569
Change for period	(1,610)	(60)	(1,670)
Ending balance, December 31, 1997	791	108	899
Change for period	69	(57)	12
Ending balance, December 31, 1998	\$ 860	\$ 51	\$ 911

**NET CHANGE IN UNREALIZED GAINS (LOSSES) ON
MARKETABLE SECURITIES (NET OF TAX)**

(Dollars in millions)	1998
For the year ended December 31:	
Unrealized gains	
arising during the period, net of tax	\$ 99
Less gains included in net income	
for the period, net of tax	156
Net decrease in unrealized gains	
on marketable securities, net of tax	\$ (57)

P Contingencies

The company is subject to a variety of claims and suits that arise from time to time out of the ordinary course of its business, including actions with respect to contracts, intellectual property, product liability and environmental matters. The company does not believe that any such current action will have a material impact on the company's business, financial condition or results of operations.

On February 25, 1993, a class action complaint was filed against the company in the United States District Court for the Southern District of New York alleging, among other matters, that the company disseminated false and misleading statements concerning its financial condition and dividends during certain periods of 1992. On February 3, 1997, Judge Rakoff issued an order granting the company's motion for summary judgment in this case in its entirety. Plaintiffs filed an appeal and on November 17, 1998, the Second Circuit Court of Appeals upheld Judge Rakoff's decision for the company.

Q Taxes

(Dollars in millions)	1998	1997	1996
For the year ended December 31:			
Income before income taxes:			
U.S. operations	\$ 2,960	\$ 3,193	\$ 3,025
Non-U.S. operations	6,080	5,834	5,562
	\$ 9,040	\$ 9,027	\$ 8,587

The provision for income taxes by geographic operations is as follows:

U.S. operations	\$ 991	\$ 974	\$ 1,137
Non-U.S. operations	1,721	1,960	2,021
Total provision for income taxes	\$ 2,712	\$ 2,934	\$ 3,158

The components of the provision for income taxes by taxing jurisdiction are as follows:

U.S. federal:			
Current	\$ 1,117	\$ 163	\$ 727
Deferred	(475)	349	83
	642	512	810
U.S. state and local:			
Current	139	83	158
Deferred	(260)	(87)	(353)
	(121)	(4)	(195)
Non-U.S.:			
Current	2,062	2,330	2,262
Deferred	129	96	281
	2,191	2,426	2,543
Total provision for income taxes	2,712	2,934	3,158
Provision for social security, real estate, personal property and other taxes	2,859	2,774	2,584
Total provision for taxes	\$ 5,571	\$ 5,708	\$ 5,742

The effect of tax law changes on deferred tax assets and liabilities did not have a significant impact on the company's effective tax rate.

The significant components of activities that gave rise to deferred tax assets and liabilities included on the balance sheet were as follows:

DEFERRED TAX ASSETS

(Dollars in millions)

At December 31:	1998	1997
Employee benefits	\$ 3,909	\$ 3,707
Bad debt, inventory and warranty reserves	1,249	1,027
Alternative minimum tax credits	1,169	1,092
Capitalized research and development	913	1,196
Restructuring charges	863	1,163
Deferred income	686	893
General business credits	555	492
Equity alliances	387	378
Foreign tax loss carryforwards	304	202
State and local tax loss carryforwards	212	203
Depreciation	201	132
Intracompany sales and services	182	235
Other	2,614	2,507
Gross deferred tax assets	13,244	13,227
Less: Valuation allowance	488	2,163
Net deferred tax assets	\$ 12,756	\$ 11,064

DEFERRED TAX LIABILITIES

(Dollars in millions)

At December 31:	1998	1997
Sales-type leases	\$ 3,433	\$ 3,147
Retirement benefits	2,775	2,147
Depreciation	1,505	1,556
Software costs deferred	287	420
Other	1,841	1,413
Gross deferred tax liabilities	\$ 9,841	\$ 8,683

As part of implementing its global strategies involving the relocation of certain of its manufacturing operations, the company transferred certain intellectual property rights to several non-U.S. subsidiaries in December 1998. Since these strategies, including this transfer, result in the anticipated utilization of U.S. federal tax credit carryforwards, the company reduced the valuation allowance from that previously required. The valuation allowance at December 31, 1998, principally applies to certain state and local and foreign tax loss carryforwards that, in the opinion of management, are more likely than not to expire before the company can utilize them.

A reconciliation of the company's effective tax rate to the statutory U.S. federal tax rate is as follows:

For the year ended December 31:	1998	1997	1996
Statutory rate	35%	35%	35%
Foreign tax differential	(6)	(3)	2
State and local	1	1	1
U.S. valuation allowance related items	(1)	—	(6)
Other	1	—	5
Effective rate	30%	33%	37%

For tax return purposes, the company has available tax credit carryforwards of approximately \$2,067 million, of which \$1,169 million have an indefinite carryforward period, \$184 million expire in 1999 and the remainder thereafter. The company also has state and local and foreign tax loss carryforwards, the tax effect of which is \$516 million. Most of these carryforwards are available for 10 years or have an indefinite carryforward period.

Undistributed earnings of non-U.S. subsidiaries included in consolidated retained earnings amounted to \$13,165 million at December 31, 1998, \$12,511 million at December 31, 1997, and \$12,111 million at December 31, 1996. These earnings, which reflect full provision for non-U.S. income taxes, are indefinitely reinvested in non-U.S. operations or will be remitted substantially free of additional tax.

R Selling and Advertising

Selling and advertising expense is charged against income as incurred. Advertising expense, which includes media, agency and promotional expenses, amounted to \$1,681 million, \$1,708 million and \$1,569 million in 1998, 1997 and 1996, respectively.

S Research, Development and Engineering

Research, development and engineering expense amounted to \$5,046 million in 1998, \$4,877 million in 1997 and \$5,089 million in 1996. Expenditures for product-related engineering included in these amounts were \$580 million, \$570 million and \$720 million in 1998, 1997 and 1996, respectively.

Expenditures of \$4,466 million in 1998, \$4,307 million in 1997 and \$4,369 million in 1996 were made for research and development activities covering basic scientific research and the application of scientific advances to the development of new and improved products and their uses. Of these amounts, software-related activities were \$2,086 million, \$2,016 million and \$2,161 million in 1998, 1997 and 1996, respectively. Included in the 1996 expenditures is \$435 million of purchased in-process research and development expense relating to the Tivoli and Object Technology International, Inc. acquisitions.

T Earnings Per Share of Common Stock

The following table sets forth the computation of basic and diluted earnings per share.

For the year ended December 31:	1998	1997	1996
Number of shares on which basic earnings per share is calculated:			
Average outstanding during year	934,502,785	983,286,361	1,056,704,188
Add—Incremental shares under stock compensation plans	25,562,450	27,648,581	23,004,716
Number of shares on which diluted earnings per share is calculated	960,065,235	1,010,934,942	1,079,708,904
Net income (millions)	\$ 6,328	\$ 6,093	\$ 5,429
Less—Preferred stock dividends (millions)	20	20	20
Net income on which basic and diluted earnings per share are calculated (millions)	\$ 6,308	\$ 6,073	\$ 5,409
Basic earnings per share	\$ 6.75	\$ 6.18	\$ 5.12
Diluted earnings per share	\$ 6.57	\$ 6.01	\$ 5.01

Stock options to purchase 2,062,365 shares in 1998, 165,833 shares in 1997 and 784,141 shares in 1996 were outstanding, but were not included in the computation of diluted earnings per share because the options' exercise price was greater than the average market price of the common shares, and therefore, the

effect would be antidilutive. In addition, 2,565,519 restricted stock units in 1998 relating to the company's Long-Term Performance Plan were not included in the computation of diluted earnings as their effect would be antidilutive.

U Rental Expense and Lease Commitments

Rental expense, including amounts charged to inventories and fixed assets and excluding amounts previously reserved, was \$1,431 million in 1998, \$1,280 million in 1997 and \$1,210 million in 1996. The table below depicts gross minimum rental commitments under noncancelable leases, amounts related to vacant space that the company has reserved and sublease income commitments. These amounts generally reflect activities related to office space and manufacturing equipment.

(Dollars in millions)	1999	2000	2001	2002	2003	Beyond 2003
Gross rental commitments	\$ 1,398	\$ 1,242	\$ 1,085	\$ 877	\$ 623	\$ 1,417
Vacant space	205	188	150	98	59	222
Sublease income commitments	165	140	122	64	35	66

V Stock-Based Compensation Plans

The company applies Accounting Principles Board (APB) Opinion No. 25 and related Interpretations in accounting for its stock-based compensation plans. A description of the terms of the company's stock-based compensation plans follows:

Long-Term Performance Plan

Incentive awards are provided to officers and other key employees under the terms of the IBM 1997 Long-Term Performance Plan, which was approved by stockholders in April 1997, and its predecessor plan, the 1994 Long-Term Performance Plan ("the Plans"). The Plans are administered by the Executive Compensation and Management Resources Committee of the Board of Directors. The committee determines the type and terms of the awards to be granted, including vesting provisions.

Awards may include stock options, stock appreciation rights, restricted stock, cash or stock awards, or any combination thereof. The number of shares that may be issued under the IBM 1997 Long-Term Performance Plan for awards is 50.3 million, which was 5 percent of the outstanding common stock on February 10, 1997. There were 34.3 million and 46.4 million unused shares available for granting under the IBM 1997 Long-Term Performance Plan as of December 31, 1998 and 1997, respectively, and approximately 2.0 and 9.0 million shares available for granting under the 1994 Long-Term Performance Plan at December 31, 1998 and 1997, respectively.

These awards, which are expressed in terms of shares, are adjusted to fair value at the end of each period and the change in value is included in net income. Awards under the Plans resulted in compensation expense of \$322.4 million, \$214.1 million and \$203.9 million in 1998, 1997 and 1996, respectively.

Stock Option Grants

Stock options granted under the Plans allow the purchase of the company's common stock at 100 percent of the market price on the date of grant and generally expire 10 years from the date of grant. The following tables summarize option activity of the Plans during 1998, 1997 and 1996:

	1998		1997		1996	
	Wtd. Avg. Exercise Price	No. of Shares under Option	Wtd. Avg. Exercise Price	No. of Shares under Option	Wtd. Avg. Exercise Price	No. of Shares under Option
Balance at January 1	\$ 54	61,728,361	\$ 44	61,435,322	\$ 39	68,565,806
Options granted	107	20,587,675	71	21,471,228	63	15,359,058
Options exercised	44	(14,816,738)	42	(19,630,005)	36	(19,302,622)
Options terminated	71	(1,777,373)	56	(1,548,184)	61	(3,186,920)
Balance at December 31	\$ 72	65,721,925	\$ 54	61,728,361	\$ 44	61,435,322
Exercisable at December 31	\$ 44	23,095,818	\$ 38	26,619,548	\$ 41	30,603,845

The shares under option at December 31, 1998, were in the following exercise price ranges:

Exercise Price Range	Options Outstanding			Options Currently Exercisable	
	No. of Options	Wtd. Avg. Exercise Price	Wtd. Avg. Contractual Life (in years)	No. of Options	Wtd. Avg. Exercise Price
\$21 – 50	16,708,124	\$ 32	5	15,137,952	\$ 32
\$51 – 80	26,369,118	68	7	7,463,820	66
\$81 – 110	20,024,496	103	9	491,047	103
\$111 and over	2,620,187	138	10	2,999	112
	65,721,925	\$ 72		23,095,818	\$ 44

IBM Employees Stock Purchase Plan

The IBM Employees Stock Purchase Plan (ESPP) enables substantially all regular employees to purchase full or fractional shares of IBM common stock through payroll deductions of up to 10 percent of eligible compensation. The price an employee pays is 85 percent of the average market price on the last day of an applicable pay period.

During 1998, 1997 and 1996, employees purchased 3,993,372, 4,676,980 and 6,461,856 shares, all of which were treasury shares, for which \$415 million, \$354 million and \$324 million were paid to the company, respectively.

There were approximately 31.5 million, 35.5 million and 40.2 million reserved unissued shares available for purchase under the ESPP, as previously approved by stockholders, at December 31, 1998, 1997 and 1996, respectively.

Pro Forma Disclosure

In applying APB Opinion No. 25, no expense was recognized for stock options granted under the Plan or for employee stock purchases under the ESPP. SFAS 123 requires that a fair market value of all awards of stock-based compensation be determined using standard techniques and that pro forma net income and earnings per share be disclosed as if the resulting stock-based compensation amounts were recorded in the Consolidated Statement of Earnings. The table below depicts the effects of SFAS 123.

(Dollars in millions except per share amounts)	1998		1997		1996	
	As reported	Pro forma	As reported	Pro forma	As reported	Pro forma
Net income applicable to common shareholders	\$ 6,308	\$ 5,985	\$ 6,073	\$ 5,866	\$ 5,409	\$ 5,267
Earnings per share of common stock—basic	\$ 6.75	\$ 6.40	\$ 6.18	\$ 5.97	\$ 5.12	\$ 4.98
Earnings per share of common stock—assuming dilution	\$ 6.57	\$ 6.24	\$ 6.01	\$ 5.82	\$ 5.01	\$ 4.89

The pro forma amounts, for purposes of SFAS 123, reflect the portion of the estimated fair value of awards earned in 1998, 1997 and 1996. The aggregate fair value of awards granted is earned ratably over the vesting or service period and is greater than that included in the pro forma amounts.

The company used the Black-Scholes model to value the stock options granted in 1998, 1997 and 1996. The weighted-average assumptions used to estimate the value of the options included in the pro forma amounts, and the weighted-average estimated fair value of an option granted are as follows:

	1998	1997	1996
Term (years)*	5/6	5/6	5/6
Volatility**	26.4%	23.0%	22.0%
Risk-free interest rate (zero coupon U.S. treasury note)	5.1%	6.2%	6.0%
Dividend yield	0.8%	1.0%	1.2%
Weighted-average fair value of options	\$ 36	\$ 25	\$ 20

* Option term is based on tax incentive options (5 years) and non-tax incentive options (6 years).
 **To determine volatility, the company measured the daily price changes of the stock over the most recent 5 and 6 year periods.

W Retirement Plans

The company and its subsidiaries have defined benefit and defined contribution retirement plans covering substantially all regular employees, and a supplemental retirement plan that covers certain executives.

The changes in the benefit obligations and plan assets of the U.S. and material non-U.S. defined benefit plans for 1998 and 1997 were as follows:

(Dollars in millions)	U.S. Plan		Non-U.S. Plans	
	1998	1997*	1998	1997*
Change in benefit obligation:				
Benefit obligation at beginning of year	\$ 33,161	\$ 29,729	\$ 18,846	\$ 19,883
Service cost	532	397	399	366
Interest cost	2,261	2,215	1,213	1,182
Plan participants' contributions	—	—	29	33
Acquisitions/divestitures, net	22	(2)	—	129
Amendments	—	14	2	—
Actuarial losses	2,729	2,805	1,331	431
Benefits paid from trust	(2,144)	(1,997)	(683)	(623)
Direct benefit payments	—	—	(254)	(281)
Foreign exchange impact	—	—	1,155	(2,186)
Plan curtailments/settlements/termination benefits	—	—	10	(88)
Benefit obligation at end of year	36,561	33,161	22,048	18,846
Change in plan assets:				
Fair value of plan assets at beginning of year	38,475	34,281	21,841	21,039
Actual return on plan assets	5,240	6,193	2,400	3,454
Employer contribution	—	—	452	192
Acquisitions/divestitures, net	22	(2)	—	129
Plan participants' contributions	—	—	29	33
Benefits paid from trust	(2,144)	(1,997)	(683)	(623)
Foreign exchange impact	—	—	1,283	(2,263)
Settlements	—	—	(28)	(120)
Fair value of plan assets at end of year	41,593	38,475	25,294	21,841
Fair value of plan assets in excess				
of benefit obligation	5,032	5,314	3,246	2,995
Unrecognized net actuarial gains	(1,289)	(1,901)	(2,342)	(2,897)
Unrecognized prior service costs	174	190	181	194
Unrecognized net transition asset	(771)	(911)	(78)	(83)
Adjustment to recognize minimum liability	—	—	(87)	(3)
Prepaid pension asset recognized				
in the Consolidated Statement of Financial Position	\$ 3,146	\$ 2,692	\$ 920	\$ 206

* Reclassified to conform to 1998 presentation.

U.S. Plan: U.S. regular, full-time and part-time employees are covered by a noncontributory plan that is funded by company contributions to an irrevocable trust fund, which is held for the sole benefit of employees. Under a new formula, which is being phased in over five years, retirement benefits will be determined based on points accumulated for each year worked and final average compensation period. To preserve benefits of employees close to retirement, service and earnings credit will continue to accrue under the prior formula through the year 2000, and upon retirement, these employees will receive the benefit from either the new or prior formulas, whichever is higher. Benefits become vested upon the completion of five years of service. The number of individuals receiving benefits at December 31, 1998 and 1997, was 116,685 and 108,415, respectively.

Non-U.S. Plans: Most subsidiaries and branches outside the U.S. have retirement plans covering substantially all regular employees, under which funds are deposited under various

fiduciary-type arrangements, annuities are purchased under group contracts or reserves are provided. Retirement benefits are based on years of service and the employee's compensation, generally during a fixed number of years immediately prior to retirement. The ranges of assumptions used for the non-U.S. plans reflect the different economic environments within various countries.

U.S. Supplemental Executive Retirement Plan: The company also has a non-qualified U.S. Supplemental Executive Retirement Plan (SERP). The SERP, which is unfunded, provides eligible executives defined pension benefits outside the IBM Retirement Plan, based on average earnings, years of service and age at retirement. At December 31, 1998 and 1997, the projected benefit obligation was \$178 million and \$128 million, respectively, and the amounts included in the Consolidated Statement of Financial Position were pension liabilities of \$81 million and \$56 million, respectively.

WEIGHTED-AVERAGE ASSUMPTIONS AS OF DECEMBER 31:

	U.S. Plan			Non-U.S. Plan		
	1998	1997	1996	1998	1997	1996
Discount rate	6.5%	7.0%	7.75%	4.5 – 7.5%	4.5 – 7.5%	4.5 – 8.5%
Expected return on plan assets	9.5%	9.5%	9.25%	6.5 – 10.0%	6.0 – 9.5%	6.5 – 10.0%
Rate of compensation increase	5.0%	5.0%	5.0%	2.7 – 6.1%	2.6 – 6.1%	2.3 – 6.5%

The cost of the defined benefit plans for 1998, 1997 and 1996 was as follows:

(Dollars in millions)	U.S. Plan			Non-U.S. Plan		
	1998	1997*	1996*	1998	1997*	1996*
Service cost	\$ 532	\$ 397	\$ 412	\$ 399	\$ 366	\$ 384
Interest cost	2,261	2,215	2,125	1,213	1,182	1,302
Expected return on plan assets	(3,123)	(2,907)	(2,701)	(1,739)	(1,457)	(1,485)
Net amortization	(124)	(125)	(121)	21	15	27
Settlement losses/(gains)	—	—	—	10	(63)	(102)
Net periodic pension cost (benefit)—U.S. Plan and material non-U.S. Plans	\$ (454)	\$ (420)	\$ (285)	\$ (96)	\$ 43	\$ 126
Total net periodic pension cost (benefit) for all non-U.S. plans				\$ (42)	\$ 50	\$ 148

* Reclassified to conform to 1998 presentation.

Cost of defined contribution plans	\$ 258	\$ 236	\$ 209	\$ 90	\$ 64	\$ 29
Cost of complementary defined benefits	\$ 34	\$ 33	\$ 27			
Cost of U.S. supplemental executive retirement plan	\$ 25	\$ 20	\$ 19			

Net periodic pension cost is determined using the Projected Unit Credit actuarial method.

The effects on the company's results of operations and financial position from changes in the estimates and assumptions used in computing pension and prepaid pension assets or pension liability is mitigated by the delayed recognition provisions of SFAS 87, with the exception of the effects of settlement gains, curtailment losses and early terminations, which are recognized immediately. The 0.5% decrease in the discount rate in 1998 resulted in an actuarial loss of \$2,144 million for the U.S. plan. The 0.75% decrease in the discount rate in 1997 resulted in an actuarial loss of \$2,723 million for the U.S. plan.

It is the company's practice to fund amounts for pensions sufficient to meet the minimum requirements set forth in applicable employee benefits laws and with regard to local tax laws. Additional amounts are contributed from time to time when deemed appropriate by the company. Liabilities for amounts in excess of these funding levels are accrued and reported in the company's Consolidated Statement of Financial Position. The assets of the various plans include corporate equities, government securities, corporate debt securities and real estate.

At December 31, 1998, the material non-U.S. defined benefit plans in which the plan assets exceeded the benefit obligation had obligations of \$18,217 million and assets of \$21,736 million. The material non-U.S. defined benefit plans in which the benefit obligation exceeded the fair value of plan assets had obligations of \$3,831 million and assets of \$3,558 million.

At December 31, 1997, the material non-U.S. defined benefit plans in which the plan assets exceeded the benefit obligation had obligations of \$18,322 million and assets of \$21,391 million. The material non-U.S. defined benefit plans in which the benefit obligation exceeded the fair value of plan assets had obligations of \$524 million and assets of \$450 million.

X Nonpension Postretirement Benefits

The company and its U.S. subsidiaries have defined benefit postretirement plans that provide medical, dental and life insurance for retirees and eligible dependents. Plan cost maximums for those who retired prior to January 1, 1992, will take effect beginning with the year 2001. Plan cost maximums for all other employees take effect upon retirement.

The changes in the benefit obligation and plan assets of the U.S. plans for 1998 and 1997 are as follows:

(Dollars in millions)	1998	1997*
Change in benefit obligation:		
Benefit obligation at beginning of year	\$ 6,384	\$ 6,453
Service cost	42	32
Interest cost	427	455
Amendments	(26)	(290)
Actuarial gains	(146)	(234)
Actuarial losses	272	435
Benefits paid from trust	(486)	(455)
Direct benefit payments	(10)	(12)
Benefit obligation at end of year	6,457	6,384
Change in plan assets:		
Fair value of plan assets at beginning of year	120	559
Actual return on plan assets	10	16
Employer contributions	479	—
Benefits paid, net of employee contributions	(486)	(455)
Fair value of plan assets at end of year	123	120
Benefit obligation in excess of plan assets	(6,334)	(6,264)
Unrecognized net actuarial losses	700	578
Unrecognized prior service cost	(965)	(1,073)
Accrued postretirement benefit liability recognized in the Consolidated Statement of Financial Position	\$ (6,599)	\$ (6,759)

* Reclassified to conform to 1998 presentation.

The benefit obligation was determined by application of the terms of medical, dental and life insurance plans, including the effects of established maximums on covered costs, together with relevant actuarial assumptions. These actuarial assumptions included a projected healthcare cost trend rate of 6 percent.

The net periodic postretirement benefit cost for the U.S. plan for the years ended December 31 included the following components:

(Dollars in millions)	1998	1997	1996
Service cost	\$ 42	\$ 32	\$ 43
Interest cost	427	455	478
Expected return on plan assets	(5)	(15)	(68)
Net amortization and deferral	(133)	(119)	(87)
Net periodic postretirement benefit cost	\$ 331	\$ 353	\$ 366

WEIGHTED-AVERAGE ASSUMPTIONS AS OF DECEMBER 31:

Discount rate	6.5%	7.0%	7.75%
Expected return on plan assets	5.0%	5.0%	9.25%

The assets of the plan are comprised of short-term fixed income investments. Certain of the company's non-U.S. subsidiaries have similar plans for retirees. However, most of the retirees outside the United States are covered by government-sponsored and administered programs. The obligations and cost of these programs are not significant to the company.

A one percentage-point change in the assumed healthcare cost trend rate would have the following effects as of December 31, 1998:

(Dollars in millions)	One Percentage Point Increase	One Percentage Point Decrease
Effect on total service and interest cost	\$ 4	\$ (6)
Effect on postretirement benefit obligation	\$ 87	\$ (122)

Y Segment Information

IBM is in the business of providing customer solutions through the use of advanced information technology. The company operates primarily in a single industry utilizing several segments that create value by offering a variety of solutions that include, either singularly or in some combination, technologies, systems, products, services, software and financing.

Organizationally, the company's major operations consist of three hardware product segments—Technology, Personal Systems and Server; a Global Services segment; a Software segment; a Global Financing segment and a series of Enterprise Investments. The product segments are determined based on several factors including customer base, homogeneity of products, technology, delivery channels and other factors.

The Technology segment produces peripheral equipment for use in general purpose computer systems including storage and networking devices, advanced function printers and display devices. In addition, the segment provides components such as semiconductors and hard disk drives for use in the company's products and for sale to original equipment manufacturers (OEM). Major business units include Storage Systems, Microelectronics, Printer Systems and Networking Hardware.

The Personal Systems segment produces general purpose computer systems, including some system and consumer software, that operate applications for use by one user at a time (personal computer clients), or as servers, and display devices. Major brands include the Aptiva home PC's, IntelliStation workstations, Netfinity servers, PC 300 commercial desktop and ThinkPad mobile systems. Consumer software brands include Crayola, Edmark and World Book Multimedia Encyclopedia. These products are sold primarily through reseller and retail channels.

The Server segment produces powerful multi-purpose computer systems that operate many open-network based applications and are used primarily by multiple users at the same time. They perform high-volume transaction processing and serve data to personal systems and other end-user devices. The servers are the engines behind the bulk of electronic business transactions, including e-commerce. Major brands include S/390, AS/400 and RS/6000. The segment's products are sold directly by the company and through business partner relationships.

The Global Services segment is the world's largest and most versatile information technology services provider, supporting computer hardware and software products, and providing professional services to help customers of all sizes realize the full value of information technology (IT). The segment provides its customers with services that include business and IT consulting, business transformational services like an ERP solution, e-business services and full scope services like strategic outsourcing or Total Systems Management services. The Global Services segment is uniquely suited to integrate the full range of the company's capabilities, including hardware, software and research.

The Software segment delivers operating systems for the company's servers and middleware for IBM and non-IBM platforms. Middleware includes application development, data management, networking, systems management, transaction processing, and messaging and collaboration. In addition to its own development, product and marketing effort, the segment supports more than 29,000 independent software vendors to ensure that the company's software and hardware offerings are included in those partners' solutions.

The Global Financing segment provides and facilitates a broad array of financing services for the company, its customers and its business partners. The primary focus is to leverage its financial structuring, portfolio management and partnering skills to expand the company's customer and partner base.

Enterprise Investments segment provides a spectrum of initiatives in information technology solutions, supporting the hardware, software and services segments of the company. The segment develops unique products designed to meet specific marketplace requirements and to complement the company's overall portfolio of products.

Segment revenue and pre-tax income include transactions between the segments which are intended to reflect an arm's-length transfer at the best price available for comparable external customers. Specifically, semiconductors and disk drives are sourced internally from the Technology segment for use in the manufacture of the Server segment and Personal Systems segment products. Technology, hardware and software used by the Global Services segment in outsourcing

engagements are sourced internally from the Technology, Server, Personal Systems and Software segments. For the internal use of information technology services, the Global Services segment recovers cost as well as a reasonable fee reflecting the arm's-length value of providing the services. The Global Services segment enters into arm's-length leases at prices equivalent to market rates with the Global Financing segment to facilitate the acquisition of equipment used in outsourcing engagements. All internal transaction prices are reviewed and reset annually if appropriate.

The company extensively utilizes shared-staff concepts in order to realize economies of scale and efficient use of resources. As such, a significant amount of expense is shared by all of the company's segments. This expense represents sales coverage, marketing and support functions such as Accounting, Treasury, Procurement, Legal, Human Resources and Billing and Collections. Where practical, shared expenses are allocated based on measurable drivers of expense, e.g., Human Resources costs are allocated on headcount while account coverage expenses are allocated on a revenue mix that reflects the company's sales commission plan. When a clear and measurable driver cannot be identified, shared expenses are allocated based on a financial basis consistent with the company's management system, e.g., image advertising is allocated based on the gross profit of the segments. The unallocated corporate expenses primarily relate to expense arising from certain acquisitions, indirect infrastructure reductions and currency exchange gains and losses recorded in net income which are not allocated to the segments.

The following tables reflect the results of the segments consistent with the company's management system. These results are not necessarily a depiction that is in conformity with generally accepted accounting principles, e.g., employee retirement plan costs are developed using actuarial assumptions on a country-by-country basis and allocated to the segments on headcount. A different result could be arrived at for any segment if actuarial assumptions unique to each segment were used. Performance measurement is based on income before income taxes (pre-tax income). These results are used, in part, by management, both in evaluating the performance of, and in allocating resources to, each of the segments.

MANAGEMENT SYSTEM SEGMENT VIEW

(Dollars in millions)	Hardware Segments			Global Services	Software	Global Financing	Enterprise Investments	Total Segments
	Technology	Personal Systems	Server					
1998:								
External revenue	\$ 11,890	\$ 12,776	\$ 10,624	\$ 28,916	\$ 11,863	\$ 2,979	\$ 2,468	\$ 81,516
Internal revenue	4,578	29	445	2,747	749	792	56	9,396
Total revenue	\$ 16,468	\$ 12,805	\$ 11,069	\$ 31,663	\$ 12,612	\$ 3,771	\$ 2,524	\$ 90,912
Pre-tax income	\$ 955	\$ (992)	\$ 2,842	\$ 3,757	\$ 2,588	\$ 1,165	\$ (616)	\$ 9,699
Revenue year-to-year change	(4.4)%	(10.8)%	(6.0)%	13.5%	6.6%	5.8%	0.6%	2.0%
Pre-tax income year-to-year change	(47.1)%	(516.1)%	(1.9)%	30.0%	27.2%	3.0%	32.3%	0.1%
Pre-tax income margin	5.8%	(7.7)%	25.7%	11.9%	20.5%	30.9%	(24.4)%	10.7%
1997:								
External revenue	\$ 11,083	\$ 14,337	\$ 11,286	\$ 25,166	\$ 11,164	\$ 2,935	\$ 2,438	\$ 78,409
Internal revenue	6,147	20	491	2,737	671	628	70	10,764
Total revenue	\$ 17,230	\$ 14,357	\$ 11,777	\$ 27,903	\$ 11,835	\$ 3,563	\$ 2,508	\$ 89,173
Pre-tax income	\$ 1,806	\$ (161)	\$ 2,896	\$ 2,890	\$ 2,034	\$ 1,131	\$ (910)	\$ 9,686
Revenue year-to-year change	0.3%	3.3%	(6.9)%	12.6%	(1.5)%	(3.3)%	5.0%	3.0%
Pre-tax income year-to-year change	17.7%	(312.8)%	(12.1)%	14.3%	(17.5)%	(10.2)%	(17.4)%	(5.7)%
Pre-tax income margin	10.5%	(1.1)%	24.6%	10.4%	17.2%	31.7%	(36.3)%	10.9%
1996:								
External revenue	\$ 10,244	\$ 13,876	\$ 12,230	\$ 22,310	\$ 11,426	\$ 3,224	\$ 2,294	\$ 75,604
Internal revenue	6,942	23	423	2,460	593	462	95	10,998
Total revenue	\$ 17,186	\$ 13,899	\$ 12,653	\$ 24,770	\$ 12,019	\$ 3,686	\$ 2,389	\$ 86,602
Pre-tax income	\$ 1,535	\$ (39)	\$ 3,293	\$ 2,529	\$ 2,466	\$ 1,260	\$ (775)	\$ 10,269
Pre-tax income margin	8.9%	(0.3)%	26.0%	10.2%	20.5%	34.2%	(32.4)%	11.9%

Reconciliations to IBM as Reported

(Dollars in millions)	1998	1997	1996
REVENUE:			
Total reportable segments	\$ 90,912	\$ 89,173	\$ 86,602
Other revenues	151	99	343
Elimination of internal revenue	(9,396)	(10,764)	(10,998)
Total IBM Consolidated	\$ 81,667	\$ 78,508	\$ 75,947
PRE-TAX INCOME:			
Total reportable segments	\$ 9,699	\$ 9,686	\$ 10,269
Elimination of internal transactions	(162)	(377)	(251)
Unallocated corporate expenses	(497)	(282)	(996)
Purchased research and development	—	—	(435)
Total IBM Consolidated	\$ 9,040	\$ 9,027	\$ 8,587

Major Customers

No single customer represents 10% or more of the company's total revenue.

Immaterial Items
INVESTMENT IN EQUITY ALLIANCES AND EQUITY ALLIANCES GAINS/LOSSES

The investments in equity alliances and the resulting gains and losses from these investments attributable to the segments are minimal and do not have a material impact on the financial results of the segments.

Segment Assets and Other Items

The assets of the hardware segments primarily include inventory and plant, property and equipment. The software segment assets mainly include inventory, plant, property and equipment, and investment in deferred software development. The Global Services segment assets primarily include maintenance inventory and plant, property and equipment associated with its strategic outsourcing business. Details regarding the Global Financing segment assets can be found on page 89.

To accomplish the efficient use of space and equipment, it becomes necessary, in most instances, for several segments to share plant, property and equipment assets. Where assets are shared, landlord ownership of the assets is assigned to one segment and not allocated to each user segment. This is consistent with the company's management system and is reflected as such in the schedule on page 88. In such cases, there will not be a precise compatibility between segment pre-tax income and segment assets.

Similarly, the depreciation amounts reported by segment are deployed on a landlord ownership basis and may not be consistent with the actual amounts included in the segments' pre-tax income. Such amounts included in pre-tax income reflect occupancy charges from the landlord segment and are not specifically identified by the management reporting system.

Capital expenditures reported by segment are also in line with the landlord ownership basis of asset assignment.

The Global Financing segment amounts on page 88 for interest income and interest expense reflect the interest income and expense associated with the financing business as well as the investment in cash and marketable securities. The remaining amounts of interest income and interest expense are not allocated discretely to the other segments, but are included as part of an indirect expense allocation.

MANAGEMENT SYSTEM SEGMENT VIEW

(Dollars in millions)	Hardware Segments			Global Services	Software	Global Financing	Enterprise Investments	Total Segments
	Technology	Personal Systems	Server					
1998:								
Assets	\$ 11,251	\$ 1,464	\$ 2,106	\$ 2,236	\$ 2,577	\$ 40,109	\$ 363	\$ 60,106
Depreciation/amortization	1,207	121	178	322	681	2,768	15	5,292
Capital expenditures/ investment-software	2,044	156	288	358	424	3,438	19	6,727
Interest income	—	—	—	—	—	2,725	—	2,725
Interest expense	—	—	—	—	—	1,252	—	1,252
1997:								
Assets	\$ 10,060	\$ 1,629	\$ 2,191	\$ 1,914	\$ 2,642	\$ 35,444	\$ 362	\$ 54,242
Depreciation/amortization	1,092	112	167	315	1,132	2,170	10	4,998
Capital expenditures/ investment-software	2,028	195	235	361	515	3,615	16	6,965
Interest income	—	—	—	—	—	2,639	—	2,639
Interest expense	—	—	—	—	—	1,175	—	1,175
1996:								
Assets	\$ 9,435	\$ 2,666	\$ 2,322	\$ 2,067	\$ 2,813	\$ 31,793	\$ 295	\$ 51,391
Depreciation/amortization	1,030	141	201	283	1,496	1,761	11	4,923
Capital expenditures/ investment-software	1,805	162	171	359	453	3,086	11	6,047
Interest income	—	—	—	—	—	2,752	—	2,752
Interest expense	—	—	—	—	—	1,166	—	1,166

Reconciliations to IBM as Reported

(Dollars in millions)	1998	1997	1996
ASSETS:			
Total reportable segments	\$ 60,106	\$ 54,242	\$ 51,391
Elimination of internal transactions	(7,519)	(6,287)	(5,192)
Unallocated amounts:			
Cash and marketable securities	4,295	6,062	6,601
Notes and accounts receivable	7,715	7,441	7,962
Deferred tax assets	5,376	4,746	4,683
Plant, other property and equipment	7,706	7,564	7,505
Pension assets	4,836	3,828	3,323
Other	3,585	3,903	4,859
Total IBM Consolidated	\$ 86,100	\$ 81,499	\$ 81,132

In addition to the previous information for the company's business segments, the following information is provided to enhance the understanding of the Global Financing segment. This data summarizes the Global Financing segment's financial statements for 1998, 1997 and 1996, respectively.

STATEMENT OF FINANCIAL POSITION

(Dollars in millions)

At December 31:	1998	1997	1996
Assets:			
Cash and cash equivalents	\$ 1,032	\$ 998	\$ 1,433
Net investment in capital leases	14,456	13,831	13,430
Working capital financing receivables	5,798	4,928	4,030
Loans receivable	8,682	6,951	6,428
Inventories	119	111	98
Equipment on operating leases and other property, net of accumulated depreciation	5,663	5,168	3,988
Other assets	4,359	3,457	2,386
Total assets	\$ 40,109	\$ 35,444	\$ 31,793
Liabilities and stockholders' equity:			
Taxes, accrued expenses and other liabilities	\$ 8,077	\$ 7,969	\$ 7,915
Debt	27,754	23,824	20,627
Total liabilities	35,831	31,793	28,542
Stockholders' equity/ invested capital	4,278	3,651	3,251
Total liabilities and stockholders' equity	\$ 40,109	\$ 35,444	\$ 31,793

NET INCOME

(Dollars in millions)

For the year ended December 31:	1998	1997	1996
Net income before income taxes	\$ 1,165	\$ 1,131	\$ 1,260
Provision for income taxes	432	429	531
Net income	\$ 733	\$ 702	\$ 729
Return on equity	19.1%	20.3%	22.7%

Geographic Information

(Dollars in millions)	Revenue*			Long-lived Assets**		
	1998	1997	1996	1998	1997	1996
United States	\$ 35,303	\$ 32,663	\$ 29,395	\$ 18,450	\$ 17,802	\$ 16,910
Japan	8,567	9,765	10,181	4,310	3,635	3,765
Other non-U.S. countries	37,797	36,080	36,371	12,343	11,621	11,648
Total	\$ 81,667	\$ 78,508	\$ 75,947	\$ 35,103	\$ 33,058	\$ 32,323

* Revenues are attributed to countries based on location of customer.

**Includes all non-current assets except non-current financial instruments and deferred tax assets.

CASH FLOWS

(Dollars in millions)

For the year ended December 31:	1998	1997	1996
Net cash provided from operating activities	\$ 4,441	\$ 3,919	\$ 5,314
Net cash used in investing activities	(7,296)	(8,435)	(5,544)
Net cash provided from financing activities	2,856	4,102	872
Effect of exchange rate changes on cash and cash equivalents	33	(21)	(17)
Net change in cash and cash equivalents	34	(435)	625
Cash and cash equivalents at January 1	998	1,433	808
Cash and cash equivalents at December 31	\$ 1,032	\$ 998	\$ 1,433

Revenue by Classes of Similar Products or Services

For the Personal Systems, Server, Software and Global Financing segments, the segment data on page 86 represents the revenue contributions from the products contained in the segments which are basically similar in nature. In the Technology and Global Services segments the table below provides external revenue for similar classes of products within those segments. OEM hardware consists primarily of revenue from the sale of HDD storage files and semiconductors. Storage consists of externally attached direct access storage devices and tape storage devices. Other technology consists primarily of advanced function printers and networking devices.

(Dollars in millions)	Consolidated		
	1998	1997	1996
Technology:			
OEM	\$ 6,756	\$ 5,560	\$ 4,123
Storage	2,439	2,644	2,716
Other technology	2,695	2,879	3,405
Global Services:			
Services	23,730	19,534	16,218
Maintenance	5,186	5,632	6,092

Five-Year Comparison of Selected Financial Data

(Dollars in millions except per share amounts)

For the year:	1998	1997	1996	1995	1994
Revenue	\$ 81,667	\$ 78,508	\$ 75,947	\$ 71,940	\$ 64,052
Net income	6,328	6,093	5,429	4,178	3,021
Per share of common stock—basic	6.75	6.18	5.12	3.61	2.51
Per share of common stock—assuming dilution	6.57	6.01	5.01	3.53	2.48
Cash dividends paid on common stock	814	763	686	572	585
Per share of common stock	.86	.775	.65	.50	.50
Investment in plant, rental machines and other property	6,520	6,793	5,883	4,744	3,078
Return on stockholders' equity	32.6%	29.7%	24.8%	18.5%	14.3%
At end of year:					
Total assets	\$ 86,100	\$ 81,499	\$ 81,132	\$ 80,292	\$ 81,091
Net investment in plant, rental machines and other property	19,631	18,347	17,407	16,579	16,664
Working capital	5,533	6,911	6,695	9,043	12,112
Total debt	29,413	26,926	22,829	21,629	22,118
Stockholders' equity	19,433	19,816	21,628	22,423	23,413

Selected Quarterly Data

(Dollars in millions except per share amounts and stock prices)

	Revenue	Gross Profit	Net Income	Per Share Common Stock			Stock Prices**	
				Earnings-Basic	Earnings-Assuming Dilution	Dividends	High	Low
1998								
First quarter	\$ 17,618	\$ 6,450	\$ 1,036	\$ 1.08	\$ 1.06	\$.20	\$ 108.38	\$ 95.63
Second quarter	18,823	7,146	1,452	1.54	1.50	.22	129.31	103.31
Third quarter	20,095	7,467	1,494	1.60	1.56	.22	138.13	110.75
Fourth quarter	25,131	9,809	2,346	2.55	2.47	.22	189.94	116.81
Total	\$ 81,667	\$ 30,872	\$ 6,328	\$ 6.75*	\$ 6.57*	\$.86		
1997								
First quarter	\$ 17,308	\$ 6,592	\$ 1,195	\$ 1.19	\$ 1.16	\$.175	\$ 85.06	\$ 65.00
Second quarter	18,872	7,401	1,446	1.46	1.43	.200	93.75	63.56
Third quarter	18,605	7,098	1,359	1.38	1.35	.200	109.44	90.13
Fourth quarter	23,723	9,518	2,093	2.16	2.11	.200	113.50	88.63
Total	\$ 78,508	\$ 30,609	\$ 6,093	\$ 6.18*	\$ 6.01*	\$.775		

* The sum of the quarters' earnings per share does not equal the year-to-date earnings per share due to changes in average share calculations. This is in accordance with prescribed reporting requirements.

** The stock prices reflect the high and low prices for IBM's common stock on the New York Stock Exchange composite tape for the last two years.

STOCKHOLDER INFORMATION

IBM Stockholder Services

Stockholders with questions about their accounts should contact:
First Chicago Trust Company, a division of EquiServe
Mail Suite 4688
P.O. Box 2530
Jersey City, New Jersey 07303-2530
(888) IBM-6700

Investors residing outside the United States, Canada and Puerto Rico should call (201) 324-0405.

Stockholders can also reach First Chicago Trust Company via the Internet at: ibmfct@em.fcncbd.com

Hearing-impaired stockholders with access to a telecommunications device (TDD) can communicate directly with First Chicago Trust Company by calling (201) 222-4489.

IBM on the Internet

Topics featured in this Annual Report can be found via the IBM home page on the Internet (<http://www.ibm.com>). Financial results, news on IBM products, services and other activities can also be found via that address. Stockholders of record can receive online account information and answers to frequently asked questions regarding stockholder accounts via the Internet (<http://www.ibm.com/investor>).

Stockholders of record can also consent to receive future IBM Annual Reports and Proxy Statements online through the Internet at this site.

IBM Investor Services

The Investor Services Program brochure outlines a number of services provided for IBM stockholders and potential IBM investors, including the reinvestment of dividends, direct purchase and the deposit of IBM stock certificates for safekeeping. Call (888) 421-8860 for a copy of the brochure. Investors residing outside the United States, Canada and Puerto Rico should call (201) 324-0405.

Annual Meeting

The IBM Annual Meeting of Stockholders will be held on Tuesday, April 27, 1999, at 10 a.m. (EST) at the James L. Knight Center at the Miami Convention Center in Miami, Florida.

IBM Stock

IBM common stock is listed on the New York Stock Exchange, on other exchanges in the United States and around the world.

Stockholder Communications

Stockholders in the United States and Canada can get quarterly financial results, listen to a summary of Mr. Gerstner's Annual Meeting remarks and hear voting results from the meeting by calling (800) IBM-7800. Callers can also request printed copies of the information via mail or fax. Stockholders residing outside the United States, Canada and Puerto Rico should call (402) 573-9861.

Investors with other requests may write to:

IBM Stockholder Relations
IBM Corporation
New Orchard Road
Armonk, New York 10504

Literature for IBM Stockholders

The following literature on IBM is available without charge from First Chicago Trust Company, a division of EquiServe
Mail Suite 4688
P.O. Box 2530
Jersey City, New Jersey 07303-2530
(201) 324-0405

The Form 10-K Annual Report and Form 10-Q Quarterly Reports to the SEC provide additional information on IBM's business. The 10-K is issued in April; 10-Q reports are released in May, August and November.

An audio cassette recording of the 1998 Annual Report is available for sight-impaired stockholders.

IBM Credit Corporation's Annual Report is available in April.

"Progress Report: Environment and Well-Being" reports on IBM's environmental, safety and energy programs.

"Valuing Diversity: An Ongoing Commitment" communicates to the company's entire community of employees, customers, stockholders, vendors, suppliers, business partners and employment applicants the importance IBM places on the diversity of the company's workplace and marketplace.

General Information

For answers to general questions about IBM from within the continental United States, call (800) IBM-4YOU. From outside the United States, call (770) 863-1234.

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