

## To Our Stockholders:

We are pleased to report outstanding results for the first fiscal quarter of 1987, ended December 31, 1986. Compared to the same period in fiscal 1986, earnings per share more than doubled, to a record \$.58 from \$.28; revenue increased sharply by 40 percent; and the pretax margin reached 20 percent of revenue, a strong improvement over 12 percent recorded a year ago.

In this quarter, business in the United States improved markedly and international business remained strong. We received strategic commitments from major accounts in the United States and abroad. For example, a large petroleum company in Europe selected Tandem systems for a major point-of-sale network; a leading U.S. automobile manufacturer selected our systems for a nationwide dealer network; and a major U.S. bank committed an international banking application to Tandem systems.

We believe we are winning strategic commitments like these because our products satisfy the full requirements of the high-growth, distributed on-line transaction processing market. Successful products this quarter included two new systems that we manufactured and shipped in production quantities: the new NonStop VLX system for mainframe applications and the NonStop EXT10 system for distributed operations. Our NonStop TXP system and our award-winning disk storage devices also were successful. This quarter, the VLX system and the new EXT systems won the prestigious Hannover Fair "Good Industrial Design" award. We believe that these awards represent a strong endorsement of our product design.

We introduced several products this quarter that support our strategy to extend our product offerings to the departments of large organizations. The MULTILAN product allows Tandem systems to be connected to more local area networks (LANs) than any other system vendor. With the MULTILAN solution, users can integrate personal computers with Tandem systems through any LAN that supports the IBM NETBIOS protocols and gain the first fault-tolerant, distributed file server in the industry. Three new workstations were added to Tandem's 6AX line of PC AT-compatible products. New WORDLINK software allows transparent document exchange be-

tween normally incompatible word processors connected to a Tandem system.

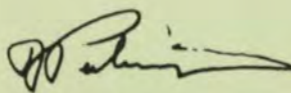
We also announced Remote Duplicate Database Facility (RDF) system software. With RDF software, Tandem users can restore the operation of critical applications within minutes after a massive disruption such as an earthquake, rather than in the hours or days required by conventional schemes.

We strengthened our management team with the appointments of two individuals to newly created vice presidential positions, one for International Sales Operations, the other for New Ventures. These appointments will broaden our ability to provide solutions that are tailored to the specialized needs of different industries and geographical areas.

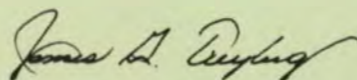
This quarter we announced a joint venture agreement with VOLMAC Group, Utrecht, the Netherlands, to form a new company. The new firm, Twinac, will provide project management and contract consulting services to Tandem customers for large on-line application projects. It also will assist Tandem Alliance members in the distribution and support of their software packages in the Netherlands.

We attribute our success this quarter to Tandem's strategic market positioning, unique computer architecture, and strong product cycle. These factors, combined with the improvements we have made in our organization, enabled us to achieve strong financial performance at a time when many in our industry are experiencing difficulties. We are encouraged by our positive results this quarter, and we will continue to strengthen our organization to support our growing business.

Sincerely,



Thomas J. Perkins  
Chairman of the Board



James G. Treybig  
President and  
Chief Executive Officer

February 18, 1987

Tandem, NonStop, NonStop VLX, NonStop EXT10, NonStop TXP, MULTILAN, WORDLINK, RDF and 6AX are trademarks of Tandem Computers Incorporated.

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**TANDEM** COMPUTERS

### Tandem Business Information Center

"**I**n this quarter, business in the United States improved markedly and international business remained strong. We received strategic commitments from major accounts in the United States and abroad."

**FIRST QUARTER REPORT**

DECEMBER 31, 1986

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## Tandem Computers Incorporated and Subsidiaries

## CONSOLIDATED INTERIM STATEMENT OF INCOME (UNAUDITED)

(In Thousands, Except Per Share Amounts)	For the Three Months Ended	
	December 31, 1986	December 31, 1985
<b>Revenue</b>		
Product revenue	\$198,725	\$140,293
Service and other revenue	39,310	29,768
Total revenue	238,035	170,061
<b>Costs and Expenses</b>		
Cost of product	53,581	43,310
Cost of service and other	27,837	22,821
Research and development	24,315	19,847
Marketing, general and administrative	86,761	64,768
Total costs and expenses	192,494	150,746
<b>Operating Income</b>	45,541	19,315
Interest income, net	2,847	1,673
<b>Income Before Income Taxes</b>	48,388	20,988
Provision for income taxes	(21,291)	(9,340)
<b>Net Income</b>	\$ 27,097	\$ 11,648
<b>Earnings Per Share</b>	\$ .58	\$ .28
Weighted average shares outstanding	46,793	42,177

Certain prior period amounts have been reclassified to conform with the current period presentation.

## Tandem Computers Incorporated and Subsidiaries

## CONSOLIDATED INTERIM BALANCE SHEET (UNAUDITED)

(In Thousands, Except Share Data)	December 31, 1986	December 31, 1985
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash investments	\$234,056	\$134,311
Accounts receivable	243,326	178,252
Inventories	66,455	75,139
Prepaid expenses and other	16,819	13,774
Prepaid income taxes	7,546	1,924
Total current assets	568,202	403,400
<b>Property, Plant and Equipment, at cost</b>	311,785	246,915
Accumulated depreciation and amortization	(116,347)	(88,808)
Net property, plant and equipment	195,438	158,107
<b>Other Assets</b>	12,914	8,591
<b>Total Assets</b>	\$776,554	\$570,098
<b>Liabilities and Stockholders' Investment</b>		
<b>Current Liabilities</b>		
Accounts payable	54,348	33,877
Accrued liabilities	75,174	47,773
Accrued income taxes	33,465	—
Current portion of long term debt and capital lease obligations	\$ 1,786	\$ 7,310
Total current liabilities	164,773	88,960
<b>Long Term Debt and Capital Lease Obligations</b>	8,327	11,404
<b>Deferred Income Taxes</b>	29,916	34,684
<b>Stockholders' Investment</b>		
Common stock, \$.025 par value; authorized 200,000,000 shares; outstanding 44,314,310 in 1986 and 41,604,711 in 1985	1,108	1,040
Additional paid-in capital	301,192	241,987
Retained earnings	271,238	192,023
Total stockholders' investment	573,538	435,050
<b>Total Liabilities and Stockholders' Investment</b>	\$776,554	\$570,098



**TO OUR STOCKHOLDERS:**

Tandem's revenue in the second fiscal quarter of 1986 surpassed that of the first quarter, reversing a trend of sequential downturns in second quarters of previous years. Demand in Europe for the Company's products was very strong and was an important factor in Tandem's performance this quarter.

Revenue for the second fiscal quarter ending March 31, 1986 reached \$176,327,000, a 20.4% increase over the same quarter last year. Net income grew 81.4% to \$12,410,000, or \$.29 per share, versus \$6,841,000, or \$.16 per share, earned in the second quarter of fiscal 1985.

For the six months ending March 31, 1986, revenue increased 13.1% to \$346,388,000, from \$306,142,000 in the same period of fiscal 1985. Net income advanced 15.3% to \$24,058,000, or \$.56 per share, compared with fiscal 1985 first-half net income of \$20,869,000, or \$.50 per share.

Earnings per share grew sharply this quarter, despite the fact that we suspended short-term cost saving measures, such as a salary freeze, which were implemented last fall in response to weakening demand in the U.S. Conditions have improved somewhat since that time. However, we are continuing to limit hiring. Total employment has declined slightly in each of the last three quarters.

Shortly after the close of the second quarter, Tandem announced a new VLSI-based computer system that extends the high end of our NonStop™ computer family. The NonStop VLX™ system, which was already in production at the time of the announcement, makes significant contributions in performance and serviceability. The VLX system's price/performance is unequaled in the industry. The basic configuration delivers twice the throughput of a comparable NonStop TXP™ system and reduces the cost per transaction by 30 percent. Because of new, on-line remote diagnostic features based on expert system technology, service cost is half that of the TXP system – and only one-fourth on a cost per transaction basis.

The VLX system is the most significant outcome to date of our six-year investment in VLSI design and product development facilities. It demonstrates our ability to produce large-scale gate array designs and gives us the knowledge base we need to leverage these designs, along

with off-the-shelf microprocessor technologies, much more rapidly into future new products.

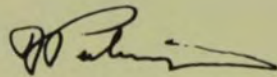
We also introduced our PATHMAKER™ application generator, which reduces by half the time required to develop on-line applications for NonStop systems, and MEASURE™ system performance monitor, which is a real-time, on-line measurement tool that can help maximize performance of complex high-volume on-line transaction processing systems.

These three product announcements join a long list of product introductions over the past year that have delivered new hardware and software technologies to every part of our system offering. They have substantially reduced system cost and service cost and have dramatically improved performance and function.

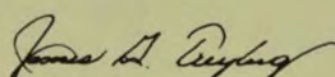
Tandem continues to build leadership in key on-line transaction processing markets throughout the world. For example, Tandem has made significant penetration of the United Kingdom brokerage industry as a result of the deregulation of the securities industry, while expanding a strong presence in the U.K. retail banking industry. This market presence enabled our U.K. subsidiary to grow at a very rapid rate this quarter. We see similar progress throughout our international operations, in such countries as Switzerland, France, Japan, Denmark and Canada, where strong performance contributed substantially to Tandem's success this quarter.

We believe that Tandem's prospects continue to improve as a result of new products, improved marketing programs and the favorable effects of the restructuring of our sales organization. These factors lead us to feel optimistic that our financial performance will continue to improve during the remainder of this year.

Sincerely yours,



Thomas J. Perkins  
Chairman



James G. Treybig  
President and  
Chief Executive Officer

200189

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**TANDEM  
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SECOND QUARTER  
REPORT**

**MARCH 31,  
1986**

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**CONSOLIDATED INTERIM  
STATEMENT OF INCOME (UNAUDITED)**

TANDEM COMPUTERS INCORPORATED AND SUBSIDIARIES

(In Thousands, Except Per Share Amounts)	For the Three Months Ended		For the Six Months Ended	
	March 31, 1986	March 31, 1985	March 31, 1986	March 31, 1985
<b>Revenue</b>				
Product revenue	\$142,754	\$120,088	\$279,982	\$254,223
Service and other revenue	33,573	26,401	66,406	51,919
Total revenue	176,327	146,489	346,388	306,142
<b>Costs and Expenses</b>				
Cost of revenue	58,025	57,713	116,869	119,734
Research and development	21,318	17,075	41,135	32,202
Marketing, general and administrative	76,986	61,998	149,071	121,994
Total costs and expenses	156,329	136,786	307,075	273,930
<b>Operating Income</b>	19,998	9,703	39,313	32,212
Interest income, net	2,362	1,573	4,035	3,461
<b>Income Before Income Taxes</b>	22,360	11,276	43,348	35,673
Provision for income taxes	(9,950)	(4,435)	(19,290)	(14,804)
<b>Net Income</b>	\$ 12,410	\$ 6,841	\$ 24,058	\$ 20,869
<b>Earnings Per Share</b>	\$ 0.29	\$ 0.16	\$ 0.56	\$ 0.50
Weighted average shares outstanding	43,385	42,156	42,781	41,770

**CONSOLIDATED INTERIM  
BALANCE SHEET (UNAUDITED)**

TANDEM COMPUTERS INCORPORATED AND SUBSIDIARIES

(In Thousands, Except Share Data)	March 31, 1986	March 31, 1985
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash investments	\$160,767	\$107,737
Accounts receivable	182,577	162,927
Inventories	69,872	91,273
Prepaid expenses and other	16,739	7,977
Total current assets	429,955	369,914
<b>Property, Plant and Equipment, at cost</b>	251,199	215,773
Accumulated depreciation and amortization	(95,110)	(64,554)
Net property, plant and equipment	156,089	151,219
<b>Other Assets</b>	9,373	4,882
<b>Total Assets</b>	\$595,417	\$526,015
<b>Liabilities and Stockholders' Investment</b>		
<b>Current Liabilities</b>		
Current portion of long term debt and capitalized lease obligations	\$ 7,721	\$ 6,537
Accounts payable	36,679	39,856
Accrued liabilities	45,888	42,724
Accrued income taxes	3,945	3,551
Total current liabilities	94,233	92,668
<b>Capitalized Lease Obligations</b>	5,982	9,828
<b>Long Term Debt</b>	4,445	2,672
<b>Deferred Income Taxes</b>	34,324	17,810
<b>Stockholders' Investment</b>		
Common stock, \$.025 par value; authorized 200,000,000 shares; outstanding 42,139,637 in 1986 and 41,111,986 in 1985	1,054	1,028
Additional paid-in capital	250,946	235,139
Retained earnings	204,433	166,870
Total stockholders' investment	456,433	403,037
<b>Total Liabilities and Stockholders' Investment</b>	\$595,417	\$526,015



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**TANDEM**

**TANDEM**



**Third Quarter Report** ♦ June 30, 1989

## To Our Stockholders:

We are pleased with the strong revenue and earnings growth Tandem achieved in the third fiscal quarter of 1989.

Revenue for the quarter grew 24 percent to \$420.7 million, compared with \$339.0 million in the same quarter of last year. Net income for the quarter increased 78 percent to \$30.8 million, or \$.31 per share, versus \$17.3 million, or \$.18 per share, earned in the same quarter of last year.

For the nine-month period ending June 30, 1989, revenue increased to \$1.2 billion, compared with \$930.7 million in the same period a year ago. Net income was \$78.9 million, or \$.79 per share, versus \$64.3 million, or \$.65 per share, earned in the first nine months of fiscal 1988.

Computer systems revenue was very strong in the United States and rebounded well from the second quarter in Europe. Our Intercontinental division continued to perform well. The enterprise networking business of Ungermann-Bass saw good revenue growth and improved profitability.

We made significant progress during the quarter in strategic product areas, including distributed midrange systems, database, networking, and security. We added the NonStop CLX 700 series to our NonStop CLX family of midrange online transaction processing (OLTP) systems. Featuring excellent price/performance, the CLX 700 series was very well received.

We announced Release 2 of our NonStop SQL distributed relational database software. Release 2 harnesses the power of parallelism inherent in Tandem systems for not only OLTP but also query and batch processing. We took steps to make NonStop SQL software easier to use through alliances with vendors of leading application development tools, including Oracle Corporation, Sybase, Inc., and OnLine Solutions Incorporated.

Several products were announced that help customers connect Tandem systems in key network environments such as IBM's Systems Network Architecture (SNA), Open Systems Interconnection (OSI), and Transmission Control Protocol/Internet Protocol (TCP/IP) networks. We shipped new software products that let customers link Apple Macintosh computers to our systems to provide a graphical user interface for Tandem applications.

Ungermann-Bass announced it is developing products that use a networking technology called 16 Mbps

(megabits per second) token ring to connect workstations with ordinary telephone wire. In addition, Atalla shipped a new high-performance security module that can be attached to most Tandem NonStop systems to protect sensitive data throughout a network from unauthorized access or alteration.

A large number of key orders from major customers reflects the validity of our product strategies. We shipped an important order to United Parcel Service, which is implementing its hub and feeder system on a distributed network of NonStop CLX systems. The California Department of Motor Vehicles (DMV) selected Tandem systems for a large database application. Ungermann-Bass also received an order from the DMV, underscoring the success of the Tandem/Ungermann-Bass merger.

Computer systems orders showed strength in the finance industry, especially in securities and banking. In health care, a potentially strong sector for Tandem, two important customers ordered large computer systems during the quarter.

Shortly after the quarter ended, the board of directors approved two new programs that we believe will help us continue to attract and motivate outstanding employees. A leveraged employee stock ownership program, or ESOP, forms the beginning of a retirement program for U.S. employees; in most countries outside the United States, our employees already have retirement programs. An option loan program will help employees acquire and hold Tandem stock.

This was an excellent quarter for Tandem in terms of product strategies, customer orders, and expense management. While we are cautious about the negative impact of a strengthening U.S. dollar, we think 1989 will finish as a good year for Tandem and we look forward to 1990.

Sincerely,

Thomas J. Perkins  
Chairman of the Board

James G. Treybig  
President and  
Chief Executive Officer

July 31, 1989



## Consolidated Statements of Income (Unaudited)

(In thousands except per share amounts)	For the Three Months Ended		For the Nine Months Ended	
	June 30, 1989	June 30, 1988	June 30, 1989	June 30, 1988
<b>Revenue</b>				
Product revenue	\$350,890	\$276,343	\$ 973,012	\$759,303
Service and other revenue	69,797	62,650	203,348	171,421
Total revenue	420,687	338,993	1,176,360	930,724
<b>Costs and expenses</b>				
Cost of product revenue	108,088	78,105	295,435	209,593
Cost of service and other revenue	46,467	46,640	139,418	127,310
Research and development	52,105	46,219	148,068	119,528
Marketing, general, and administrative	166,150	140,778	469,472	371,443
Total costs and expenses	372,810	311,742	1,052,393	827,874
<b>Operating income</b>	47,877	27,251	123,967	102,850
Net interest income (expense)	562	(1,019)	303	6,228
Settlement of litigation	-	-	-	(9,375)
<b>Income before income taxes</b>	48,439	26,232	124,270	99,703
Provision for income taxes	17,680	8,946	45,358	35,394
<b>Net income</b>	\$ 30,759	\$ 17,286	\$ 78,912	\$ 64,309
<b>Earnings per share</b>	\$ .31	\$ .18	\$ .79	\$ .65
Weighted average shares outstanding	100,569	98,252	100,213	98,904

These income statements include the financial results of Ungermann-Bass, Inc., from March 18, 1988, the date of acquisition.

TANDEM COMPUTERS INCORPORATED AND SUBSIDIARIES

## Consolidated Balance Sheets (Unaudited)

(In thousands)	June 30, 1989	June 30, 1988
<b>Assets</b>		
<b>Current assets</b>		
Cash and equivalents	\$ 101,433	\$ 93,507
Accounts receivable	388,604	316,927
Inventories	138,105	140,508
Prepaid expenses and other	78,417	42,532
Total current assets	706,559	593,474
<b>Property, plant, and equipment, at cost</b>	703,925	594,919
Accumulated depreciation and amortization	(270,082)	(203,142)
Net property, plant, and equipment	433,843	391,777
<b>Costs in excess of net assets acquired, net</b>	206,393	195,689
<b>Other assets</b>	79,284	51,587
<b>Total assets</b>	\$1,426,079	\$1,232,527
<b>Liabilities and stockholders' investment</b>		
<b>Current liabilities</b>		
Notes payable	\$ 7,738	\$ 17,124
Accounts payable	91,212	73,073
Accrued liabilities	201,296	136,377
Income taxes payable	56,241	22,126
Current maturities of long-term obligations	26,765	5,811
Total current liabilities	383,252	254,511
<b>Long-term obligations</b>	55,082	115,579
<b>Deferred income taxes</b>	35,467	44,106
<b>Stockholders' investment</b>		
Common stock, \$.025 par value; authorized 400,000 shares; outstanding 97,958 in 1989 and 95,510 in 1988	2,450	2,388
Additional paid-in capital	426,965	394,054
Retained earnings	524,764	415,676
Accumulated translation adjustments	(1,901)	6,213
Total stockholders' investment	952,278	818,331
<b>Total liabilities and stockholders' investment</b>	\$1,426,079	\$1,232,527

These balance sheets include the financial position of Ungermann-Bass, Inc., which was acquired in March of 1988.



## California DMV Chooses Tandem

Tandem NonStop VLX systems and NonStop SQL database management software have been chosen by the California Department of Motor Vehicles (DMV) to manage one of the largest online databases in the world. Information in the database, including data on driver licensing, vehicle registration, and occupational licensing, is critical to the DMV's daily operation. The DMV's 8,000 employees, in 170 offices statewide, must be able to access and update records instantly on more than 19 million drivers and 25 million vehicles. The data must be accessible around the clock to law enforcement officials throughout California.

The DMV is replacing its current data processing system with new relational database technology to serve the agency through the 1990s. In selecting the new system, the DMV's goals were to ensure DMV customers and clients the best service, and to choose technology that would be able to manage growth and change.

The agency's decision to use Tandem systems followed a year-long evaluation of products from various computer vendors. The evaluation included a "benchmark," or realistic test simulation. Audited by an independent consulting firm, the test compared systems from the two finalists, Tandem and IBM.

For the benchmark, the Tandem and IBM systems had to implement and manage the massive database. They had to handle both critical online applications and other types of processing (called "batch" and "query" operations) while meeting the DMV's performance requirements. Furthermore, the systems had to be able to survive major component failures and undergo routine maintenance while remaining available 24 hours a day, 7 days a week.

Tandem NonStop SQL database software, NonStop VLX transaction processing systems, and XL80 disk



storage facilities made up the Tandem benchmark system.

"Tandem demonstrated a higher degree of performance, availability, and operational ease of use," concluded the final DMV report. Initial and ongoing costs for hardware, software, and maintenance were significantly less for the Tandem solution than for IBM's, the report added. And finally, Tandem was able to provide a more extensive list of customers who had similar requirements, and was rated better able to meet future DMV requirements.

To begin implementing its new system, the State of California at \$5 million to purchase Tandem products valued at \$5 million. The DMV is also installing Ungermann-Bass's Access/One network delivery system at its headquarters to link terminals and workstations.

For Tandem, its selection by the California DMV represents a validation of the ability of Tandem products to handle the largest databases with top performance at competitive prices. It is also an indication of the success of Tandem's strategy of providing a single database system not just for online transaction processing (OLTP), a traditional strength of Tandem systems, but also for other important processing tasks. It clearly demonstrates how a large organization can use a single, online Tandem database as its main information bank. *For a free booklet on the DMV performance benchmark, call 800-482-6336 in the United States or 800-345-8636 in Canada. ■*

◀ *The California Department of Motor Vehicles recently chose Tandem systems to manage its database of information on more than 19 million drivers and 25 million vehicles.*

## Extending The Power Of Parallelism

Tandem is extending the power of parallelism with Release 2 of its NonStop SQL database software. Release 2 will provide a customer using Tandem systems and NonStop SQL software with powerful capabilities for both processing critical online applications and handling other essential tasks.

NonStop SQL software is the industry's first fully distributed relational database management system. It provides the high performance needed for OLTP and uses the widely accepted SQL language to help programmers be more productive.

NonStop SQL software takes advantage of the powerful capabilities of Tandem systems, in which multiple, separate processors operating in parallel divide complex tasks into separate parts that are handled simultaneously. This design helps the systems do their jobs faster and more efficiently—and allows the organizations that use them to save time and provide better service to their customers.

Release 2 of NonStop SQL software extends the power of parallelism beyond OLTP to batch processing and query operations. A batch task, such as payroll processing or customer billing, runs as a single large job at a regularly scheduled time. Queries are smaller batch jobs that occur at unscheduled times, often to support management decision making.

Release 2 of NonStop SQL software is scheduled to be available by the end of 1989. ■

## Partnerships Target Easy, Open Data Access

Tandem and three vendors of leading database products recently reached agreements aimed at speeding the development of application programs that use Tandem's NonStop SQL database software, and at facilitating data sharing between NonStop SQL software and personal computer database programs.

Oracle Corporation, of Belmont, California, has agreed to work with Tandem to develop and market the Oracle database toolset, a widely used application toolset, for use with NonStop SQL software. OnLine Solutions Incorporated, of Newton, Massachusetts, and Tandem will jointly market development tools from Cullinet Software. These popular tools from Oracle and Cullinet can help application developers become productive more quickly on Tandem database systems.

Sybase, Inc., of Berkeley, California, will work with Tandem to create an interface between Tandem's NonStop SQL software and SQL Server, a personal computer database product developed by Sybase, Ashton-Tate Corporation, and Microsoft Corporation. The interface will allow programs written for SQL Server to access data in a NonStop SQL database. ■

## New Technology From Ungermann-Bass

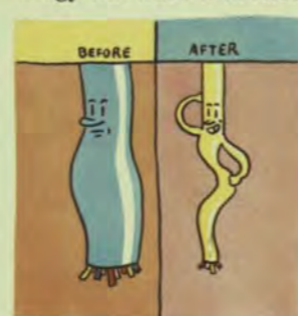
Ungermann-Bass, an independently operated subsidiary of Tandem, is developing a new high-speed networking technology that uses ordinary telephone wire to link workstations.

On-premises phone wire is less bulky and costs less than other wiring and cabling solutions, and already exists in many buildings worldwide. These advantages make it easier for customers to plan, install, and alter networks that are based on phone wire. The Access/One networking system, an existing product from Ungermann-Bass, already uses phone wire to support several key types of networking communications.

With the new technology, the Access/One system will use an emerging communications standard, called 16 Mbps token ring, to send data at high speeds through local area networks. Ungermann-Bass is the only vendor to announce support of 16 Mbps token ring over ordinary telephone wire.

Customers with networks that use Ungermann-Bass's Access/One networking system will be able to take advantage of the new high-speed communications technology when it becomes available in 1990.

Ungermann-Bass products that use the new technology will work with telecommunications systems and



services from AT&T, Southern New England Telephone, and British Telecom. These three companies endorsed the development program in a joint press announcement with Ungermann-Bass in May. ■

▲ *This illustration appeared in a June 19, 1989, Business Week article on a new Ungermann-Bass technology for linking workstations with telephone wire instead of bulky cable.*

## Tandem To Handle EFT/POS In Belgium

Ninety percent of all EFT/POS (electronic funds transfer at the point of sale) transactions in Belgium will now be handled by Tandem systems, as a result of the recent merger of two major Belgian EFT/POS networks.

The new combined network, called Banksys, was formed from the merger of two networks: Bancontact, run by a consortium of 36 Belgian banks, and Mister Cash. Before the merger, Bancontact used Tandem systems to handle its EFT/POS transactions, which totaled 68 million in 1988.

Banksys will control more than 900 ATMs (automated teller machines) and manage electronic payment and credit authorization at more than 3,000 automobile service stations and 16,000 retail outlets. Transaction volumes are projected to reach more than 125 million per year in 1990. To support the high volumes resulting from the merger, Banksys has installed a seven-processor Tandem NonStop VLX system.

The Banksys network provides both national and international electronic credit authorization. Cards supported by Banksys can be used in several European countries, and the network is linked to other international EFT/POS networks such as Eurocheque, EDCS, and Visa.

Tandem systems are widely used for EFT/POS services in most European countries and in many other countries around the world. ■

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## TO OUR STOCKHOLDERS:

We are pleased to report that Tandem's revenue and earnings grew sharply in the third fiscal quarter of 1986. Tandem's business has improved throughout the first nine months of the fiscal year, with the third quarter the strongest to date. International business remains strong, and business in the United States showed significant gains.

Revenue for the three-month period ending June 30, 1986 increased 39 percent to \$200,853,000, compared to revenue of \$144,165,000 in the same quarter of last year. Net income grew 659 percent to \$18,124,000, or \$.40 per share, versus \$2,388,000, or \$.06 per share, earned in the third quarter of fiscal 1985.

For the nine months ending June 30, 1986, revenue increased 22 percent to \$547,241,000, from \$450,307,000 in the same period of fiscal 1985. Net income advanced 81 percent to \$42,182,000, or \$.97 per share, compared with fiscal 1985 nine-month net income of \$23,257,000, or \$.56 per share.

The pretax profit margin reached 16 percent this quarter. The major factor in this margin improvement was an increase in gross profit margins, which resulted from higher revenue levels, a shift in mix toward more profitable products, and improvements in the level of service profitability. At the same time, we maintained our commitment to research and development and continued to invest in new marketing programs.

In this quarter, we saw a meaningful change in our U.S. business. For the first time in several quarters, U.S. operations posted strong growth. We are very proud of this achievement by the domestic field sales force. They delivered strong performance despite having fewer people, and despite adverse business conditions. We view especially positively our success in gaining important commitments from major accounts, including companies that are leaders in the areas of savings and loan, petroleum, brokerage and retailing.

For example, Safeway Stores purchased two systems for development of pilot applications for order processing, warehousing and communications. Among the other important customers in the quarter were Merrill Lynch & Co., Kentucky Fried Chicken, Citgo Petroleum and First Nationwide Savings.

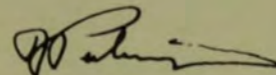
During the quarter, Tandem introduced the new NonStop VLX system, which is based on VLSI technology. The VLX system was announced at a press conference held at corporate headquarters early in the quarter. Customers have responded very positively to the capabilities, attractive price-performance ratio and technological leadership provided by this powerful new system. Shipments in the quarter exceeded our goals. Sales were made to companies in a wide variety of industries, confirming a broad potential market.

Other product introductions included the 6AX/20 and 6AX/40 workstations, which are IBM PC AT-compatible and can function either as stand-alone units or as fully integrated terminals for Tandem systems. Newly available software lets the user work with system information in one window and with local information in other windows.

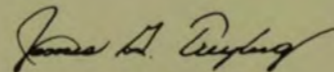
During the quarter Tandem became one of the first vendors to announce for immediate delivery a product conforming to the Layer 4 standard of the Open Systems Interconnection (OSI) model. OSI products provide a standard of interoperability that makes communication across multi-vendor networks more cost-effective for users.

Tandem achieved good financial results in a weak business environment. Despite the fact that we must view the economic outlook with caution, we are optimistic that customers will continue to respond favorably to Tandem's products and marketing programs, and that our fiscal year results will provide stockholders with significantly improved financial performance compared with last year.

Sincerely yours,



Thomas J. Perkins  
Chairman



James G. Treybig  
President and  
Chief Executive Officer

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THIRD QUARTER  
REPORT**

**JUNE 30,  
1986**

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**CONSOLIDATED INTERIM  
STATEMENT OF INCOME (UNAUDITED)**

TANDEM COMPUTERS INCORPORATED AND SUBSIDIARIES

(In Thousands, Except Per Share Amounts)	For the Three Months Ended		For the Nine Months Ended	
	June 30, 1986	June 30, 1985	June 30, 1986	June 30, 1985
<b>Revenue</b>				
Product revenue	\$159,237	\$116,868	\$439,219	\$371,091
Service and other revenue	41,616	27,297	108,022	79,216
Total revenue	200,853	144,165	547,241	450,307
<b>Costs and Expenses</b>				
Cost of revenue	61,030	56,116	177,899	175,850
Research and development	22,299	18,027	63,434	50,229
Marketing, general and administrative	86,923	69,482	235,994	191,476
Total costs and expenses	170,252	143,625	477,327	417,555
<b>Operating Income</b>	30,601	540	69,914	32,752
Interest income, net	2,054	1,298	6,089	4,759
<b>Income Before Income Taxes</b>	32,655	1,838	76,003	37,511
Provision for income taxes	(14,531)	550	(33,821)	(14,254)
<b>Net Income</b>	\$ 18,124	\$ 2,388	\$ 42,182	\$ 23,257
<b>Earnings Per Share</b>	\$ 0.40	\$ 0.06	\$ 0.97	\$ 0.56
Weighted average shares outstanding	45,003	41,896	43,522	41,812

**Tandem Business  
Information Center**

TANDEM COMPUTERS INCORPORATED AND SUBSIDIARIES

**CONSOLIDATED INTERIM  
BALANCE SHEET (UNAUDITED)**

(In Thousands, Except Share Data)	June 30, 1986	June 30, 1985
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash investments	\$177,243	\$109,022
Accounts receivable	205,064	150,606
Inventories	67,716	94,611
Prepaid income taxes	371	19,495
Prepaid expenses and other	20,399	9,241
Total current assets	470,793	382,975
<b>Property, Plant and Equipment</b> , at cost	271,545	230,817
Accumulated depreciation and amortization	(103,470)	(72,572)
Net property, plant and equipment	168,075	158,245
<b>Other Assets</b>	9,927	3,828
<b>Total Assets</b>	\$648,795	\$545,048
<b>Liabilities and Stockholders' Investment</b>		
<b>Current Liabilities</b>		
Current portion of long term debt and capitalized lease obligations	\$ 5,882	\$ 6,675
Accounts payable	40,036	36,678
Accrued liabilities	55,381	46,678
Accrued income taxes	9,893	10,889
Total current liabilities	111,192	100,920
<b>Capitalized Lease Obligations</b>	2,689	8,817
<b>Long Term Debt</b>	4,445	2,719
<b>Deferred Income Taxes</b>	35,198	24,988
<b>Stockholders' Investment</b>		
Common stock, \$.025 par value; authorized 200,000,000 shares; outstanding 43,149,995 in 1986 and 41,260,521 in 1985	1,079	1,032
Additional paid-in capital	271,635	237,314
Retained earnings	222,557	169,258
Total stockholders' investment	495,271	407,604
<b>Total Liabilities and Stockholders' Investment</b>	\$648,795	\$545,048



## To Our Stockholders:

Revenue for the second fiscal quarter of 1989 was \$363.4 million, a 17 percent increase over the same quarter of fiscal 1988, when revenue was \$309.4 million. Net income in the second quarter of 1989 was \$16.9 million, or \$.17 per share, compared to \$23.3 million, or \$.24 per share, in the same quarter last year.

For the six-month period ending March 31, 1989, revenue was \$755.7 million, an increase of 28 percent over \$591.7 million in the same period a year ago. Net income was \$48.2 million, or \$.48 per share, compared with \$47.0 million, or \$.47 per share, in the first six months of fiscal 1988.

We were pleased by the strong sales in Pacific Rim countries, the continuing growth in U.S. sales, and the high growth and profitability of Ungermann-Bass, Inc., during the quarter. However, overall revenue growth was below our target.

Because we historically have seen some softness at this time of year, we anticipated that revenue would be below the level achieved in our first fiscal quarter. However, the softness was greater than expected in Europe. We believe this was due in part to competitive pricing of other vendors' midrange systems in Europe and to the anticipation of an addition to Tandem's midrange NonStop CLX system family, announced after the quarter's end.

In May, we introduced the NonStop CLX 700 series. The four systems in this series offer a 40 percent increase in price/performance over the existing CLX 600 series. Like the CLX 600 series, the CLX 700 series incorporates Tandem fundamentals such as fault tolerance, expandability, and networking capabilities.

At the same time, we announced upgrade programs and price reductions for the CLX 600 series, which make these systems attractive entry points into our product line. We believe that the CLX 600 and 700 series will provide a competitive midrange system platform well into the 1990s.

In March and April, we announced a number of new products that address customer requirements for linking different systems throughout organizations.

With these new offerings, it is now easier to connect Tandem systems in major network environments, including IBM's Systems Network Architecture (SNA), Open

Systems Interconnection (OSI), and Transmission Control Protocol/Internet Protocol (TCP/IP) networks.

Enhancements to Tandem's EXPAND networking software, which provide support for industry-standard local area network protocols, were announced, as was an agreement with Logica Data Architects Inc. for the development of an X.400 software product for Tandem systems. X.400 is an important international standard for exchanging information among different computer systems.

In March, we announced an agreement with Relational Technology, Inc., to develop and market Relational's INGRES database tools for use with Tandem's NonStop SQL relational database management software. This partnership is an important step in our strategy to offer customers easy, open access to information stored on Tandem databases.

Finally, we are pleased that George P. Shultz, professor of international economics at the Graduate School of Business at Stanford University, honorary fellow of the Hoover Institution, and secretary of state under former President Reagan, has been elected a director of Tandem.

Though we are more cautious than before about fiscal 1989, we have identified actions we believe will help return our European operations to their historically high levels of performance. In addition, we are entering an exciting new product cycle and are managing expenses conservatively. We are working hard to ensure that 1989 will be a good year for Tandem.

Sincerely,

Thomas J. Perkins  
Chairman of the Board

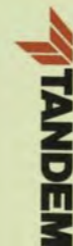
James G. Treybig  
President and  
Chief Executive Officer

May 8, 1989

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Second Quarter Report • March 31, 1989



## Consolidated Statements of Income (Unaudited)

	For the Three Months Ended		For the Six Months Ended	
	March 31, 1989	March 31, 1988	March 31, 1989	March 31, 1988
(In thousands except per share amounts)				
<b>Revenue</b>				
Product revenue	\$296,402	\$253,429	\$622,122	\$482,960
Service and other revenue	66,986	56,020	133,551	108,771
Total revenue	363,388	309,449	755,673	591,731
<b>Costs and expenses</b>				
Cost of product revenue	88,730	68,347	187,347	131,488
Cost of service and other revenue	46,241	41,555	92,951	80,670
Research and development	49,878	37,442	95,963	73,309
Marketing, general, and administrative	152,451	118,769	303,322	230,665
Total costs and expenses	337,300	266,113	679,583	516,132
<b>Operating income</b>	26,088	43,336	76,090	75,599
Net interest income (expense)	458	2,491	(259)	7,247
Settlement of litigation	—	(9,375)	—	(9,375)
<b>Income before income taxes</b>	26,546	36,452	75,831	73,471
Provision for income taxes	9,688	13,122	27,678	26,448
<b>Net income</b>	\$ 16,858	\$ 23,330	\$ 48,153	\$ 47,023
<b>Earnings per share</b>	\$ .17	\$ .24	\$ .48	\$ .47
Weighted average shares outstanding	100,964	98,712	100,035	99,231

The 1989 income statements include the financial results of Ungermann-Bass, Inc., from March 18, 1988, the date of acquisition.

## Consolidated Balance Sheets (Unaudited)

(In thousands)	March 31, 1989	March 31, 1988
<b>Assets</b>		
<b>Current assets</b>		
Cash and equivalents	\$ 89,371	\$ 102,781
Accounts receivable	342,988	305,247
Inventories	140,352	138,437
Prepaid expenses and other	66,983	28,572
Total current assets	639,694	575,037
<b>Property, plant, and equipment, at cost</b>	680,636	580,274
Accumulated depreciation and amortization	(255,903)	(191,667)
Net property, plant, and equipment	424,733	388,607
<b>Costs in excess of net assets acquired, net</b>	209,348	197,698
<b>Other assets</b>	71,031	46,837
<b>Total assets</b>	\$1,344,806	\$1,208,179
<b>Liabilities and stockholders' investment</b>		
<b>Current liabilities</b>		
Notes payable	\$ 6,977	\$ 6,912
Accounts payable	82,367	79,406
Accrued liabilities	185,824	167,166
Income taxes payable	34,486	21,428
Current maturities of long-term obligations	24,374	5,838
Total current liabilities	334,028	280,750
<b>Long-term obligations</b>	52,642	85,896
<b>Deferred income taxes</b>	38,971	44,834
<b>Stockholders' investment</b>		
Common stock, \$.025 par value; authorized 400,000 shares; outstanding 97,530 in 1989 and 94,850 in 1988	2,438	2,371
Additional paid-in capital	420,993	385,119
Retained earnings	494,005	398,390
Accumulated translation adjustments	1,729	10,819
Total stockholders' investment	919,165	796,699
<b>Total liabilities and stockholders' investment</b>	\$1,344,806	\$1,208,179

These balance sheets include the financial position of Ungermann-Bass, Inc., which was acquired in March of 1988.



## To Our Stockholders:

Tandem revenues for the first fiscal quarter of 1990 reached \$436.5 million, compared with \$392.3 million in the same period of 1989. Net income was \$30.7 million, or \$.29 per share, compared with \$31.3 million, or \$.32 per share, in the same quarter of last year.

We view these results positively, particularly since they come at a time of year when we sometimes experience softness. In addition, we were in transition this quarter as we introduced a powerful mainframe computer and prepared to launch a major UNIX® system offering.

Our NonStop Cyclone mainframe system is off to a strong start, with shipments exceeding our expectations. Some current customers, including Union Bank of Finland, have already installed large Cyclone systems. Among new customers are the Ministry of the Solicitor General in Canada, which has installed a Cyclone system to serve the Ontario Provincial Police; and Fokker Aircraft BV, a Dutch aerospace company, which will use a Cyclone system to implement a T.I.M.E. (Tandem Integrated Manufacturing Environment) application.

During the quarter, other NonStop computer systems also sold well. Midrange CLX systems continue to generate most of our new customer accounts. Shipments of VLX systems, our entry-level mainframes, reached the level planned.

Our independently operated subsidiary, Ungermann-Bass, Inc., continued to contribute to the Company's revenue growth. Ungermann-Bass introduced products during the quarter that further integrate local and wide area network applications into a single, open architecture, and include powerful new network-management functions. These offerings have been well received by customers, some of whom are already using the products to build large networks.

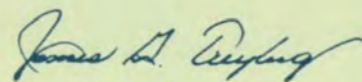
We are pleased that our Tandem Telecommunications Systems, Inc. (TTSI), subsidiary recorded a strategic sale to Cable & Wireless Communications, Inc., a subsidiary of the United Kingdom's Cable & Wireless Plc. TTSI's intelligent networking products give

Tandem significant competitive strengths in the fast-growing telecommunications sector.

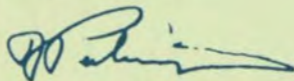
One of our most important new products this year is the Integrity S2 system. This offering brings Tandem strengths of fault tolerance, data integrity, and online user serviceability to the high-growth market for commercial UNIX systems. We have already shipped Integrity S2 systems to such strategic partners as Nixdorf Computer AG of West Germany and GEC Plessey Telecommunications Limited in the United Kingdom.

We are enthusiastic about our product and technology advantages, organizational strengths, and ability to identify and pursue growth markets. While we remain cautious about the current business environment, we believe that these assets will help Tandem perform well during the rest of 1990 and beyond.

Sincerely,



James G. Treybig  
President and Chief  
Executive Officer

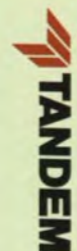


Thomas J. Perkins  
Chairman of the Board

January 26, 1990

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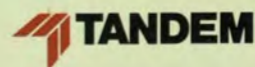
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## Consolidated Statements of Income (Unaudited)

(In thousands except per share amounts)	For the three months ended	
	December 31, 1989	December 31, 1988
<b>Revenues</b>		
Product revenues	\$362,320	\$325,720
Service and other revenues	74,199	66,565
<b>Total revenues</b>	<b>436,519</b>	<b>392,285</b>
<b>Costs and expenses</b>		
Cost of product revenues	107,240	98,617
Cost of service and other revenues	50,997	46,710
Research and development	57,195	46,085
Marketing, general, and administrative	173,734	150,871
<b>Total costs and expenses</b>	<b>389,166</b>	<b>342,283</b>
<b>Operating income</b>	<b>47,353</b>	<b>50,002</b>
Net interest income (expense)	1,050	(717)
<b>Income before income taxes</b>	<b>48,403</b>	<b>49,285</b>
Provision for income taxes	17,668	17,990
<b>Net income</b>	<b>\$ 30,735</b>	<b>\$ 31,295</b>
<b>Earnings per share</b>	<b>\$ .29</b>	<b>\$ .32</b>
Weighted average shares outstanding	107,033	99,105

## Consolidated Balance Sheets

(In thousands)	December 31, 1989	September 30, 1989
	(Unaudited)	
<b>Assets</b>		
<b>Current assets</b>		
Cash and equivalents	\$ 55,869	\$ 197,174
Accounts receivable	447,825	419,440
Inventories	149,218	144,176
Prepaid income taxes	74,609	77,759
Prepaid expenses and other	28,107	24,602
<b>Total current assets</b>	<b>755,628</b>	<b>863,151</b>
<b>Property, plant, and equipment, at cost</b>	<b>886,361</b>	<b>735,499</b>
Accumulated depreciation and amortization	(311,011)	(288,117)
<b>Net property, plant, and equipment</b>	<b>575,350</b>	<b>447,382</b>
<b>Costs in excess of net assets acquired, net</b>	<b>201,923</b>	<b>203,438</b>
<b>Other assets</b>	<b>134,792</b>	<b>104,817</b>
<b>Total assets</b>	<b>\$1,667,693</b>	<b>\$1,618,788</b>
<b>Liabilities and stockholders' investment</b>		
<b>Current liabilities</b>		
Notes payable	\$ 18,276	\$ 19,857
Accounts payable	94,892	106,263
Accrued liabilities	235,793	223,361
Income taxes payable	53,692	53,198
Current maturities of long-term obligations	41,563	38,726
<b>Total current liabilities</b>	<b>444,216</b>	<b>441,405</b>
<b>Long-term obligations</b>	<b>116,268</b>	<b>106,643</b>
<b>Deferred income taxes</b>	<b>66,850</b>	<b>81,622</b>
<b>Commitments and contingencies</b>	—	—
<b>Stockholders' investment</b>		
Common stock, \$.025 par value; authorized 400,000 shares; outstanding 102,957 at December 31 and 102,064 at September 30	2,574	2,552
Additional paid-in capital	512,188	500,155
Retained earnings	594,903	564,168
Accumulated translation adjustments	1,076	(820)
Treasury stock, at cost	(21,952)	(26,937)
Deferred compensation	(48,430)	(50,000)
<b>Total stockholders' investment</b>	<b>1,040,359</b>	<b>989,118</b>
<b>Total liabilities and stockholders' investment</b>	<b>\$1,667,693</b>	<b>\$1,618,788</b>



## To Our Stockholders:

Tandem achieved record revenue of \$392.3 million for the first fiscal quarter of 1989. This represents a 39 percent increase over the same period last year, when the Company reported revenue of \$282.3 million. Net income for the quarter grew 32 percent to a record \$31.3 million, or \$.32 per share, compared with \$23.7 million, or \$.24 per share, recorded in the same period last year.

Our international business was stronger than expected during the quarter, contributing a record 54 percent of the Company's revenue. Both international shipments and new account growth were strong and revenue growth was aided by the weak U.S. dollar. Japan, in particular, showed exceptional growth, and added six new customers during the quarter.

For the second consecutive quarter, our U.S. computer business grew year-over-year. We maintained the improvement we saw in the fourth fiscal quarter of 1988, although domestic business followed the typical pattern of softness for this period of the year.

Ungermann-Bass, Inc., performed above expectations, achieving a record quarter with substantial growth both year-over-year and quarter-to-quarter. Ungermann-Bass's Access/One product, which provides network services to personal computers and workstations over ordinary telephone wiring, saw increased sales.

Shipments of our midrange NonStop CLX system, which provides a low-cost way to distribute on-line processing and databases throughout enterprises, exceeded forecast. The CLX system continues to draw new customers and applications to Tandem; it accounted for more than half of our new customers this quarter. We are proud that the CLX system was recently awarded the Good Design Prize for Foreign Products from the Japanese Ministry of International Trade and Industry (MITI).

We are excited about the strengthening of our competitive database position. During the quarter, we announced six new NonStop VLX system packages that include new technology products that increase significantly the memory and storage capacity of our largest systems. With NonStop SQL, our high-performance relational database management system, these packages can support very large on-line database applications.

In November, Atalla Corporation announced a new debit/credit card management system, CAPS 2000, representing the completion of the first joint product development project for Tandem and Atalla since our merger. CAPS 2000 runs on all Tandem NonStop systems and gives financial institutions, retailers, and telephone companies an easy, fast, convenient, and secure method of issuing and tracking debit/credit cards.

Also during the quarter, former President Reagan appointed Jim Treybig to the newly formed National Advisory Committee on Semiconductors. The Committee's task is to develop a national semiconductor strategy to assure the continued leadership of the United States in semiconductor technology.

We are pleased with our performance in the first fiscal quarter of 1989. Historically, we have seen some weakness at this time of year. In keeping with this seasonal pattern, we planned and maintained a conservative level of expense and employment growth. As we move forward, we will continue to watch carefully currency exchange rates, the domestic market and economic conditions, and our expense levels.

Our focus on important geographic markets such as Japan, successful mergers with Ungermann-Bass and Atalla, leading-edge products, and careful management of costs and expenses all contributed to the positive results attained this quarter. We believe that continuing emphasis on these areas should lead to a good year for Tandem in 1989.

Sincerely,

Thomas J. Perkins  
Chairman of the Board

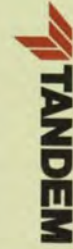
James G. Treybig  
President and  
Chief Executive Officer

January 31, 1989

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First Quarter Report • December 31, 1988



## Consolidated Statements of Income (Unaudited)

(In thousands except per share amounts)	For the Three Months Ended	
	Dec. 31, 1988	Dec. 31, 1987
<b>Revenue</b>		
Product revenue	\$325,720	\$229,531
Service and other revenue	66,565	52,751
Total revenue	392,285	282,282
<b>Costs and expenses</b>		
Cost of product revenue	98,617	63,141
Cost of service and other revenue	46,710	39,115
Research and development	46,085	35,867
Marketing, general, and administrative	150,871	111,896
Total costs and expenses	342,283	250,019
<b>Operating income</b>	50,002	32,263
Net interest income (expense)	(717)	4,756
<b>Income before income taxes</b>	49,285	37,019
Provision for income taxes	17,990	13,326
<b>Net income</b>	\$ 31,295	\$ 23,693
<b>Earnings per share</b>	\$ .32	\$ .24
Weighted average shares outstanding	99,105	99,749

The 1988 income statement includes the financial results of Ungermann-Bass, Inc., which was acquired in March of 1988.

## Consolidated Balance Sheets (Unaudited)

(In thousands)	Dec. 31, 1988	Dec. 31, 1987
<b>Assets</b>		
<b>Current assets</b>		
Cash and equivalents	\$ 72,690	\$ 269,076
Accounts receivable	376,207	259,781
Inventories	131,452	116,311
Prepaid expenses and other	62,288	25,500
Total current assets	642,637	670,668
<b>Property, plant, and equipment, at cost</b>	664,647	533,725
Accumulated depreciation and amortization	(240,765)	(176,468)
Net property, plant, and equipment	423,882	357,257
<b>Costs in excess of net assets acquired, net</b>	202,017	—
<b>Other assets</b>	60,560	31,575
<b>Total assets</b>	\$1,329,096	\$1,059,500
<b>Liabilities and stockholders' investment</b>		
<b>Current liabilities</b>		
Notes payable	\$ 8,508	\$ —
Accounts payable	87,532	74,703
Accrued liabilities	167,707	122,039
Income taxes payable	53,586	16,025
Current maturities of long-term obligations	10,916	5,557
Total current liabilities	328,249	218,324
<b>Long-term obligations</b>	64,742	26,714
<b>Deferred income taxes</b>	37,315	47,146
<b>Stockholders' investment</b>		
Common stock, \$.025 par value; authorized 200,000 shares; outstanding 96,874 in 1988 and 94,280 in 1987	2,422	2,357
Additional paid-in capital	412,583	377,128
Retained earnings	477,147	375,060
Accumulated translation adjustments	6,638	12,771
Total stockholders' investment	898,790	767,316
<b>Total liabilities and stockholders' investment</b>	\$1,329,096	\$1,059,500

The 1988 balance sheet includes the financial position of Ungermann-Bass, Inc., which was acquired in March of 1988.



## To Our Stockholders:

**R**evenue growth for the third fiscal quarter of 1988, ended June 30, was 27 percent over the same period last year. Consolidated revenue was \$338,993,000 for this quarter, which compares to \$267,824,000 from the same period last year. Net income for the quarter was \$17,286,000 or \$.18 per share, versus \$25,884,000 or \$.26 per share in the third fiscal quarter of 1987.

For the nine months ended June 30, revenue increased 23 percent to \$930,724,000, compared with \$753,759,000 in the year-ago period. Net income was \$64,309,000 or \$.65 per share, versus \$75,423,000 or \$.77 per share in the first nine months of fiscal 1987.

Expenses were well managed, but a shortfall in domestic revenue caused an earnings decline. Earnings also were diluted due to the mergers with Ungermann-Bass, Inc. and Tandem Telecommunications Systems, Inc., formerly Integrated Technology, Inc. These mergers are key to our long-term strategies in networking and Integrated Services Digital Networks, respectively.

Indeed, we were very pleased by the performance of Ungermann-Bass, whose results are now fully consolidated with Tandem's. Ungermann-Bass, the leader in open enterprise-wide networking, met its revenue targets with orders for its new Access/One product exceeding forecast.

We believe one reason for the domestic revenue shortfall was a delay in releasing a major revision of our GUARDIAN operating system software. Without this software release, we were unable to fulfill customer demand for larger configurations of NonStop CLX distributed systems and CLX systems with the NonStop SQL relational database management system. This software now is scheduled for release in the fourth fiscal quarter. Our revenue also was impacted because our ability to ship PSX workstations was constrained by the supplier during the quarter.

Sales of smaller configurations of NonStop CLX systems were strong, giving us confidence that these

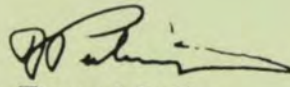
systems have great potential. Overall, this quarter we closed more than 80 new accounts, which significantly breaks previous records. A large percentage of these new customers purchased NonStop CLX systems.

We have not seen a significant change in the competitive situation and we continue to win orders from major corporations. For example, more than 30 financial institutions and over a dozen manufacturing companies became new Tandem customers.

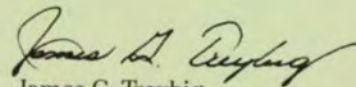
Digital Equipment Corporation's (DEC) long-awaited on-line transaction processing (OLTP) announcement further pointed out the strengths of Tandem systems. For example, NonStop CLX systems have a two-to-one price-performance advantage over DEC's offerings, while offering additional features uniquely suited to OLTP.

Late in the quarter, we restructured Tandem into five operating groups to streamline the decision-making process and to enable us to bring new products to the market more quickly. We also have more sharply defined our strategies for the future. Tandem is hard at work implementing these plans to ensure our long-term success.

Sincerely,



Thomas J. Perkins  
Chairman of the Board



James G. Treybig  
President and  
Chief Executive Officer

August 8, 1988

Tandem, GUARDIAN, NonStop, NonStop SQL, CLX and PSX are trademarks of Tandem Computers Incorporated.  
Ungermann-Bass and Access/One are trademarks of Ungermann-Bass, Inc.

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Third Quarter Report • June 30, 1988

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(In Thousands, Except Per Share Amounts)	For the Three Months Ended		For the Nine Months Ended	
	June 30, 1988	June 30, 1987	June 30, 1988	June 30, 1987
<b>Revenue</b>				
Product revenue	\$276,343	\$222,391	\$759,303	\$628,179
Service and other revenue	62,650	45,433	171,421	125,580
Total revenue	338,993	267,824	930,724	753,759
<b>Costs and Expenses</b>				
Cost of product	78,105	58,618	209,593	169,362
Cost of service and other	46,640	36,321	127,310	94,510
Research and development	46,219	27,700	119,528	78,492
Marketing, general and administrative	140,778	103,618	371,443	288,908
Total costs and expenses	311,742	226,257	827,874	631,272
<b>Operating Income</b>	27,251	41,567	102,850	122,487
Net interest income	(1,019)	3,923	6,228	9,995
Settlement of litigation	0	0	(9,375)	0
<b>Income Before Income Taxes</b>	26,232	45,490	99,703	132,482
Provision for income taxes	8,946	19,606	35,394	57,059
<b>Net Income</b>	\$ 17,286	\$ 25,884	\$ 64,309	\$ 75,423
<b>Earnings Per Share</b>	\$ 0.18	\$ 0.26	\$ 0.65	\$ 0.77
Weighted average shares outstanding	98,252	100,365	98,904	97,804

Prior period amounts have been restated to include the financial statements of Atalla Corporation acquired through a merger in November 1987 and accounted for as a pooling of interests.

TANDEM COMPUTERS INCORPORATED AND SUBSIDIARIES

(In Thousands, Except Share Data)	June 30, 1988	June 30, 1987
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash investments	\$ 93,507	\$297,318
Accounts receivable	316,927	234,193
Inventories	140,508	83,889
Prepaid expenses and other	42,532	21,989
Total current assets	593,474	637,389
<b>Property, Plant and Equipment, at cost</b>	594,919	369,121
Accumulated depreciation and amortization	(203,142)	(137,900)
Net property, plant and equipment	391,777	231,221
Costs in excess of net assets acquired	195,689	0
<b>Other Assets</b>	51,587	20,347
<b>Total Assets</b>	\$1,232,527	\$888,957
<b>Liabilities and Stockholders' Investment</b>		
<b>Current Liabilities</b>		
Current portion of long term debt and capital lease obligations	\$ 5,811	\$ 1,135
Bank borrowings	17,124	0
Accounts payable	73,073	66,912
Accrued liabilities	136,377	93,660
Income taxes payable	22,126	14,735
Total current liabilities	254,511	176,442
<b>Long Term Debt and Capital Lease Obligations</b>	115,579	7,342
<b>Deferred Income Taxes</b>	44,106	27,408
<b>Stockholders' Investment</b>		
Common stock, \$.025 par value; authorized 200,000,000 shares; outstanding 95,510,126 in 1988 and 92,789,631 in 1987	2,388	2,320
Additional paid-in capital	394,054	353,884
Retained earnings	415,676	321,561
Cumulative translation adjustment	10,191	0
Balance sheet translation adjustment	(3,978)	0
Total stockholders' investment	818,331	677,765
<b>Total Liabilities and Stockholders' Investment</b>	\$1,232,527	\$888,957

Prior period amounts have been restated to include the financial statements of Atalla Corporation acquired through a merger in November 1987 and accounted for as a pooling of interests.



“**C**ompanies worldwide have discovered that Tandem’s architecture for on-line transaction processing frees them to solve the more difficult and important computing problems now. This has led to Tandem’s outstanding financial performance in 1986 and represents the company’s fundamental strength. Tandem’s solution brings the future to its customers today.”

Carol E. Muratore  
Vice President  
Morgan Stanley & Co. Incorporated  
December, 1986<sup>1</sup>



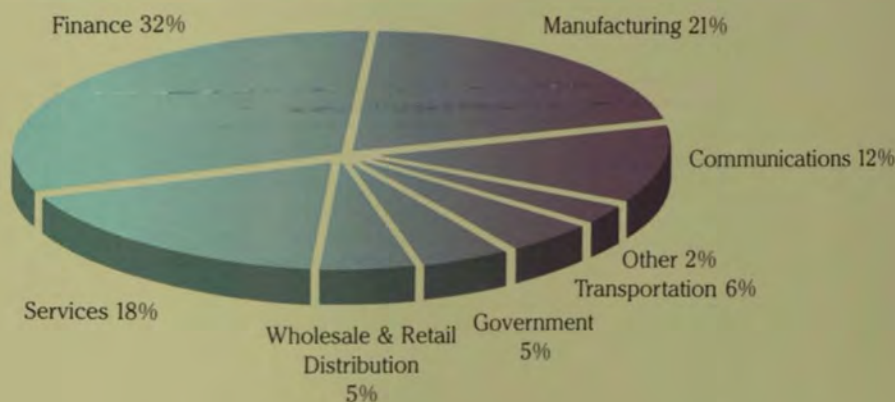
**T**andem Computers Incorporated, founded 12 years ago, today ranks as a Fortune 500 company and employs over 5,700 people worldwide. It is a leading supplier of computer systems and networks for on-line transaction processing. Tandem systems are used widely to run ATM and point-of-sale networks, stock exchanges, factories, and other enterprises where hundreds of business transactions must be processed each second and recorded instantly. Tandem provides a fully compatible family of systems that spans the range of performance requirements for on-line transaction processing applications. The systems can run the same applications and can be networked with each other and with equipment from many other vendors to provide a single computing resource for an organization. Tandem supports its customers from over 130 locations worldwide and manufactures its products in the United States, Mexico, and West Germany.

## Highlights

Fiscal Year Ended September 30	1986	1985	1984
Revenue	\$767,793,000	\$624,138,000	\$532,620,000
Operating income	\$105,978,000	\$ 50,081,000	\$ 51,101,000
Operating margin	13.8%	8.0%	9.6%
Net income	\$ 63,766,000	\$ 34,374,000	\$ 42,908,000
Earnings per share	\$1.44	\$ .82	\$1.04
Working capital	\$385,220,000	\$298,611,000	\$263,403,000
Total assets	\$705,025,000	\$552,344,000	\$501,873,000
Stockholders' investment	\$534,680,000	\$420,408,000	\$375,122,000
Number of employees	5,719	5,494	5,223

## Revenue by Industry

(Fiscal 1986; amounts may not total due to rounding.)





**T**andem Computers “is a true original in a world of look-alikes. Though all computer makers strive mightily for product differentiation, they tend to come up with variations on a very few themes. Tandem has parlayed a unique computer architecture into an almost unmatched position in the specialized world of transaction processing.”

*Electronics*  
April 14, 1986 <sup>2</sup>



# To Our Stockholders:

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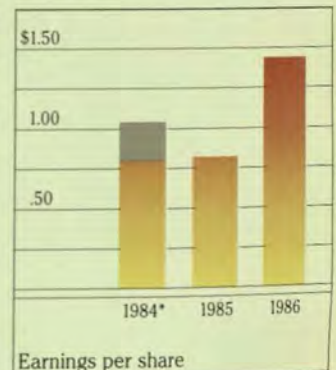
**F**iscal 1986 was a good year for Tandem. Despite a difficult environment for the computer industry, our year-end results set records in both revenue and earnings. Compared to fiscal year 1985, revenue grew 23 percent to \$768 million and earnings



Thomas J. Perkins (left), Chairman of the Board; James G. Treybig, President and Chief Executive Officer.

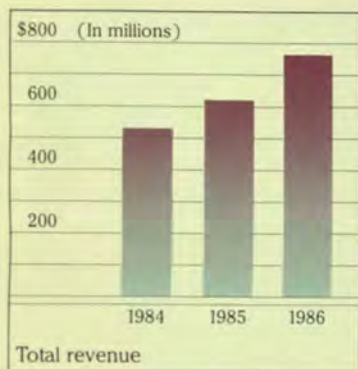
per share grew 76 percent to \$1.44. We ended the year with a record cash balance of \$240 million. ■ Our strong financial performance is the result of strengthening our marketing organization; introducing many products based on new, leading-edge technology; and improving productivity throughout the company, particularly in manufacturing. ■ *Marketing Focus:* Early in fiscal 1986, we reorganized and strengthened our marketing organization, and we have begun to see positive results. Productivity in our U.S. sales organization has improved. Our revenue growth rate increased over fiscal 1985. We are adding customers and increasing penetration of exist-

ing accounts. In addition, many customers have begun to build strategic networks using Tandem products. ■ During 1986, we broadened our emphasis on strategic relationships with other companies to leverage our internal resources and bring solutions to market faster. For example, to reach smaller businesses outside of our traditional customer base, we began to develop value-added reseller distribution channels. We worked with independent software companies to increase the quantity and quality of third-party software. More than 200 companies now provide software solutions for Tandem system users. ■ We made equity investments in two companies that support our long-term industry strategies, one in telecommunications and the other in manufacturing. To broaden markets in specific geographic areas, we formed a joint venture company in Japan and entered into

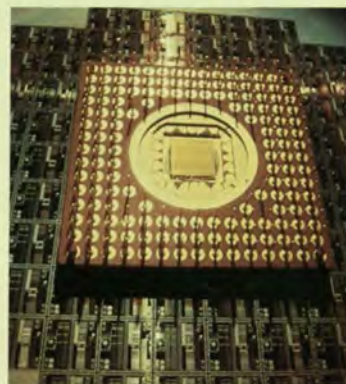


(\*Includes \$.24 benefit from DISC tax reversal.)





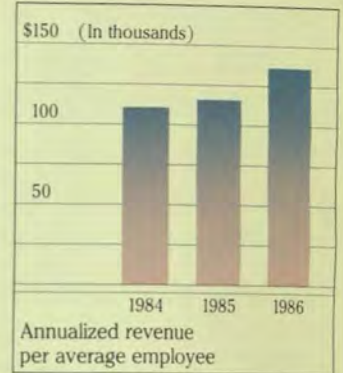
negotiations to establish joint venture companies in the Netherlands and Australia. We also entered into several strategic joint development agreements to leverage the technologies of other companies. ■ *New Products, Advanced Technology:* The unique architecture of Tandem systems has given the company a fundamental advantage in the marketplace. During 1986, we significantly strengthened this advantage with the introduction of new technology. We began investing in the development of semi-custom bipolar and CMOS gate array technology six years ago. This investment not only produced important new products during 1986, but it also provided Tandem with the automated design tools and facilities necessary to reduce development time for future products. ■ The successful introduction of our new high-end NonStop VLX system in April marked the first of several Tandem processors that will be based on gate array technology. The VLX system processes more transactions per second than many of the industry's largest mainframe computers. Its bipolar gate array technology and expert-system based diagnostic capability reduce service costs by two-thirds on a per-transaction basis for customers who select our remote support option. ■ *Management Focus:* In 1986, we achieved substantial productivity improvements in manufacturing as part of our long-term strategic plan. We also initiated new budgeting, asset management, and review processes that have improved revenue forecasting and expense control. These new processes, combined with increased employee efforts, enabled us to achieve a 23 percent revenue gain with only a 4 percent increase in hiring. ■ We strengthened Tandem's management team and board of directors. Walter B. Wriston, Chairman of the President's Economic



Tandem designs and develops gate array technology for use in many new products.



Policy Advisory Board, joined our board of directors. Mr. Wriston retired in 1984 from Citicorp, where he was Chairman and Chief Executive Officer. His experience in managing a multibillion-dollar corporation, plus his extraordinary grasp of the benefits that technology can bring to large organizations, will be of tremendous value to Tandem as we go forward. ■ Three senior individuals joined Tandem as vice presidents for strategic planning, management information systems, and Austin Operations. In recognition of the growing importance of international sales, third-party marketing, and new ventures, three individuals were promoted to newly created vice presidential positions. ■ *Outlook:* Fiscal 1987 will be another year of important product introductions. We plan to announce systems with low entry prices to extend the Tandem network to the individual store, to the branch bank, to the manufacturing cell, and to the departments of large corporations. One of these new systems will be based on custom CMOS technology and also will feature semi-custom CMOS gate arrays and 680X0 microprocessors in input/output controllers. In addition to new systems, we plan to announce new storage products, communications products, and printers. ■ Fiscal 1987 will be a significant year for software. Products in development build on the unique capabilities of the GUARDIAN 90 operating system



The Tandem NonStop VLX system improves performance and reduces service costs.

and we believe they will establish a new standard in software technology for on-line transaction processing. Tandem believes it will advance the state of the art in database technology with the announcement of a relational database that implements the emerging industry-standard interface, SQL. This new product will be optimized for high-performance, distributed on-line transaction processing, and we believe it will



be the industry's first SQL database to allow on-line updates with transaction integrity for data distributed across networks. We also plan to announce products for network and system management that are implemented within a common architecture. ■ Strategic relationships will become more important as we target new opportunities with lower cost, departmental systems. We will continue to develop value-added reseller distribution channels to reach smaller businesses outside of our traditional customer base. Through strategic third-party relationships, we plan to increase the quality and quantity of application solutions. ■ We will continue our efforts to improve productivity throughout the company. In addition, we plan to strengthen our systems analyst organization, as well as our capabilities in management information systems, human resources, and project management. ■ We believe that the fundamental trends in the marketplace favor Tandem. With the planning and review programs that are in place, we anticipate another good year.



The Tandem XL8 disk storage facility (right) won the prestigious Hannover Faire "Good Industrial Design" award during 1986. The V8 disk storage facility (left) won the "Industrial Design Magazine 1985 Design Review Award" for excellence in industrial design.



The powerful Tandem 6AX workstation, introduced in fiscal 1986, can operate as a stand-alone workstation or as a fully integrated system terminal.

Sincerely,

A handwritten signature in cursive script, appearing to read "James G. Treybig".

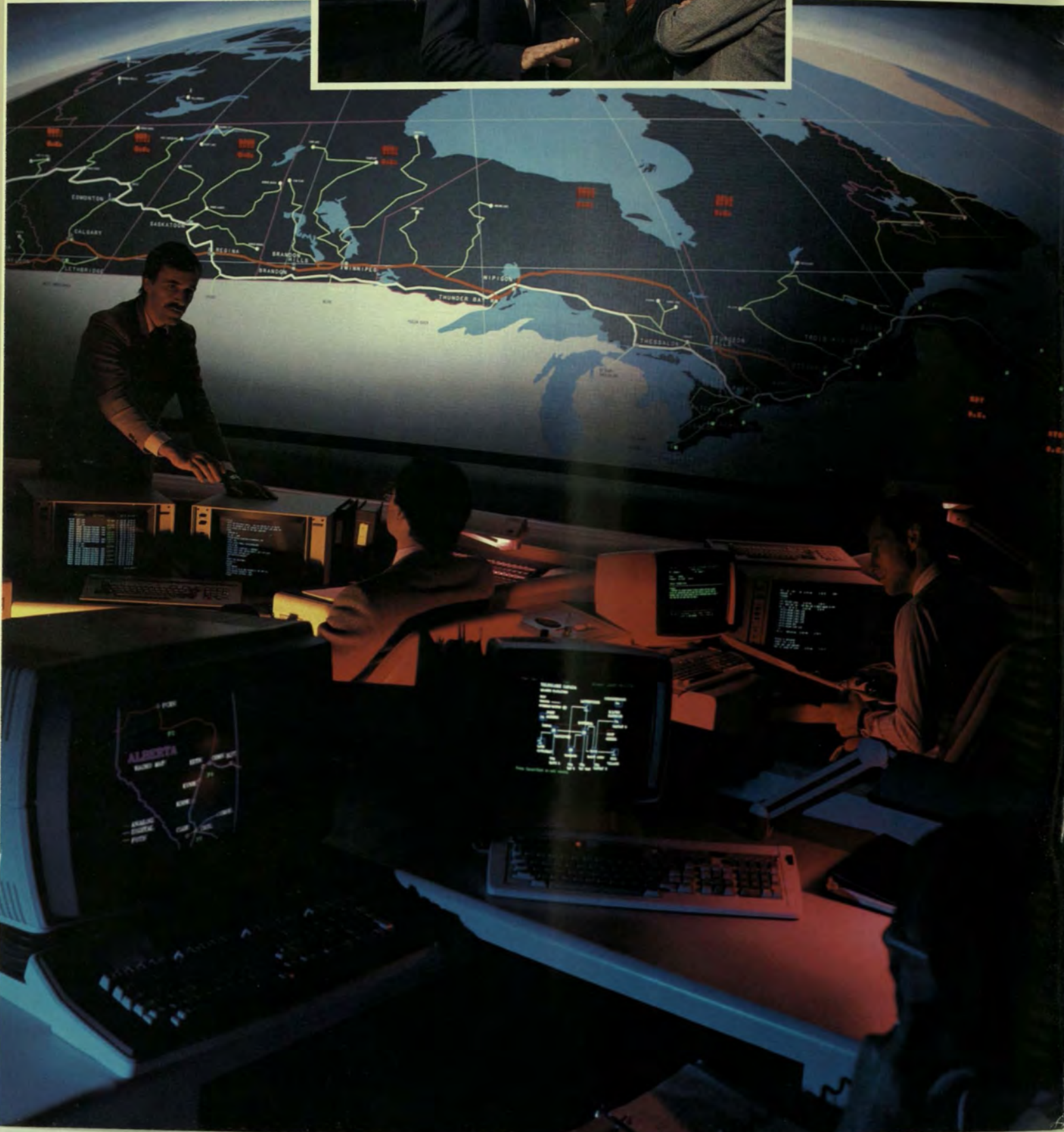
James G. Treybig  
President and Chief Executive Officer

A handwritten signature in cursive script, appearing to read "Thomas J. Perkins".

Thomas J. Perkins  
Chairman of the Board

December 9, 1986







“**W**e believe that Tandem will displace many traditional computer vendors and become one of the major, surviving computer companies. Although Tandem has historically been associated with a limited market niche – fault-tolerant systems – we think that Tandem’s unique computer architecture makes it better suited for the broad, mainstream commercial market.”

Jonathan Fram  
Bear, Stearns & Co. Inc.  
June 11, 1986<sup>3</sup>

In Ottawa (from left): Bjorn B. Ahlblad, President of Tandem Computers Canada Limited, with Alan Walter, Vice President of Bell Canada, and Robert Radcliffe, Ottawa Branch Manager of Tandem Computers Canada Limited.

In the large photo is the National Network Operations Center of Telecom Canada.

Bell Canada runs its iNet (“intelligent network”) and other networks, including Envoy electronic mail and a nationwide credit authorization system, on Tandem systems because “these are public networks and we demand the same degree of availability as we expect from our central office exchanges.” Bell Canada’s iNet offers significant growth opportunities for the company beyond its traditional role of simply transmitting voice and data information. The value-added public network, inaugurated in 1982 and offered nationally through all other members of Telecom Canada, provides business users easy access to a variety of interactive databases.



# Dynamic Marketplace

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**T**andem's marketplace, on-line transaction processing (OLTP), is one of the fastest growing marketplaces in commercial data processing. In businesses and financial institutions worldwide, OLTP systems and networks are being used as competitive weapons to deliver new customer services electronically, to collect and process business transactions, and to run operations profitably.

"Increasingly, the very viability of retail stores, banks, brokerage houses, airline reservation offices, and manufacturing plants—in short, vast segments of the U.S. economy—depends on machines that

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*Tandem's "fault-tolerant design is now offering a new payoff: a powerful role in distributed computing and networking, two of the high-growth markets of the 1980s."*

*Electronics, April 14, 1986<sup>4</sup>*

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conduct rapid-fire transactions as they occur, not overnight in a windowless back office," wrote *Business Week* on July 14, 1986. "If on-line machines didn't exist, banks would have to hire more tellers, the stock markets couldn't handle anywhere near their current volume, and lines at airline ticket

counters might stretch around the corner."<sup>5</sup>

The market demand is for networks of on-line transaction processing systems that can collect and process transactions generated by hundreds of devices, and that can speed up and ensure the delivery of money, stocks, bonds, news, messages, and many other goods and services. Tandem was first to recognize and fulfill this market demand.

Today, Tandem systems offer a unique blend of features that enable them to process growing numbers of transactions across networks, integrate devices from other vendors, provide data accuracy, expand modularly, minimize downtime, deliver up-to-the-minute reports, and allow users to interact with a network as easily as if it were a single, centralized system.

## *Tandem Is an Industry Leader*

According to a Merrill Lynch investment research report dated May 5, 1986, Tandem "is the leading supplier of high availability transaction processing systems. Tandem's NonStop systems have met excellent user acceptance, building a substantial customer base in over 1,000 major enterprises worldwide.... The company has important strengths in its large user base and expertise in large-scale computer networking. In our view, these strengths ensure a continued leadership role for Tandem."<sup>6</sup>

In the view of the Gartner Group, a respected market research company, "Tandem Computers is the leading player, behind IBM, in the on-line transaction processing (OLTP) market, one of the fastest

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*Chances are, you have used a Tandem computer if you...*



...read a major city newspaper



growing markets in the information processing industry... Tandem has successfully challenged IBM in the financial services OLTP business, which is an extremely dynamic business as a result of bank deregulation, brokerage consolidations, and [a] rash of mergers and acquisitions."<sup>7</sup>

### *OLTP Is Mainstream*

Unlike traditional mainframe data processing, where data is stored at a central computing facility and is processed only at specific times, OLTP updates data to reflect changes as they occur. The power of this concept is that it matches the flow of business operations, transaction by transaction.

According to Omri Serlin, a prominent computer industry analyst, "OLTP applications are in the mainstream of the business they serve. Sometimes they are the business. More often than not, they are the major tool the business uses to offer revenue-generating services to customers, or to run day-to-day operations."<sup>8</sup>

### *OLTP Market Grows*

"Since 1981, when on-line transaction processing accounted for less than one-third of new sales, the market has grown in size and importance to more than \$17 billion in worldwide revenue in 1985. As the effective cost per transaction continues to shrink, this market will grow to more than 70 percent of new business computer system revenue (not necessarily unit replacements), or \$35 billion in 1990," according

to a 1986 report from Dataquest, a leading market research company.

Commenting on the forces for growth, Dataquest observed, "The service sector of the economy is growing much faster than the manufacturing sector,

*"Tandem is very focused, dedicated to providing high-value-added products to the transaction-processing marketplace.... This focus, plus Tandem's product breadth, should keep it one of the industry's bright spots during the next three to five years."*

*Goldman, Sachs & Co., October 13, 1986<sup>9</sup>*

and on-line transaction processing lends itself to service businesses such as telemarketing, insurance, and banking. Service companies see OLTP as a way to gain a competitive advantage. Typical applications include automated teller machines, electronic funds transfer, credit authorization, directory assistance, manufacturing shop floor control, and reservation systems." The report concluded, "The on-line transaction processing market will continue to grow as more applications are developed and more batch applications are converted to on-line."<sup>10</sup>



...run a business  
or a factory







“**W**ith Tandem, we now have a strategic network foundation in place to support our growth and help us capture market share.”

Peter C. M. Hart  
Vice President of Management  
Information Systems  
Ross Stores, Inc.  
1986

▲ In California: Peter C. M. Hart (left), Vice President of Management Information Systems, Ross Stores, Inc., with Ross's President and Chief Executive Officer Donald E. Rowlett.

◀ At Ross Stores, Inc., a point-of-sale network from Tandem links 1,400 cash registers in 147 stores to inventory and distribution systems and to credit authorizers throughout the United States. The network supports Ross's aggressive plans for growth, helps Ross enhance customer service, and allows Ross to communicate electronically with stores, while preserving its significant investment in point-of-sale devices and in-store controllers.



**R**etailing, like many industries, is highly competitive and cost-conscious. It is an industry where on-line transaction processing (OLTP) and point-of-sale networks are becoming key strategic tools for success.

At Ross Stores, Inc., of Newark, California, OLTP is a key ingredient in the company's plans for future growth. In less than five years, Ross has become the third largest off-price fashion retailer in the U.S., and it has one of the lowest operating costs as a percentage of sales in the industry.

The point-of-sale networking solution Ross uses is from Tandem. It links 1,400 cash registers in 147 stores to inventory and distribution systems and to credit authorizers throughout the U.S. On-line access to the latest sales and inventory information gives Ross a competitive edge in controlling its business, says Peter C. M. Hart, Ross's Vice President of Management Information Systems.

"From the beginning, we have taken a different view of computer technology. To us, computer technology—particularly on-line transaction processing—is a strategic business weapon. Indeed, certain parts of our growth plan and corporate philosophy could not exist without the help of OLTP," Hart said.

### *Technology Is Critical to Success*

"Our business is off-price fashion retailing. We provide the same quality name-brand and designer merchandise as the big department store chains, but at 20 percent to 60 percent less cost to the customer.

"We operate on very low margins, so profit-

ability and growth in our business depend on how well we serve our customers and how well we manage merchandising. Our corporate motto, 'Dress for Less,' attracts new customers, but to keep them coming back, we have to provide great service and continue to offer quality and value.

*"Now that the Tandem network is in place, we are planning new ways to use it that will cut some of our operating expenses and make communications with our stores much more efficient and timely."*

*Peter C. M. Hart  
Ross Stores, Inc.*

"Not long ago, we faced a dilemma in our processing that illustrates the critical role that technology plays in our success.

"We were using six NCR [Corporation] minicomputers to provide credit authorization and to collect the point-of-sale information we need to drive our merchandising process.

"The problem was that we had reached a point where we needed to add more minicomputers to support our growth. But that created a larger problem because the minicomputers couldn't talk to each other or to our inventory and distribution system.

*Chances are, you have used a Tandem computer if you...*



...purchase gasoline with a credit card or bank ATM card



Instead, each minicomputer generated a tape at the end of each day, which we would mount onto another computer and reformat the data. That process took about 45 minutes per tape, and then we still had to run the batch applications using the new data.

"There simply wasn't enough time to do all that before the next morning, when our buyers need the data—especially during the Christmas season with extended shopping hours.

### *Network Helps Ross Provide Convenient Shopping*

"At that point, we turned to Tandem and one of its independent application software vendors, Signorum [Inc., Fremont, Calif.], for a solution.

"Without replacing any cash registers or in-store controllers, we now have an on-line, point-of-sale transaction processing network from Tandem with StoreLink software that supports 1,400 cash registers in over 140 stores. Not only does it eliminate tapes and feed sales data directly into our host, but it gives us numerous competitive advantages by helping us provide better customer service.

"For instance, we are dedicated to providing 'hassle-free' shopping. When there are three people in a checkout line, we open another register—we don't want our customers to wait. Likewise, they shouldn't be made to wait for credit authorization when they are making a purchase.

"So one of the things our Tandem network allows us to do is monitor the performance of our check and credit card authorizers. I use a terminal

to get up-to-the-minute reports about how many authorizations they completed in under five seconds, two seconds, and so on. If the performance of an authorizer is falling below an acceptable level, I contact them immediately and begin fixing the problem. That's just one example of how we use technology to serve our customers better.

"Not only that: for the first time, we can link into multiple credit authorizers. That means we can shop for the best discount rates and support as many different credit cards as we choose. It also means we can make it easy to write checks—even out-of-state checks. We request only a driver's license. That's what 'hassle-free' is all about.

### *Tandem Provides a Foundation for the Future*

"Now that the Tandem network is in place, we are planning new ways to use it that will cut some of our operating expenses and make communications with our stores much more efficient and timely. For instance, we frequently send information via courier to each of our stores. We'll eliminate most of those courier packages in the near future by using the Tandem network to send that same information electronically on a daily basis.

"With Tandem, we now have a strategic network foundation in place to support our growth and help us capture market share," Hart said. "With creativity and a clear sense of what we want our business to be five years from now, we can use our network as a very powerful tool to help us be successful."



...use an automated teller machine







“**T**he company’s emphasis on communications has intensified in recent years, with Tandem scoring significant competitive wins of large-scale networks in banking, retail point of sale and electronic mail.”

Merrill Lynch,  
Pierce, Fenner & Smith Inc.  
April 30, 1986 ”

▲ In Frankfurt: Dr.-Ing. Fritz Timm (left), Project Manager, Seat Reservation System, Deutsche Bundesbahn, with Richard Glück, Project Manager for Tandem Computers GmbH.

◀ The Deutsche Bundesbahn, Germany’s national railway, runs its international reservation system on Tandem computers to maximize its rolling stock and guarantee seats to all passengers. The system books up to 170,000 reservations daily from 4,500 railway and travel agent terminals in Western Europe. The heavily traveled railway chose Tandem computers for rapid response time, reliability, and modular expandability.



# Unique Parallel Architecture

16

**I**n the battle for a competitive edge in emerging markets, corporations are using computers to create new computer-based products and services that will generate revenue. But they are finding that their traditional, centralized computers do not provide the distributed networking foundation they need. As a result, many are investing in networks for on-line transaction processing—networks that will deliver new services, move information between incompatible systems, and support unpredictable transaction volumes in the future.

During 1986, Tandem was awarded several contracts to install strategic, large-scale networks for retailers, financial institutions, and other businesses. A key element of Tandem's success in applications such as these is its system architecture.

## *Tandem's Strength: The System Is a Network*

"Others build networks on top of individual processors. Our lowest-level operating system is a network," explained James G. Treybig, President and Chief Executive Officer of Tandem, in the April 14, 1986, issue of *Electronics*. In that same article, *Electronics* described the essence of Tandem's uniqueness:

"The location of a data base or a peripheral is immaterial in a Tandem system, which makes it well-suited for networking. One process communicates with another through packet-switched messages without regard for physical location. The process of creating a network is therefore straightforward."<sup>12</sup>

In a June 11, 1986 investment research report, Bear, Stearns & Co. Inc. described the advantages of Tandem's architecture. Following are excerpts from that report.

"[Tandem's] architecture enables users to:  
1) physically and geographically distribute processors and data throughout their organization, yet perceive a single system image; [and] 2) expand the performance of their systems in a much wider range than found in traditional computer designs....

## *Distributing Programs and Data*

"... With Tandem computers, users can physically distribute data and programs throughout their organization. Yet, the user perceives the image of a single system—transparent to the user, the operating system fetches and stores data at remote sites if needed. The user perceives the data to be local....

"The importance of being able to physically distribute processors and data becomes apparent when one realizes that businesses and their employees are geographically dispersed, yet it is desirable to maintain only a single copy of important data. Consider the problem of allocating airline seats from any of 20,000 travel agent locations. While it is imperative not to allocate the same seat at different locations, it is desirable to alter the data from any location. In older systems, each travel agent and ticket counter was tied into where the data resides (at the airline's central computer). We think that the airline industry represents one of the biggest opportunities for Tandem over the next few years....

*Chances are, you have used a Tandem computer if you...*



...send messages over  
a public electronic mail  
network



## *Expandability Without Degradation*

"Unlike today's mainframes, Tandem's machines do not experience performance degradation when multiple processors are strung together.... A Tandem user can achieve a *linear* growth in performance

**"While fault tolerance is certainly a key feature of Tandem's machines, it is only one of many architectural advantages that makes Tandem's systems more suitable than traditional mainframes and minicomputers in the commercial marketplace."**

*Bear, Stearns & Co. Inc., June 11, 1986*<sup>13</sup>

by adding processor modules to the system. [For example, an 8-processor NonStop VLX system processes 80 to 100 transactions per second (TPS), while a 16-processor VLX processes twice as many—160 to 200 TPS.]....

"... In a sense, Tandem's systems are really a form of *parallel processing* for the commercial world.

"The importance of linear performance expandability is better understood by realizing that on-line

transaction processing systems tend to grow as the customers' business grows. This stems from the fact that interactive/transaction processing systems generally form the core of the customers' own product offering—the computer becomes part of the customers' competitive repertoire. For example, major stock exchanges use Tandem systems for order execution and reconciliation.... With the burgeoning transaction volumes of recent years, such expandability was a necessary requirement....

"Finally, the President of the Tandem Users' Group, an independent association, informed us that customers are now purchasing Tandem systems more for their expandability than for fault tolerance....

## *Application Software Solutions*

"... When we queried the [Tandem third-party] software houses as to why they chose Tandem, they said that Tandem's architecture allowed the software houses to develop an application that could not be conceived on a conventional mainframe. Over time we believe that Tandem will be able to attract more third-party software vendors than other computer companies because of this unique architecture. [Tandem currently works with over 200 third-party companies.]... Attracting third-party software vendors who add value to a vendor's machine has become the key to success in the computer industry...."<sup>14</sup>




...make retail purchases with a credit card





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“  e are dedicated to reducing system maintenance costs by using new technologies to increase product reliability and to offer the highest quality of service to our customers.”

James G. Treybig  
President and Chief Executive Officer  
Tandem Computers Incorporated

kyo: Norio Izumi (left), Country Sales  
anager for Tandem Computers Japan,  
, with Teiichi Aruga, Deputy General  
anager, Network Services Department,  
mura Computer Systems Co., Ltd.

mura Securities' main stock trading  
m is seen in the accompanying photo.

mura Securities, Japan's largest  
erage firm and the first Japanese  
pany to use computers, is expand-  
its competitive advantage with a  
e-of-the-art value-added network  
(N) that runs on Tandem systems and  
vides a variety of services to cross-  
ustry clients nationwide through  
mura Computer Systems Co., Ltd.  
(C). More than 30,000 terminals of  
ifferent types were on-line by the  
of 1986, and significant expansion  
lanned. In its annual report, NCC  
its customers it uses Tandem products  
the network for enhanced reliability  
efficiency. Japan is the world's second  
est market for computers.



# Comprehensive Support and Service

20

**T**andem's support and service mission has a single goal: to provide the highest quality, most comprehensive assistance available in the industry. At Tandem, this means supplying much more than traditional installation and maintenance.

It means helping customers to design their applications. It means understanding customers' business objectives and configuring networks that will support their goals.

As a result, Tandem staffs its service and support organization with highly experienced people and provides training to keep them informed about the latest technologies. In addition, Tandem sponsors programs to assist customers with application and network design, capacity planning, and benchmarking. Customers who participate in these programs can reduce system costs by fine-tuning system configurations before they are installed.

## *Education*

A key element of Tandem's support philosophy is education. Courses cover everything from daily system operation to application design and development. Instruction is available worldwide through classes, teletraining, computer-assisted learning, or self-paced tutorials.

## *Supporting Large Networks*

Assisting customers with large-scale network design is an important part of Tandem's support strategy. The company recently expanded its

Performance Center in Sunnyvale, California, to include a Network Environment Studies Facility for testing customer applications in large networking environments. In addition, Tandem offers consulting and benchmark testing to help customers design applications and networks that are optimized for peak performance and lowest possible cost.

## *Ongoing Research: High-Performance Systems*

Research also is a significant element in Tandem's support philosophy. In Frankfurt, Germany, Tandem operates its High-Performance Research Center, where architectural research is done by studying system requirements for very high-volume transaction processing applications. The knowledge generated is shared with customers to help maximize throughput of their Tandem systems. The knowledge also is shared with Tandem development groups, where it contributes to the design of future high-performance systems.

## *Support Centers*

Located in Austin, Texas; Frankfurt, Germany; and High Wycombe, England are support centers that provide a combination of remote hardware and software support to Tandem customers. All centers are connected electronically via Tandem's worldwide network, allowing customers to call on the expertise of Tandem's support people located around the world.

*Chances are, you have used a Tandem computer if you...*



...make long distance  
telephone calls



Through Customer Information Services, Tandem customers worldwide can dial into a Tandem system for up-to-date technical information that is stored on-line.

### *Flexible, Cost-Effective Service*

Tandem's service organization has over 130 locations worldwide to support customers. *Computer/Electronic Service News*, in its August 1986 issue, wrote, "Tandem products span the full range from micros to large mainframes, with all of the associated peripherals. And Tandem has made a name for itself in servicing those products.

## *Assisting customers with a large-scale network design is an important part of Tandem's support strategy.*

"Tandem has been servicing its own equipment for more than 12 years. From disk drives to mainframes, from power supplies to operating systems, Tandem has provided maintenance and repair on over 360 products. And now, they have moved into complete networks . . .

"Large installations have dedicated field service engineers on site. A standard service package usually calls for full coverage from eight a.m. to five p.m., five days per week. This can be extended to include second and third shifts. Total on-site service (requir-

ing seven day, 24-hour coverage) is available. Or, the plan may include full coverage on a specified shift only, with second shift and/or third shift on-call service . . .

"[A number of products are] . . . supported with remote diagnostics. No on-site visits are required to troubleshoot either the hardware or software; a CE [customer engineer] goes to the site only when a part replacement or system adjustment is required . . .

### *Service Philosophy*

"Speaking on the subject of service, James G. Treybig, Tandem President and Chief Executive Officer, stated, 'We are dedicated to reducing system maintenance costs by using new technologies to increase product reliability and to offer the highest quality of service to our customers.' He went on to say that Tandem's use of new technologies in the VLX mainframes, including VLSI circuits, expert system-based diagnostics, and remote support, directly led to . . . [reduced] maintenance pricing.

"Tandem constantly initiates customer surveys to judge the effectiveness and efficiency of field service. It also regularly gauges customer satisfaction levels with these polls, asking their customers what they want and what they expect from field service . . .

"The newer VLSI technology used in VLX mainframes has more than doubled system reliability compared to similar Tandem configurations using previous technologies. This has reduced service time, and the cost of service by more than 50 percent—making field service better and better . . ." <sup>15</sup>



... send money via a public telegraphic service





AUSTRALIA AND NEW ZEALAND  
BANKING GROUP LIMITED  
(INCORPORATING ANZ BANK AND ES&A BANK)




CHEQUE  
ACCOUNTS



Ask your adviser  
High Performance  
ANZ





“ LTP systems can play an important strategic role in keeping a company ahead of its competition.”

*Computerworld*  
September 29, 1986 <sup>16</sup>

▲ In Melbourne: Grahame Bennett (left), Managing Director for Tandem NonStop Pty. Ltd., with Derek W. Gall, General Manager, Electronic Network Services, Australia and New Zealand Banking Group Limited.

◀ In the large photo is one of the bank's downtown Melbourne branches.

Australia and New Zealand Banking Group Limited (ANZ), Australia's second largest bank, is building a massive, nationwide Electronic Funds Transfer/Point-of-Sale and credit authorization network on Tandem systems as a strategic weapon to combat competition from foreign banks as deregulation changes the financial industry in Australia. ANZ, which chose Tandem for its system's superior growth and networking capabilities, also runs its nationwide ATM network on Tandem systems. All of the four national banks in Australia have Tandem systems at the heart of their operations.



# A Strategic Foundation

24

**T**oday's business environment is undergoing fundamental and dramatic change. Competition is intensifying and industries are being restructured because deregulation and technology are enabling companies to enter new markets. For instance, insurance will be available through banks. Convenience stores will distribute tickets for entertainment and travel. News distribution companies will offer home shopping. And a new class of service companies will emerge and create more competition.

To be successful in this new environment, businesses are beginning to offer computer-based services and products that will change where and how consumers shop, and how they pay for merchandise.

## *The Future Demands OLTP Networking*

New computer uses such as these demand the rapid response and competitive advantages of on-line transaction processing (OLTP). Many computer vendors now market systems for use in OLTP. Most of their offerings are traditional, single-processor or single-memory architectures.

But corporations that want to be competitive in the 1990s are planning for the long term. They are reviewing their technology strategies and are discovering many market-driven reasons why single, centralized computers will not help them compete in the future. First, they must respond to market changes quickly by offering new services faster than

the competition. They also must have a low-cost, wide-area distribution system to market products and services in many locations. In short, information delivery networks are becoming vital strategic tools in long-term business strategies.

## *Tandem Delivers a Competitive Edge*

Many businesses with a long-term view are selecting Tandem based solutions. With Tandem, corporations gain easy-to-use tools for developing new computer-based services rapidly—services that are distributed, networked, and on-line. With Tandem systems, corporations can add new customers easily. Modular expansion lets them support growing transaction volumes without rewriting software. In

*“Tandem’s architecture enables customers to do things that cannot be done effectively on other vendors’ systems.”*

*Bear, Stearns & Co. Inc., June 11, 1986<sup>17</sup>*

addition, Tandem networking lets corporations open new markets and add users in remote locations quickly. The Tandem architecture lets people interact with data and services on the network as easily as if the network were a single, centralized system.

*Chances are, you have used a Tandem computer if you...*



...make stock market transactions



Businesses are uncertain about the future: Does it include changes such as mergers or acquisitions? What new technology will have to be integrated to remain competitive? Because of this uncertainty, corporations want flexibility to merge new technology and business operations into their existing systems. Tandem provides this flexibility. Tandem systems today process transactions generated by hundreds of different electronic devices: mainframes, cash registers, gas pumps, ATMs, facsimile devices, robots on the factory floor, personal computers, ticketing devices, and many others.

### *Tandem Integrates and Preserves Investments*

Over 200 independent companies provide application software and other solutions for Tandem systems. Software companies and Tandem customers can migrate their applications to the next generation of Tandem equipment without reprogramming because Tandem systems are software compatible.

Tandem's support for a wide variety of industry-specific, incompatible devices preserves customers' existing investments in automation.

### *Many Businesses Select Tandem*

Tandem is hard at work in 21 of the top 25 U.S. banks (by assets as of June 30, 1986) and 46 of the top banks outside of the U.S. In Australia, 80 percent of retail electronic funds transfer transactions go through Tandem systems. Over 60 percent of the

top U.S. regional automated teller machine interchanges use Tandem systems to switch consumer electronic funds transfer transactions between financial institutions. Nine U.S. and 12 international retailers automate merchandising or distribution functions with Tandem equipment, or have Tandem

*“Increasingly, the information stored in OLTP systems is not only vital to the corporation itself, it is the corporation’s business.”*

Computerworld  
September 29, 1986<sup>18</sup>

point-of-sale networks installed. Five major European and several major U.S. automobile manufacturers are using Tandem solutions. Two of the three leading stock exchanges in the world—and 17 others—automate trading or other functions with Tandem equipment.

Businesses are making technology decisions today that will influence their future market positions. Today's decisions will have a critical and strategic impact in the long term. Many businesses select Tandem because Tandem's system architecture meets today's on-line business requirements and establishes a strategic foundation for the future.



...drive a car manufactured by any of several major automobile companies







“**F**iscal 1986 ended on  
a superlative note for  
Tandem.”

Frederic H. Cohen  
L. F. Rothschild,  
Unterberg, Towbin, Inc.  
November 4, 1986<sup>19</sup>

▲ In California: Robert E. Berry, Jr., Senior Marketing Representative for Tandem Computers Incorporated, with Deborah A. Coleman, Vice President of Worldwide Operations, Apple Computer, Inc.

◀ Completed Macintosh computers are being readied for shipment in the large picture.

Apple Computer runs its automated domestic manufacturing operations on Tandem systems and is implementing a worldwide Tandem network that will link Tandem processors and Apple Macintosh workstations at manufacturing facilities in Europe, Asia, and the U.S. Apple believes that "information technology in manufacturing is as important to our competitive advantage as is our automated process." Apple selected Tandem primarily for its systems' unique expandability to accommodate growth without impacting operations.



# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

## Overview

Tandem Computers is committed to being a technological leader in the expanding market for on-line transaction processing systems and networks. The Company believes that its computer architecture uniquely satisfies the fundamental requirements for such applications. Achieving its goal of technological leadership involves many factors, including strategic market positioning, a commitment to product development, and an organizational structure and philosophy that foster employee productivity and creativity. Further, Tandem believes it is essential to maintain a strong financial position and operating record to allow the Company to maximize its opportunities within this growing market.

## Financial Condition

Tandem's already strong financial condition continued to improve throughout fiscal 1986. For the fourth consecutive year, the cash and cash investments balance grew. Cash reached an all-time high of \$240 million at September 30, 1986, up from \$129 million at the end of fiscal 1985. Key factors contributing to the record cash levels were income from operations, employee purchases of stock, and improved asset management. Net income increased 86 percent over the fiscal 1985 level.

An important part of Tandem's corporate philosophy is to provide all employees with the opportunity to participate in the Company's ownership through employee stock purchase and option programs. As a result of employee participation in these programs, the Company received \$45 million in fiscal 1986 and \$10 million in fiscal 1985.

Asset management improved as the Company reduced its inventory levels and improved its collection of receivables. Inventories declined 19 percent from the fiscal 1985 year-end level. Inventory days improved to 86 days at fiscal year-end, down from 123 days at the end of fiscal 1985. Accounts receivable days improved to 82 days at fiscal year-end, down from 86 days at the end of fiscal 1985.



From left: Lawrence A. Laurich, Vice President—Engineering; Dennis L. McEvoy, Vice President—Software; Barry E. Young, Vice President—Austin Operations.



From left: Gerald L. Peterson, Vice President—Marketing; Lawrence W. McGraw, Vice President—U.S. Sales Operations.

The Company's financial strategy includes maintaining a sound ratio of current assets to current liabilities and a conservative capital structure. At the end of fiscal 1986, the current ratio was 3.9:1, long-term debt and capital lease obligations were 1.2 percent of total capital, unused lines of credit totaled \$65 million, and the equity base was \$535 million. Tandem believes this financial strategy provides the maximum near-term and long-term flexibility to utilize a full range of financing alternatives to enable the Company to invest for future growth.

## Results of Operations

The following table summarizes the changes in selected operating indicators for the years presented. The percentages on the left show the relationship of various income and expense items to revenue. The percentages on the right measure the year-to-year percentage increases or decreases.

Percent of Revenue			Percent Increase (Decrease)			
1986	1985	1984	1986	1985	1984	
100	100	100	Revenue	23	17	27
32	38	40	Cost of revenue	3	11	23
11	12	10	Research and development	21	36	34
			Marketing, general and administrative	25	23	39
43	42	40	Operating income	112	(2)	3
14	8	10	Interest income, net	36	21	610
1	1	1	Pretax income	103	—	11
15	9	11	Current tax provision	131	(5)	17
7	4	4	DISC reversal	(2)		
			Net income excluding DISC reversal	86	4	8
8	6	6	Net income	86	(20)	39
8	6	8	Earnings per share excluding DISC reversal	76	3	5
			Earnings per share	76	(21)	37

Amounts may not total due to rounding.



## Revenue

The rate of revenue growth in fiscal 1986 surpassed that of fiscal 1985, although it was lower than that of fiscal 1984. The rate of revenue growth in fiscal 1986 improved as the Company strengthened its position as a major supplier in the on-line transaction processing marketplace. Significant new products introduced during the fiscal year had a positive influence on revenue growth. While demand in the United States was relatively weak, international demand was strong.

Tandem's revenue gains over the past three years result from increased shipments of its hardware and software products to new and existing customers and from increases in the number of customers using its support and training services. The Company's total revenue in fiscal 1986 increased \$144 million, or 23 percent, over fiscal 1985. Revenue in fiscal 1985 increased \$92 million, or 17 percent, over fiscal 1984. International business, led



From left: Stephen C. Schmidt, Vice President—Operations; Michael K. Bateman, Vice President—Third-Party Marketing; Robert C. Marshall, Senior Vice President and Chief Operating Officer.

by Europe, continued to grow more rapidly than domestic business in fiscal 1986. The percentage of total revenue contributed from international operations reached 40 percent, compared with 33 percent in fiscal 1985 and 31 percent in fiscal 1984.

## Operating Income

Operating income as a percentage of revenue increased significantly in fiscal 1986 compared with the prior two fiscal years. The improving trend in operating income is primarily attributable to higher gross profit margins. Cost of revenue as a percentage of total revenue declined sharply. Research and development expenditures as a percentage of total revenue declined slightly compared to fiscal 1985, largely because certain software development expenses were capitalized in fiscal 1986 (see Notes to Consolidated Financial Statements). Marketing, general, and administrative expenditures increased modestly as a percentage of total revenue.



From left: Alois J. Strnad, Vice President—Management Information Systems; David J. Rynne, Vice President and Chief Financial Officer; Jeanne D. Wohlers, Vice President and Corporate Controller; Richard A. Lamb, Treasurer.

The Company increased its research and development expenditures to support an active product introduction schedule. Tandem's product development activities focus on meeting the needs of computer users who are implementing on-line systems at single sites and in geographically distributed information processing networks. The Company believes that the opportunities for technological innovation in this marketplace are substantial and, therefore, has increased its investment in research and development each year since its founding. The Company expects to increase expenditures on research and development in fiscal 1987.

The Company's marketing strategy focuses on selling to large organizations that are implementing major on-line transaction processing applications. Providing a high level of service and support is essential to meeting the needs of this customer base. To maximize its long-term opportunities in this marketplace, Tandem has built a direct selling and support organization in industrial markets throughout the world. The Company's direct sales activities are comple-



From left: Thomas J. Klitgaard, Vice President, General Counsel and Secretary; Jan E. Jensen, Vice President—Human Resources; Gerald D. Held, Vice President—New Ventures; Donald E. Fowler, Vice President—Strategy and Corporate Development.



mented by relationships established with third-party application software developers, equipment remarketers, and distributors.

Marketing, general, and administrative expenses have increased as a percentage of revenue over the past three fiscal years as the Company has continued to build its marketing organization and to develop marketing relationships with third parties to foster future growth. The products introduced during this period resulted in increased marketing costs to bring the products to market and to train new and existing sales, service, and support personnel.

The improvement in the ratio of cost of revenue to total revenue is attributable to a number of factors: Tandem continued its successful programs to increase the efficiency of its manufacturing and service operations. The Company sold a favorable mix of products, including a high ratio of newer products. These products incorporate new technology that provides greater performance at lower cost. The weakness of the U.S. dollar against European currencies had a favorable impact on the cost of revenue ratio.

The 23 percent increase in revenue for fiscal 1986 was achieved with only a four percent increase in employment. Total employment at fiscal year-end was 5,719. The Company expects that, in order to support a higher level of revenue, it will be required to add a greater number of new employees in fiscal 1987.

#### **Net Income and Earnings Per Share**

The rate of change in net income has differed from that of operating income over the past three years because of the factors discussed above and because of changes in the Company's net interest income and effective tax rate. This year, net interest income was more than \$2 million higher than in fiscal 1985 and more than \$3 million higher than in fiscal 1984. While prevailing interest rates continued to decline, the effect has been offset by continuing growth in the amount of interest-earning cash investments.

Net income comparisons for the three years are distorted by a one-time tax benefit recorded in fiscal 1984. In that year, \$9.7 million of taxes that had been accrued on earnings of the Company's Domestic International Sales Corporation (DISC) were reversed.

The effective tax rate in fiscal 1986 was 44 percent, compared with rates of 39 percent in fiscal 1985 and 24 percent in fiscal 1984. The effective tax rate in fiscal 1986 was higher than that in fiscal 1985 primarily because of higher levels of pretax income and a reduction of the research and development credit. The Company expects



From left: Robert F. Hoogstraten, Vice President and Managing Director - European Division; Michael C. Moore, Vice President and Intercontinental Division Manager; Jack W. Chapman, Vice President - International Sales Operations.

the Tax Reform Act of 1986 to have an immaterial impact on the fiscal 1986 effective tax rate.

The effective tax rate in fiscal 1984 was lower than that in fiscal 1985 primarily because of the \$9.7 million DISC benefit.

Earnings per share in fiscal 1986 were \$1.44, compared with earnings per share in fiscal 1985 of \$.82 and in fiscal 1984 of \$.80 (net of the \$.24 per share benefit from the DISC tax reversal). In each of the three years, the growth in earnings per share differed from that of net income because of a higher number of weighted average shares outstanding.

#### **Effect of Inflation**

Please see page 39 of this report for a discussion of the effect of changing prices on the Company's operations.



From left: Thomas Lyman Chun, Vice President - Corporate Projects; George C. Eckert, Vice President - Major Projects Management.



## SELECTED FINANCIAL DATA

For the Five Years Ended September 30, 1986

(In thousands except per share amounts)	1986	1985	1984	1983	1982
<b>Revenue</b>	\$767,793	\$624,138	\$532,620	\$418,282	\$312,143
Cost of revenue	247,871	240,148	215,692	175,646	120,390
Research and development	86,614	71,577	52,514	39,168	33,642
Marketing, general and administrative	327,330	262,332	213,313	153,697	117,403
<b>Operating Income</b>	105,978	50,081	51,101	49,771	40,708
Interest income, net	8,504	6,269	5,183	730	6,033
Provision for income taxes					
Current period	(50,716)	(21,976)	(23,076)	(19,696)	(16,885)
Benefit of DISC tax reversal	—	—	9,700	—	—
<b>Net Income</b>	\$ 63,766	\$ 34,374	\$ 42,908	\$ 30,805	\$ 29,856
<b>Earnings Per Share</b>	\$ 1.44	\$ .82	\$ 1.04	\$ .76	\$ .76
Total Assets	\$705,025	\$552,344	\$501,873	\$415,525	\$337,366
Long Term Debt and Capital Lease Obligations	\$ 6,526	\$ 12,412	\$ 17,155	\$ 23,957	\$ 21,102
Stockholders' Investment	\$534,680	\$420,408	\$375,122	\$310,993	\$250,988

31

### Auditors' Report

To Tandem Computers Incorporated:

We have examined the consolidated balance sheet of Tandem Computers Incorporated (a Delaware corporation) and subsidiaries as of September 30, 1986 and 1985 and the related consolidated statements of income, stockholders' investment and changes in financial position for each of the three years in the period ended September 30, 1986. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of Tandem Computers Incorporated and subsidiaries as of September 30, 1986 and 1985, and the results of their operations and the changes in their financial position for each of the three years in the period ended September 30, 1986, in conformity with generally accepted accounting principles applied on a consistent basis.

San Jose, California,  
October 28, 1986.

Arthur Andersen & Co.



# CONSOLIDATED STATEMENT OF INCOME

For the Three Years Ended September 30, 1986

(In thousands except per share amounts)	1986	1985	1984
<b>Revenue</b>			
Product revenue	\$618,357	\$515,109	\$448,611
Service and other revenue	149,436	109,029	84,009
Total revenue	767,793	624,138	532,620
<b>Costs and Expenses</b>			
Cost of revenue	247,871	240,148	215,692
Research and development	86,614	71,577	52,514
Marketing, general and administrative	327,330	262,332	213,313
Total costs and expenses	661,815	574,057	481,519
<b>Operating Income</b>	105,978	50,081	51,101
Interest expense	(1,979)	(2,407)	(2,642)
Interest income	10,483	8,676	7,825
<b>Income Before Income Taxes</b>	114,482	56,350	56,284
<b>Provision For Income Taxes</b>			
Current period	(50,716)	(21,976)	(23,076)
Benefit of DISC tax reversal	—	—	9,700
Total provision for income taxes	(50,716)	(21,976)	(13,376)
<b>Net Income</b>	\$ 63,766	\$ 34,374	\$ 42,908
<b>Earnings Per Share</b>			
Weighted average shares outstanding	44,201	41,765	41,399

Because of the Company's method of operation, it is not practical or meaningful to report the cost of service and other revenue as a separate line item.

The accompanying notes are an integral part of this statement.



# CONSOLIDATED BALANCE SHEET

As of September 30, 1986 and 1985

(In thousands except share amounts)	1986	1985
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash investments	\$239,819	\$128,676
Accounts receivable, net of allowances of \$7,292 in 1986 and \$3,479 in 1985	197,658	163,378
Inventories	64,229	78,962
Prepaid expenses and other	17,505	10,746
Prepaid income taxes	—	3,655
Total current assets	519,211	385,417
<b>Property, Plant and Equipment, at cost</b>		
Land and buildings	38,652	25,398
Machinery and equipment	62,302	55,669
Computer equipment and spares	137,388	119,982
Leasehold improvements	34,270	32,363
Construction in process	9,513	7,932
	282,125	241,344
Accumulated depreciation and amortization	(107,103)	(80,746)
Net property, plant and equipment	175,022	160,598
<b>Other Assets</b>	10,792	6,329
<b>Total Assets</b>	<b>\$705,025</b>	<b>\$552,344</b>

## Liabilities and Stockholders' Investment

<b>Current Liabilities</b>		
Accounts payable	\$ 50,768	\$ 33,377
Accrued liabilities		
Wages, payroll taxes and employee benefits	34,132	28,196
Income taxes	21,670	—
Other accrued liabilities	21,452	18,184
Current portion of long term debt and capital lease obligations	5,969	7,049
Total current liabilities	133,991	86,806
<b>Long Term Debt and Capital Lease Obligations</b>	6,526	12,412
<b>Deferred Income Taxes</b>	29,828	32,718
<b>Stockholders' Investment</b>		
Common stock, \$.025 par value, authorized 200,000,000 shares, outstanding 43,918,756 in 1986 and 41,386,572 in 1985	1,098	1,035
Additional paid-in capital	289,441	238,998
Retained earnings	244,141	180,375
Total stockholders' investment	534,680	420,408
<b>Total Liabilities and Stockholders' Investment</b>	<b>\$705,025</b>	<b>\$552,344</b>

The accompanying notes are an integral part of this balance sheet.



## CONSOLIDATED STATEMENT OF STOCKHOLDERS' INVESTMENT

For the Three Years Ended September 30, 1986

(In thousands)	Common Stock		Additional	Retained	Total
	Shares	Amount	Paid-In Capital	Earnings	
<b>Balance September 30, 1983</b>	39,553	\$ 989	\$206,911	\$103,093	\$310,993
Sale of common stock under stock option plans	779	19	9,983	—	10,002
Sale of common stock under stock purchase plan	285	7	6,982	—	6,989
Tax benefit from employee transactions in common stock	—	—	4,230	—	4,230
Net income	—	—	—	42,908	42,908
<b>Balance September 30, 1984</b>	40,617	1,015	228,106	146,001	375,122
Sale of common stock under stock option plans	352	10	3,873	—	3,883
Sale of common stock under stock purchase plan	418	10	6,184	—	6,194
Tax benefit from employee transactions in common stock	—	—	835	—	835
Net income	—	—	—	34,374	34,374
<b>Balance September 30, 1985</b>	41,387	1,035	238,998	180,375	420,408
Sale of common stock under stock option plans	2,143	53	39,253	—	39,306
Sale of common stock under stock purchase plan	389	10	5,926	—	5,936
Tax benefit from employee transactions in common stock	—	—	5,264	—	5,264
Net income	—	—	—	63,766	63,766
<b>Balance September 30, 1986</b>	43,919	\$1,098	\$289,441	\$244,141	\$534,680

The accompanying notes are an integral part of this statement.



# CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION

For the Three Years Ended September 30, 1986

(In thousands)	1986	1985	1984
<b>Funds</b> (Cash and cash investments) at beginning of period	\$128,676	\$106,862	\$ 93,501
<b>Funds Provided from Operations</b>			
Net income	63,766	34,374	42,908
Items not requiring current outlay of funds			
Depreciation and amortization	43,242	35,616	22,741
Deferred income taxes	(2,890)	12,296	(3,544)
Net book value of property, plant and equipment sold or retired	8,742	13,810	6,614
Total provided from operations	112,860	96,096	68,719
<b>Funds Used for Operations</b>			
Increase in accounts receivable	34,280	17,036	26,784
Increase (decrease) in inventories	(14,733)	(13,413)	6,455
Net change in prepaid expenses and non-debt current liabilities	(45,161)	1,795	(25,652)
Investment in property, plant and equipment	65,011	67,568	71,519
Increase (decrease) in other assets, net	5,860	(511)	2,361
Total used for operations	45,257	72,475	81,467
Net increase (decrease) in funds from operations	67,603	23,621	(12,748)
<b>Provided from (Repayment of) External Financings</b>			
Increase (decrease) in long term debt and capital lease obligations, net	(6,966)	(12,719)	4,888
Sale of common stock under employee stock option and stock purchase plans	45,242	10,077	16,991
Tax benefit from employee transactions in common stock	5,264	835	4,230
Total provided from (repayment of) external financings	43,540	(1,807)	26,109
<b>Funds</b> (Cash and cash investments) at end of period	\$239,819	\$128,676	\$106,862

The accompanying notes are an integral part of this statement.



# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

## 1. Summary of Significant Accounting Policies

### Consolidation

The consolidated financial statements include the accounts of Tandem Computers Incorporated and its wholly-owned subsidiaries after elimination of intercompany accounts and transactions.

### Revenue Recognition

The Company generally recognizes revenue from equipment sales at the time of shipment. Service and other revenue are recognized ratably over the contractual period or as the services are provided.

### Translation of Non-U.S. Currency Amounts

Assets and liabilities of the Company's subsidiaries which are denominated in the local currency of the subsidiary are translated into U.S. dollars (the functional currency) at year-end exchange rates, except for inventories and property, plant, and equipment, which are translated at approximate rates prevailing when the assets were acquired. Income and expense items are translated at average rates of exchange prevailing during the year, except that cost of goods sold and depreciation are translated at historical rates. Exchange gains and losses are included in current earnings as operating expenses and are immaterial in amount.

### Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market and include materials, labor, and manufacturing overhead. The components of inventories as of September 30 were:

(In thousands)	1986	1985
Purchased parts and subassemblies	\$31,191	\$41,434
Work-in-process	12,138	11,176
Finished goods	20,900	26,352
Total	\$64,229	\$78,962

### Income Taxes

The Company accounts for investment and research and development tax credits as a reduction of the provision for income taxes in the year in which the related credits are generated.

### Property, Plant and Equipment

Systems spares (original cost of \$34,785,000 and \$35,420,000 at September 30, 1986 and 1985, respectively) are depreciated over a five-year period using an accelerated depreciation method. All other property, plant, and equipment are depreciated using the straight-line method. The estimated useful lives are:

Buildings	30 years
Machinery and equipment	5-10 years
Computer equipment and spares	3-7 years
Leasehold improvements	Lease term

Included in the Land and buildings and the Construction in process balances at September 30, 1986 and 1985 are approximately \$26,575,000 and \$12,789,000, respectively, of costs relating to land and land improvements on a parcel held for future development.

### Software Development Costs

During fiscal 1986, the Company adopted the Financial Accounting Standards Board Statement No. 86 which requires the capitalization of certain software development costs. The amount of software development costs included in Other Assets as of September 30, 1986 was \$2,982,000, net of amortization of \$190,000. The Company does not consider the capitalization of these costs to be material to the fiscal 1986 operating results.

### Earnings Per Share

Earnings per common share have been computed based upon the weighted average number of common and common equivalent shares outstanding. Common equivalent shares result from the assumed exercise of outstanding stock options and a convertible debenture that have a dilutive effect when applying the treasury stock method. Fully diluted earnings per share are substantially the same as reported earnings per share.

## 2. Income Taxes

The provision for income taxes included the following deferred (prepaid) items:

(In thousands)	1986	1985	1984
Federal:			
Current	\$26,037	\$ 2,950	\$13,882
Deferred (Prepaid)	(3,923)	4,610	(10,550)
	22,114	7,560	3,332
State:			
Current	6,880	3,522	4,800
Deferred (Prepaid)	89	423	(297)
	6,969	3,945	4,503
Foreign:			
Current	21,686	12,005	6,197
Deferred (Prepaid)	(53)	(1,534)	(656)
	21,633	10,471	5,541
Total Provision	\$50,716	\$21,976	\$13,376

Sources of deferred (prepaid) taxes were as follows:

(In thousands)	1986	1985	1984
Installment sale method			
for income tax reporting	\$(8,043)	\$9,752	\$(1,950)
DISC income	—	(6,117)	(6,084)
Accelerated depreciation	447	2,586	2,950
Effect of intercompany profit eliminations	2,048	(90)	(2,178)
Other (including expenses recognized for financial statements, but not for income tax reporting)	1,661	(2,632)	(4,241)
Total Deferred (Prepaid)	\$(3,887)	\$3,499	\$(11,503)



The provision for income taxes differs from the amount obtained by applying the federal statutory income tax rate to income before taxes as follows:

	1986	1985	1984
Federal statutory tax rate	46%	46%	46%
State taxes, net of federal income tax benefit	3	4	4
Investment tax credits	(2)	(3)	(3)
Research and development tax credits	(1)	(8)	(7)
Tax exempt DISC and FSC income	(2)	(4)	(1)
Other	—	4	2
	44	39	41
Benefit of DISC tax reversal	—	—	(17)
Effective Tax Rate	44%	39%	24%

The 1984 benefit of DISC (Domestic International Sales Corporation) tax reversal represents the benefit of deferred taxes previously provided on DISC earnings accumulated prior to the enactment of the Tax Reduction Act of 1984.

The Company established a Foreign Sales Corporation (FSC) effective January 1, 1985.

In fiscal 1986, the Company provided taxes pursuant to tax laws in effect on September 30, 1986. The Company expects the subsequent enactment of the Tax Reform Act of 1986 to have an immaterial impact on the fiscal 1986 effective tax rate.

### 3. Long Term Debt, Capital Lease Obligations and Other Commitments

Long term debt and capital lease obligations as of September 30 consist of the following:

(In thousands)	1986	1985
5.8% and 8.2% promissory notes payable to a bank in Japanese yen, due October 1986 and March 1987, respectively	\$ 3,292	\$ 2,573
Convertible subordinated debenture payable to an officer of the Company, bearing interest at 9.5% and due September 1989	1,667	1,667
Industrial revenue bond, bearing interest at 12%, due June 1992	1,000	1,000
Industrial revenue bond, bearing interest at 12.4%, due July 1992 and collateralized by certain equipment.	1,000	1,000
Obligations under capital leases, interest ranging from 4% to 17%, net of imputed interest totaling \$749 and \$2,648, in 1986 and 1985, respectively	4,735	11,775
Other	801	1,446
	12,495	19,461
Less current portion	5,969	7,049
Long Term Debt and Capital Leases	\$ 6,526	\$12,412

The \$1,667,500 convertible subordinated debenture is convertible into 100,000 shares of Common Stock at a

price of \$16.675. The debenture becomes convertible as to 25,000 shares each year beginning in September 1986 and is subject to conversion acceleration in the event of certain occurrences.

There were no interest costs capitalized during fiscal 1986. Interest costs of \$594,000 and \$1,606,000 relating to construction projects were capitalized during fiscal 1985 and 1984, respectively.

The Company has entered into unsecured credit agreements totaling \$65,000,000 with several banks for working capital purposes. The agreements provide for revolving borrowings through March 1988, at which time outstanding amounts may be converted to term loans to be amortized through 1991. Domestic borrowings bear interest at or below the banks' prime rates through March 1988 and approximately 1/4% above these rates through 1991. The Company is required to pay a commitment fee of 1/4% per annum. There are no compensating balances required under any of these arrangements.

Certain financial covenants and restrictions are included in the loan agreements. The Company was in compliance with all such covenants and restrictions at September 30, 1986.

The Company has guaranteed payment of loans made to officers totaling \$250,000 at September 30, 1986 under a \$2,000,000 bank line of credit. In addition, the Company has a \$1,667,500 note receivable from an officer included in Other Assets which matures in September 1989 and bears interest at an annual rate of 10%.

The Company leases its headquarters, field offices, certain equipment, automobiles, and most of its operating facilities under operating lease agreements. The Company also has capital leases for certain equipment. Future minimum lease payments as of September 30, 1986 are as follows:

(In thousands)	Lease Obligations	
	Capital	Operating
Fiscal Year		
1987	\$3,210	\$ 38,647
1988	1,902	33,047
1989	243	29,545
1990	63	26,739
1991	33	23,268
Thereafter	33	83,954
Total minimum lease payments	\$5,484	\$235,200

The cost of assets held under capital leases totaled \$11,981,000 and \$20,504,000 at September 30, 1986 and 1985, respectively, and are included in the Machinery and equipment and Computer equipment and spares classifications in the accompanying Balance Sheet. The accumulated depreciation associated with these assets totaled \$8,894,000 and \$11,928,000 at September 30, 1986 and 1985, respectively.

Rent expenses were \$43,092,000 in 1986, \$38,213,000 in 1985, and \$36,726,000 in 1984.



#### 4. Capital Stock

The Company's authorized capital stock consists of 2,400,000 shares of preferred stock, 4,000,000 shares of Junior Common Stock, and 196,000,000 shares of Common Stock. At September 30, 1986, 13,258,490 shares of Common Stock were reserved for future issuance under stock option plans, the employee stock purchase plan, and a convertible subordinated debenture. There were no shares of preferred stock or Junior Common Stock outstanding at September 30, 1986.

#### Preferred Stock Rights

During 1985, the Company declared a dividend of one preferred share purchase right for each then outstanding share of Common Stock. In addition, one right will be issued with each share of Common Stock issued by the Company before the date the rights become exercisable, are redeemed by the Company, or expire on May 17, 1990. The rights will not be exercisable, or transferable apart from the Common Stock, until 10 days after another person or group of persons acquires 20% of the Common Stock or commences, or announces its intention to commence, a tender or exchange offer for at least 30% of the Common Stock. Each right entitles the holder to buy one one-hundredth of a share of a newly created series of preferred stock of the Company, par value \$.10 per share, designated as Series A Participating Preferred Stock, at an exercise price of \$80.00. In certain circumstances, the right will entitle its holder to purchase a larger amount of preferred stock or stock in an acquiring company.

#### Stock Option Plans

The Company has employee stock option plans under which permanent employees may be granted options to purchase shares of Common Stock at 100% of fair market value at the time of the grant. Options generally become exercisable six months after the effective date and expire no later than seven years after the effective date. At the discretion of the Board of Directors, options granted under the stock option plans may qualify for Incentive Stock Option treatment under the Economic Recovery Tax Act of 1981.

As of September 30, 1986 options for 6,008,986 shares were outstanding at prices ranging from \$5.23 to \$34.88, with an average price of \$22.60. Options for 4,860,946 shares were exercisable as of September 30, 1986. Options for 4,653,538 shares are available for future grant. Options were exercised at prices ranging from \$3.96 to \$34.88 in 1986, \$3.96 to \$26.88 in 1985, and \$3.92 to \$26.88 in 1984.

#### Employee Stock Purchase Plan

As of September 30, 1986 the Company has reserved 1,605,666 shares of Common Stock for future issuance under its employee stock purchase plan. Under the plan, the Company may offer shares to employees by two

methods. Under one method, eligible employees may elect to purchase shares of Common Stock at 85% of fair market value as of the last trading day before or the last trading day of the participation period. Under the second method, the Company may grant to all employees the option to purchase the same number of shares of Common Stock at not less than 85% of fair market value at the grant date. As of September 30, 1986 options to purchase 100,600 common shares at \$15.73, 225,000 common shares at \$16.15, and 564,700 common shares at \$23.91 were outstanding under the second method. Such options are exercisable through February 28, 1987, February 10, 1988, and October 10, 1988, respectively.

#### 5. Geographic Segment Information

The following table sets forth information about the Company's operations in different geographic regions for the three years ended September 30, 1986.

(In thousands)	Geographic Area			Eliminations	Consolidated
	United States	Europe	Other		
1986					
Revenue—Customer	\$463,705	\$207,670	\$ 96,418	\$ —	\$767,793
Revenue—Intercompany	118,989	—	—	(118,989)	—
Revenue—Total	582,694	207,670	96,418	(118,989)	767,793
Pretax Income	73,716	39,821	1,007	(62)	114,482
Identifiable Assets	541,381	131,853	63,701	(31,910)	705,025
1985					
Revenue—Customer	\$417,460	\$136,307	\$ 70,371	\$ —	\$624,138
Revenue—Intercompany	111,742	—	—	(111,742)	—
Revenue—Total	529,202	136,307	70,371	(111,742)	624,138
Pretax Income	34,586	15,496	6,555	(287)	56,350
Identifiable Assets	436,835	101,836	47,386	(33,713)	552,344
1984					
Revenue—Customer	\$364,873	\$109,562	\$ 58,185	\$ —	\$532,620
Revenue—Intercompany	90,850	—	—	(90,850)	—
Revenue—Total	455,723	109,562	58,185	(90,850)	532,620
Pretax Income	46,977	10,842	5,261	(6,796)	56,284
Identifiable Assets	421,974	79,747	31,732	(31,580)	501,873

Intercompany transfers are made at arm's length prices, which include manufacturing profits attributable to United States operations. Identifiable assets are those assets of the Company that are identified with the operations of the corresponding geographic area. United States customer revenue includes export sales of \$10,048,000 in 1986, \$7,053,000 in 1985, and \$5,989,000 in 1984.

#### 6. Contingencies

The Company, along with three present or former principal officers, was named as a defendant in a class action complaint filed in the United States District Court for the Northern District of California on October 23, 1984, purporting to state claims for alleged violations of federal



securities laws and pendent state claims arising out of the Company's December 1982 restatement of revenue and earnings for fiscal 1982. The court dismissed the complaint as to the individual defendants in March 1985 with leave to amend. Subsequently, the court granted the defendant's motion for summary judgment and dismissed the suit in September 1985. The plaintiff filed a Notice of Appeal in October 1985. No provision has been made in the accompanying financial statements for possible liability because, in the opinion of management, it is unlikely that the ultimate disposition of the suit would have a material effect on the Company's financial position.

In addition, there are various actions or claims which have been brought or asserted against the Company. Management does not consider them to be material to the Company's financial position.

## 7. Unaudited Quarterly Financial Data

(In thousands except per share amounts)

Quarters Ended	Dec. 31	March 31	June 30	Sept. 30
Year ended September 30, 1986:				
<b>Revenue</b>	\$170,061	\$176,327	\$200,853	\$220,552
<b>Costs and Expenses</b>				
Cost of revenue	58,844	58,025	61,030	69,972
Research and development	19,817	21,318	22,299	23,180
Marketing, general and administrative	72,085	76,986	86,923	91,336
Total costs and expenses	150,746	156,329	170,252	184,488
<b>Operating Income</b>	19,315	19,998	30,601	36,064
Interest income, net	1,673	2,362	2,054	2,415
<b>Income Before Income Taxes</b>				
	20,988	22,360	32,655	38,479
<b>Provision For Income Taxes</b>				
	(9,340)	(9,950)	(14,531)	(16,895)
<b>Net Income</b>	\$ 11,648	\$ 12,410	\$ 18,124	\$ 21,584
<b>Earnings Per Share</b>	\$ .28	\$ .29	\$ .40	\$ .47

Year ended September 30, 1985:

<b>Revenue</b>	\$159,653	\$146,489	\$144,165	\$173,831
<b>Costs and Expenses</b>				
Cost of revenue	62,021	57,713	56,116	64,298
Research and development	15,127	17,075	18,027	21,348
Marketing, general and administrative	59,996	61,998	69,482	70,856
Total costs and expenses	137,144	136,786	143,625	156,502
<b>Operating Income</b>	22,509	9,703	540	17,329
Interest income, net	1,888	1,573	1,298	1,510
<b>Income Before Income Taxes</b>				
	24,397	11,276	1,838	18,839
<b>Provision For Income Taxes</b>				
	(10,369)	(4,435)	550	(7,722)
<b>Net Income</b>	\$ 14,028	\$ 6,841	\$ 2,388	\$ 11,117
<b>Earnings Per Share</b>	\$ .34	\$ .16	\$ .06	\$ .27

## 8. Information on the Effects of Inflation (Unaudited)

The Company has provided an adjusted summary of operations and selected financial data in accordance with the

Financial Accounting Standards Board Statement No.33, as amended, concerning "Financial Reporting and Changing Prices." This disclosure requirement is experimental and involves considerably more judgment than traditional financial statements and, therefore, should be reviewed with caution.

Inflation-adjusted information was completed using the "current cost" method, which requires the Company to adjust asset values based on specific indices and appraisals.

The method does not allow for inflation adjustments to operating expenses, revenue, or net interest income, nor an adjustment to the tax provision, despite the decrease in pretax income which results from the inflation adjustments. Only the cost of revenue and depreciation expense related to the assets, which are restated for inflation effects, are adjusted.

Depreciation is computed on a straight-line basis, rather than the accelerated basis that is used for some assets in the Company's historical financial statements, because the accelerated method already recognizes some of the effects of inflation.

Net income for fiscal 1986 was lower under the current cost method because of higher depreciation and amortization expense resulting from higher asset values. Companies that hold monetary assets during a period of inflation lose purchasing power. Tandem held net monetary assets during the period, and their purchasing power declined.

## Consolidated Statement of Income Adjusted for Inflation

For the year ended September 30, 1986

(In thousands)	In Average 1986 Dollars	
	Historic Cost	Current Cost
Total Revenue	\$767,793	\$767,793
Cost of revenue, excluding depreciation and amortization	232,944	232,944
Other costs and expenses, excluding depreciation and amortization	385,629	385,629
Depreciation and amortization	43,242	46,311
Interest (income), net	(8,504)	(8,504)
Provision for income taxes	\$ 50,716	\$ 50,716
<b>Net Income</b>	<b>\$ 63,766</b>	<b>\$ 60,697</b>
Increase in value of inventories, property, plant and equipment held during the year:		
Measured in general prices		\$ 4,534
Measured in specific prices		(3,677)
Excess of increase in general price level (constant dollars) over increase in specific prices		\$ 8,211

At September 30, 1986, current cost of inventory was \$64,343,000 and current cost of property, plant and equipment, net of accumulated depreciation was \$183,490,000.



## Five Year Comparison of Selected Financial Data Adjusted for Inflation

(In thousands except per share amounts)

	In Average 1986 Dollars				
	1986	1985	1984	1983	1982
<b>Total revenue</b>					
Constant dollars	\$767,793	\$639,575	\$565,995	\$462,669	\$357,218
<b>Current cost information</b>					
Net income	\$ 60,647	\$ 32,234	\$ 44,761	\$ 32,449	—
Earnings per share	\$ 1.37	\$ .77	\$ 1.08	\$ .80	—
Net assets at year-end	\$538,553	\$444,269	\$406,261	\$345,589	—
Excess of increase in general price level (constant dollars) over increase in specific prices	\$ 8,211	\$ 4,531	\$ 831	\$ 1,273	—
<b>Other information</b>					
Decrease in purchasing power of net monetary items	\$ 4,191	\$ 5,466	\$ 5,814	\$ 3,115	—
Market price per share at end of period	\$ 33.70	\$ 14.51	\$ 16.82	\$ 38.51	\$ 25.39
Average CPI (1967=100)	327.3	319.4	308.0	295.9	286.0

## Tandem Stock Price

Calendar Quarter	Price	High	Low
1986	3rd Quarter	39 1/2	27 3/4
	2nd Quarter	34 1/8	22 5/8
	1st Quarter	26 7/8	19 1/2
1985	4th Quarter	23 7/8	12 7/8
	3rd Quarter	18 5/8	13 1/8
	2nd Quarter	23 7/8	14 1/2
1984	1st Quarter	28 5/8	17 5/8
	4th Quarter	20 1/8	14 3/4
	3rd Quarter	24 3/4	13
	2nd Quarter	30 5/8	16 1/4
1st Quarter		40 1/4	30

Tandem Computers Incorporated is traded via the NASDAQ National Market System under the trading symbol TNDM. All quotations shown represent the high and low sale prices. The company has not declared or paid any cash dividends on its Common Stock and has no plans to do so in the foreseeable future.

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- Gordon Casey, Merrill Lynch, Pierce, Fenner & Smith Inc. *Research Comment 1061* (April 30, 1986): 3. © 1986 Merrill Lynch, Pierce, Fenner & Smith Incorporated. Reprinted by permission.
- See note 2 above; pp. 39-40.
- See note 3 above.
- See note 3 above; pp. 1-6.
- Ron Levine, "Tandem Computers, Inc.[orporated]—This Fault Tolerant Computer Maker Concentrates on Advanced Service Technologies As Well," *Computer/Electronic Service News* (August 1986): 61-63. © 1986 CESN Publications, Inc. Reprinted by permission.
- Philip J. Gill, "On-line Transaction Processing," *Computerworld* (September 29, 1986): 49. © 1986 CW Communications. Reprinted by permission.
- See note 3 above; p. 3.
- See note 16 above.
- Frederic H. Cohen and Walter J. Winnitzki, L. F. Rothschild, Unterberg, Towbin, Inc. Investment Viewpoint coded T-42 (November 4, 1986): 53. © 1986 L. F. Rothschild, Unterberg, Towbin, Inc. Reprinted by permission.

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Thomas J. Perkins,  
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General Partner,  
Kleiner, Perkins, Caufield & Byers

Morton Collins,  
General Partner, DSV Associates

Thomas J. Davis, Jr.,  
General Partner, Mayfield Fund

Franklin P. Johnson, Jr.,  
Chairman, Asset Management Company

Andrew Knight,  
Chief Executive, *The Daily Telegraph*

Robert C. Marshall,  
Senior Vice President and  
Chief Operating Officer,  
Tandem Computers Incorporated

Robert G. Stone, Jr.,  
Chairman of the Board,  
Kirby Exploration Company

James G. Treybig,  
President and  
Chief Executive Officer,  
Tandem Computers Incorporated

Thomas I. Unterberg,  
Chairman and  
Chief Executive Officer  
L.F. Rothschild, Unterberg,  
Towbin Holdings, Inc.

Walter B. Wriston  
Chairman, President's Economic  
Policy Advisory Board

## Auditors

Arthur Andersen & Co.  
San Jose, California

## Registrar and Transfer Agent

Bank of America N.T. & S.A.  
San Francisco, California

## Form 10-K

A copy of the Company's Report  
on Form 10-K for the 1986 fiscal  
year, as filed with the Securities  
and Exchange Commission, is  
available on written request.  
Please direct your request to:

Director of Investor Relations  
Tandem Computers Incorporated  
19333 Vallico Parkway  
Cupertino, California 95014-2599

## Annual Meeting

The annual meeting of stock-  
holders will be held at 10:00 a.m.  
on Friday, February 20, 1987, at the  
Company's headquarters.

## Corporate Headquarters

19333 Vallico Parkway  
Cupertino, California 95014-2599  
(408) 725-6000

## Officers

James G. Treybig,  
President and  
Chief Executive Officer

Robert C. Marshall,  
Senior Vice President and  
Chief Operating Officer

Michael K. Bateman,  
Vice President -  
Third-Party Marketing

Jack W. Chapman,  
Vice President -  
International Sales Operations

Thomas Lyman Chun,  
Vice President -  
Corporate Projects

George C. Eckert,  
Vice President -  
Major Projects Management

Donald E. Fowler,  
Vice President - Strategy and  
Corporate Development

Gerald D. Held,  
Vice President - New Ventures

Robert F. Hoogstraten,  
Vice President and Managing  
Director - European Division

Jan E. Jensen,  
Vice President - Human Resources

Thomas J. Klitgaard,  
Vice President, General Counsel  
and Secretary

Richard A. Lamb,  
Treasurer

Lawrence A. Laurich,  
Vice President - Engineering

Dennis L. McEvoy,  
Vice President - Software

Lawrence W. McGraw,  
Vice President -  
U.S. Sales Operations

Michael C. Moore,  
Vice President and Intercontinental  
Division Manager

Gerald L. Peterson,  
Vice President - Marketing

David J. Rynne,  
Vice President and  
Chief Financial Officer

Stephen C. Schmidt,  
Vice President - Operations

Alois J. Strnad,  
Vice President -  
Management Information Systems

Jeanne D. Wohlers,  
Vice President and  
Corporate Controller

Barry E. Young,  
Vice President - Austin Operations

## Domestic Sales and Service Offices

*Alaska*, Anchorage

*Arizona*, Phoenix, Tucson

*Arkansas*, Little Rock

*California*, Culver City, Los Angeles,  
Orinda, Riverside, Sacramento,  
San Diego, San Francisco,  
Santa Ana, Santa Clara

*Colorado*, Englewood

*Connecticut*, Hartford, Stamford

*Florida*, Jacksonville, Miami,  
Orlando, Tampa

*Georgia*, Atlanta

*Hawaii*, Honolulu

*Illinois*, Chicago, Oak Brook,  
Palatine, Schaumburg

*Indiana*, Indianapolis, Fort Wayne

*Iowa*, Bettendorf, Cedar Rapids,  
Des Moines

*Kansas*, Overland Park

*Kentucky*, Louisville

*Louisiana*, Metairie

*Maryland*, Linthicum

*Massachusetts*, Newton

*Michigan*, Ann Arbor, Flint,  
Lansing

*Minnesota*, Minneapolis

*Mississippi*, Jackson

*Missouri*, Creve Coeur, St. Louis

*Nebraska*, Omaha

*Nevada*, Las Vegas

*New Jersey*, Cardiff City, Cherry  
Hill, Hasbrouck Heights

*New Mexico*, Albuquerque

*New York*, Amherst, Fairport,  
Jericho, New York City

*North Carolina*, Charlotte,  
Greensboro, Raleigh

*Ohio*, Cincinnati, Cleveland,  
Columbus, Dayton

*Oklahoma*, Oklahoma City, Tulsa

*Oregon*, Portland

*Pennsylvania*, Allentown,  
Harrisburg, Philadelphia,  
Pittsburgh

*Tennessee*, Memphis, Nashville

*Texas*, Austin, Dallas, Fort Worth,  
Houston, Plano, San Antonio

*Utah*, Salt Lake City

*Virginia*, Reston, Richmond,  
Virginia Beach

*Washington*, Bellevue, Olympia

*Wisconsin*, Brookfield

## International Distributors

<i>Argentina</i>	<i>Peru</i>
<i>Finland</i>	<i>Philippines</i>
<i>Israel</i>	<i>South Korea</i>
<i>Malaysia</i>	<i>Taiwan</i>
<i>Mexico</i>	<i>Thailand</i>
<i>Middle East</i>	<i>Venezuela</i>

## International Subsidiaries

*Australia*  
Tandem NonStop Pty. Ltd.  
Adelaide, Brisbane, Canberra,  
Melbourne, Perth, Sydney

*Austria*  
Tandem Computer Ges.m.b.H.  
Linz, Vienna

*Belgium*  
Tandem Computers S.A./N.V.  
Brussels

*Canada*  
Tandem Computers Canada Ltd.  
Edmonton, Halifax, Markham,  
Montreal, Ottawa, Scarborough,  
Toronto, Vancouver, Victoria,  
Winnipeg

*Denmark*  
Tandem Computers A/S  
Copenhagen

*France*  
Tandem Computers S.A.  
Paris

*Hong Kong*  
Tandem Computers Hong Kong Ltd.  
Kowloon

*Italy*  
Tandem Computers Italia S.p.A.  
Milan, Rome

*Japan*  
Tandem Computers Japan Ltd.  
Nagoya, Osaka, Tokyo

*The Netherlands*  
Tandem Computers B.V.  
Hoofddorp (Amsterdam)

*New Zealand*  
Tandem NonStop Pty. Ltd.  
Auckland, Christchurch,  
Wellington

*Norway*  
Tandem Computers (Norway) A/S  
Oslo

*Singapore*  
Tandem Computers Int'l Inc.  
Singapore

*Spain*  
Tandem Computers Iberica, S.A.  
Madrid

*Sweden*  
Tandem Computers AB  
Gothenburg, Malmö,  
Spanga (Stockholm)

*Switzerland*  
Tandem Computers AG  
Nyon (Genève), Zurich

*United Kingdom*  
Tandem Computers Ltd.  
Birmingham, Glasgow, High  
Wycombe, London, Northolt,  
Rochdale

*West Germany*  
Tandem Computers GmbH  
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Hamburg, Hilden (Düsseldorf),  
Mannheim, Neufahrn (Munich),  
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First Quarter Report • December 31, 1987

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(In Thousands, Except Per Share Amounts)	For the Three Months Ended	
	December 31, 1987	December 31, 1986
<b>Revenue</b>		
Product revenue	\$229,531	\$200,709
Service and other revenue	52,751	39,531
Total revenue	282,282	240,240
<b>Costs and Expenses</b>		
Cost of product	63,141	54,387
Cost of service and other	39,115	27,985
Research and development	35,867	24,616
Marketing, general and administrative	111,896	87,751
Total costs and expenses	250,019	194,739
<b>Operating Income</b>	32,263	45,501
Interest income, net	4,756	2,842
<b>Income Before Income Taxes</b>	37,019	48,343
Provision for income taxes	13,326	21,269
<b>Net Income</b>	\$ 23,693	\$ 27,074
<b>Earnings Per Share</b>	\$ 0.24	\$ 0.29
Weighted average shares outstanding	99,749	94,290

Prior period amounts have been restated to include the financial statements of Atalla Corporation acquired through a merger in November 1987 and accounted for as a pooling of interests.



(In Thousands, Except Share Data)	December 31, 1987	December 31, 1986
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash investments	\$ 269,076	\$234,705
Accounts receivable	259,781	245,217
Inventories	116,311	68,695
Prepaid expenses and other	25,500	24,544
Total current assets	670,668	573,161
<b>Property, Plant and Equipment, at cost</b>	533,725	313,174
Accumulated depreciation and amortization	(176,468)	(117,261)
Net property, plant and equipment	357,257	195,913
<b>Other Assets</b>	31,575	13,139
<b>Total Assets</b>	\$1,059,500	\$782,213
<b>Liabilities and Stockholders' Investment</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 74,703	\$ 55,563
Accrued liabilities		
Accrued payroll and payroll related	43,148	35,282
Accrued commissions to third parties	11,866	5,218
Deferred income	23,965	7,692
Income taxes	16,025	33,557
Other	43,060	28,813
Current portion of long term debt and capital lease obligations	5,557	1,851
Total current liabilities	218,324	167,976
<b>Long Term Debt and Capital Lease Obligations</b>	26,714	7,505
<b>Deferred Income Taxes</b>	47,146	29,916
<b>Stockholders' Investment</b>		
Common stock, \$.025 par value; authorized 200,000,000 shares; outstanding 94,280,137 in 1987 and 89,317,386 in 1986	2,357	2,233
Additional paid-in capital	377,128	301,371
Retained earnings	375,060	273,212
Cumulative translation adjustment	10,191	0
Balance sheet translation adjustment	2,580	0
Total stockholders' investment	767,316	576,816
<b>Total Liabilities and Stockholders' Investment</b>	\$1,059,500	\$782,213

Prior period amounts have been restated to include the financial statements of Atalla Corporation acquired through a merger in November 1987 and accounted for as a pooling of interests.





Tandem posted revenue of \$282,282,000 for our first fiscal quarter of 1988, ended December 31. This represents an 18 percent increase in revenue over the \$240,240,000 from the same period of last year. Net income was \$23,693,000 or \$.24 per share, versus \$27,074,000 or \$.29 per share from the first quarter a year ago when our pretax margins were unusually high.

Our international business remained strong, contributing 50 percent of the quarter's revenue. Japan, which continues to do extremely well in the retail industry, furthered its strong revenue growth through significant new account generation. West Germany and the United Kingdom also had particularly high growth.

Our domestic business was moderately weaker than expected. Planning for our normal business patterns, we tightened expense and headcount growth in August 1987. Despite close management of these variables, the domestic revenue shortfall led to lower than anticipated earnings.

Our analysis indicates that a number of customers in the U.S. became more cautious in their decisions to purchase large systems. This may have been in response to the uncertainty in the economy. These domestic customers represented no specific geography or industry.

We do not believe this quarter's results signal a long-term change in the Company's prospects.

Interestingly, the banking, brokerage, and retail industries were particularly strong and new account generation during the quarter was among the most robust for any period in the Company's history.

We are especially excited about the potential of our new distributed NonStop CLX systems, which we began shipping this quarter. We have already received orders for major networks of NonStop CLX systems. These low-cost systems can operate outside of a computer room and are user serviceable.

In addition, we began shipping our new line of PSX workstations and Distributed Systems Management software during the first quarter. The PSX workstations have been very well received by our customers, includ-

ing a major order from a leading telecommunications company.

In December, we used a portion of our cash to purchase five buildings previously leased in Cupertino, California. These, plus the two buildings we purchased a year earlier, give us greater control over our facilities costs and provide Tandem a headquarters complex. This environment helps ensure close communication between Tandem groups.

Our new venture program continues to focus on making strategic investments to leverage our position with key technologies or within targeted industries or geographic markets. In the quarter, we acquired Atalla Corporation, a San Jose, California, company that specializes in secure transaction systems for the financial and retail industries, enhancing our competitive position in these markets. We are pleased to welcome the new Atalla division and to announce that Dr. John M. Atalla has joined Tandem as a vice president.

In addition to the acquisition of Atalla, we announced a minority equity investment in Anamartic Limited. A research and development firm based in Cambridge, England, Anamartic is developing advanced wafer-scale technology for computer storage products.

As we strategically pursue our markets through such activities, we also continue to tightly manage our business and monitor external variables that can impact Tandem, such as changes in relative currency values.

We believe the Company is positioned well to capitalize on the expanding opportunities in on-line transaction processing, distributed systems, and networking. We have the strategies, products, financial strength, and motivation to make 1988 a good year for Tandem.

Sincerely,

Thomas J. Perkins  
Chairman of the Board

James G. Treybig  
President and  
Chief Executive Officer

February 1, 1988





“**D**uring the quarter, we continued to see an increasing demand for geographically distributed networks of Tandem systems.”

**SECOND QUARTER REPORT**

MARCH 31, 1987

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## Tandem Computers Incorporated and Subsidiaries

## CONSOLIDATED INTERIM STATEMENT OF INCOME (UNAUDITED)

(In Thousands, Except Per Share Amounts)	For the Three Months Ended		For the Six Months Ended	
	March 31, 1987	March 31, 1986	March 31, 1987	March 31, 1986
<b>Revenue</b>				
Product revenue	\$202,010	\$146,109	\$400,735	\$286,402
Service and other revenue	40,358	30,218	79,668	59,986
Total revenue	242,368	176,327	480,403	346,388
<b>Costs and Expenses</b>				
Cost of product	54,912	41,500	108,493	84,810
Cost of service and other	30,061	24,754	57,898	47,575
Research and development	25,867	21,287	50,182	41,134
Marketing, general and administrative	96,235	68,788	182,996	133,556
Total costs and expenses	207,075	156,329	399,569	307,075
<b>Operating Income</b>	35,293	19,998	80,834	39,313
Interest income, net	3,233	2,362	6,080	4,035
<b>Income Before Income Taxes</b>	38,526	22,360	86,914	43,348
Provision for income taxes	(16,082)	(9,950)	(37,373)	(19,290)
<b>Net Income</b>	\$ 22,444	\$ 12,410	\$ 49,541	\$ 24,058
<b>Earnings Per Share</b>	\$ .46	\$ .29	\$ 1.03	\$ .56
Weighted average shares outstanding	49,028	43,385	47,910	42,781

Certain prior period amounts have been reclassified to conform with the current period presentation.



## Tandem Computers Incorporated and Subsidiaries

## CONSOLIDATED INTERIM BALANCE SHEET (UNAUDITED)

(In Thousands, Except Share Data)

March 31, 1987

March 31, 1986

**Assets****Current Assets**

Cash and cash investments	\$285,529	\$160,767
Accounts receivable	234,751	182,577
Inventories	77,248	69,872
Prepaid expenses and other	22,476	16,739
Total current assets	620,004	429,955
<b>Property, Plant and Equipment, at cost</b>	335,135	251,199
Accumulated depreciation and amortization	(125,492)	(95,110)
Net property, plant and equipment	209,643	156,089
<b>Other Assets</b>	14,942	9,373
<b>Total Assets</b>	<b>\$844,589</b>	<b>\$595,417</b>

**Liabilities and Stockholders' Investment****Current Liabilities**

Accounts payable	\$ 65,748	\$ 36,679
Accrued liabilities	91,032	45,888
Accrued income taxes	13,149	3,945
Current portion of long term debt and capital lease obligations	1,586	7,721
Total current liabilities	171,515	94,233
<b>Long Term Debt and Capital Lease Obligations</b>	8,449	10,427
<b>Deferred Income Taxes</b>	30,088	34,324

**Stockholders' Investment**

Common stock, \$.025 par value; authorized 200,000,000 shares; outstanding 45,761,598 in 1987 and 42,139,637 in 1986	1,144	1,054
Additional paid-in capital	339,711	250,946
Retained earnings	293,682	204,433
Total stockholders' investment	634,537	456,433
<b>Total Liabilities and Stockholders' Investment</b>	<b>\$844,589</b>	<b>\$595,417</b>



## To Our Stockholders:

We are pleased to report strong financial results for the second fiscal quarter of 1987, ended March 31. Revenue increased to a record \$242,368,000, a 37 percent gain over \$176,327,000 achieved in the second quarter of 1986. Net income grew 81 percent to \$22,444,000, or \$.46 per share, compared with \$12,410,000, or \$.29 per share, posted in the same period last year.

For the six-month period ended March 31, 1987, revenue increased 39 percent to \$480,403,000, compared with \$346,388,000 recorded in the first six months of the prior year. Net income more than doubled to \$49,541,000, or \$1.03 per share, compared with \$24,058,000, or \$.56 per share, earned in the first half of fiscal 1986.

During the quarter, we continued to see an increasing demand for geographically distributed networks of Tandem systems. Several customers committed new network applications to Tandem for the deployment of commercial services or for the management of multinational business operations. One such customer is the Bank of Tokyo. In March, the bank announced plans to use Tandem systems to extend its international banking network.

This quarter we announced a significant advance in database technology which will enhance our ability to handle the largest heart-of-the-business applications in commercial data processing. NonStop SQL software, a new product that incorporates the ANSI-standard Structured Query Language (SQL), is the industry's first SQL implementation of the relational model to provide both high performance and fully transparent data distribution. In a recent audited benchmark, NonStop SQL software running on NonStop VLX systems yielded more than 200 debit/credit transactions per second. In addition, NonStop SQL software allows data anywhere in a network of Tandem systems to be read, written, or updated with full transaction protection, and the database will always reflect the current state of a business.

Tandem's international and domestic operations remained strong during the quarter. All regions of the United States performed well and exhibited strong year-over-year revenue growth of 31 percent. International business grew 48 percent over last year and represented 43 percent of this quarter's revenue.

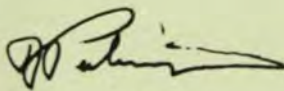
To support our growth, particularly overseas, we increased hiring in sales and customer service during the quarter. We remain committed to providing the highest quality of service and support because this is critical to our long-term success. During this quarter, we also increased hiring in development and continued to invest in third-party programs that will result in new and, we believe, leading-edge solutions for our customers.

In keeping with our position as an international company with many large multinational customers, Tandem recently listed its securities on the New York Stock Exchange, where we are traded under the symbol TDM. We believe this move will afford us broader visibility in international product and financial markets.

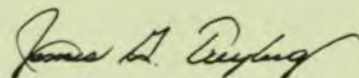
On April 23, just prior to the publication of this letter, Tandem's Board of Directors approved a two-for-one stock split, effected in the form of a stock dividend with respect to the Company's outstanding common stock, stock options, and other commitments payable in shares of the company's common stock. This move demonstrates our belief in Tandem's future. Stockholders of record as of May 22, 1987, will receive one share of stock for each share of stock held. The shares will be mailed on June 12, 1987.

Our success in the first half of this year gives us a good start toward achieving our fiscal 1987 goals of high revenue growth and sustained profitability. We are concerned about potential trade barriers, and we are uncertain about the stability of the U.S. economy. Despite these concerns, our market position and product offerings remain strong, and we are optimistic about the future.

Sincerely,




Thomas J. Perkins  
Chairman of the Board




James G. Treybig  
President and  
Chief Executive Officer

May 11, 1987



 **TANDEM** COMPUTERS

“ur product leadership in networking and our industry strategies continued to bring us success.”

**THIRD QUARTER REPORT**

JUNE 30, 1987

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## Tandem Computers Incorporated and Subsidiaries

## CONSOLIDATED INTERIM STATEMENT OF INCOME (UNAUDITED)

(In Thousands, Except Per Share Amounts)	For the Three Months Ended		For the Nine Months Ended	
	June 30, 1987	June 30, 1986	June 30, 1987	June 30, 1986
<b>Revenue</b>				
Product revenue	\$218,838	\$163,361	\$619,573	\$449,763
Service and other revenue	45,140	37,492	124,808	97,478
Total revenue	263,978	200,853	744,381	547,241
<b>Costs and Expenses</b>				
Cost of product	57,028	43,431	165,521	128,241
Cost of service and other	36,164	26,924	94,062	74,499
Research and development	27,416	22,337	77,598	63,471
Marketing, general and administrative	102,346	77,560	285,342	211,116
Total costs and expenses	222,954	170,252	622,523	477,327
<b>Operating Income</b>	41,024	30,601	121,858	69,914
Interest income, net	3,934	2,054	10,014	6,089
<b>Income Before Income Taxes</b>	44,958	32,655	131,872	76,003
Provision for income taxes	(19,341)	(14,531)	(56,714)	(33,821)
<b>Net Income</b>	\$ 25,617	\$ 18,124	\$ 75,158	\$ 42,182
<b>Earnings Per Share</b>	\$ 0.26	\$ 0.20	\$ 0.77	\$ 0.48
Weighted average shares outstanding	99,652	90,006	97,098	87,044

Certain prior period amounts have been reclassified to conform with the current period presentation.



## Tandem Computers Incorporated and Subsidiaries

## CONSOLIDATED INTERIM BALANCE SHEET (UNAUDITED)

(In Thousands, Except Share Data)	June 30, 1987	June 30, 1986
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash investments	\$296,295	\$177,243
Accounts receivable	232,675	205,064
Inventories	81,422	67,716
Prepaid expenses and other	21,829	20,770
Total current assets	632,221	470,793
<b>Property, Plant and Equipment, at cost</b>	367,627	271,545
Accumulated depreciation and amortization	(136,864)	(103,470)
Net property, plant and equipment	230,763	168,075
<b>Other Assets</b>	20,121	9,927
<b>Total Assets</b>	\$883,105	\$648,795
<b>Liabilities and Stockholders' Investment</b>		
<b>Current Liabilities</b>		
Current portion of long term debt and capitalized lease obligations	\$ 1,099	\$ 5,882
Accounts payable	66,363	40,036
Accrued liabilities	92,245	56,159
Income taxes payable	14,511	9,893
Total current liabilities	174,218	111,970
<b>Long Term Debt and Capital Lease Obligations</b>	7,290	6,356
<b>Deferred Income Taxes</b>	27,408	35,198
<b>Stockholders' Investment</b>		
Common stock, \$.025 par value; authorized 200,000,000 shares; outstanding 92,100,865 in 1987 and 84,279,274 in 1986	2,303	1,079
Additional paid-in capital	352,587	271,635
Retained earnings	319,299	222,557
Total stockholders' investment	674,189	495,271
<b>Total Liabilities and Stockholders' Investment</b>	\$883,105	\$648,795

Certain prior period amounts have been reclassified to conform with the current period presentation.



## To Our Stockholders:

Tandem set a quarterly record for revenue in the third fiscal quarter, ended June 30, 1987, and recorded its second highest quarter ever for net income. Revenue grew 31 percent, to \$263,978,000, up from \$200,853,000 in the comparable quarter in fiscal 1986. Net income rose 41 percent to \$25,617,000, or \$.26 per share, versus \$18,124,000, or \$.20 per share, earned in the same quarter of fiscal 1986.

For the nine months ended June 30, revenue increased 36 percent to \$744,381,000 compared with \$547,241,000 for the same period last year. Net income was up 78 percent, to \$75,158,000, from \$42,182,000. Per share earnings increased to \$.77 from \$.48. Per share amounts reflect a two-for-one stock split in the third quarter.

International business again was healthy and contributed 44 percent of our total revenue. Domestic revenue grew 20 percent year-over-year.

Our product leadership in networking and our industry strategies continued to bring us success. During the quarter, we won six new accounts in retail, a targeted industry, including two of the three top retailers in Japan. Existing retail customers, such as the May Company and Target Stores, expanded their Tandem network installations.

We also recorded strong gains in the securities and communications market segments and made additional sales in two emerging markets—healthcare and government. The company accelerated its thrust into manufacturing by announcing the Tandem Integrated Manufacturing Environment (T.I.M.E.), a new strategic framework of standards and mechanisms integrating critical business functions to control manufacturing.

This quarter, we reaffirmed our product leadership by announcing two distributed computer systems designed to extend Tandem's on-line transaction processing (OLTP) networks to departments and branch offices. NonStop CLX systems, based on CMOS technology, are compatible with our larger GUARDIAN-based systems and allow us to deliver new levels of cost, compactness and performance in OLTP systems. The CLX system will be available late this calendar year.

The LXN multiuser system, introduced during the quarter, is our first UNIX-based system. It gives customers with UNIX applications access to Tandem OLTP networks

and offers a high degree of data integrity and system reliability. We also introduced six new NonStop VLX models and a new desktop laser printer.

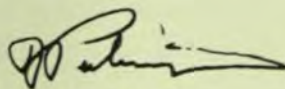
Shortly after the quarter closed, we made an equity investment in Netlink, Inc., a privately-held North Carolina company that produces SNA interconnect products. Tandem and Netlink jointly will develop and market products to enhance and extend the integration of networks between Tandem and IBM systems. This strategy, which will result in our networks operating more effectively with IBM systems, will create greater market opportunities.

Agreements with new Alliance partners continue to bring us strategic wins in targeted industries. During the quarter, such partnerships contributed to a large brokerage sale to Euro-Clear Operations Centre, run by Morgan Guaranty Trust Co., in Brussels, Belgium and to a key healthcare sale with St. Joseph's Hospital and Medical Center in New Jersey.

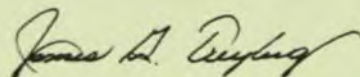
To ensure quality for our growing customer base, and support our growth, we added 387 employees during the quarter. The new employees, added mostly in the sales, support and research and development areas, bring our total work force to 6,680. This year we are making our first material increase in employees in three years. Third fiscal quarter hiring was the largest since the second quarter in fiscal 1984. Even with the increased hiring, productivity has increased significantly. During the quarter, annualized revenue per employee reached a near record level of \$162,700.

We have made substantial improvements in budgeting and in our internal review processes. We expect to continue our growth while continuing to control expenses.

Sincerely,



Thomas J. Perkins  
Chairman of the Board



James G. Treybig  
President and  
Chief Executive Officer

July 22, 1987

Tandem, GUARDIAN, NonStop, NonStop VLX, NonStop CLX, CLX, LXN and T.I.M.E. are trademarks of Tandem Computers Incorporated. IBM is a trademark of International Business Machines.





December 18, 1987

Dear Stockholder:

You are cordially invited to attend the Annual Meeting of Stockholders which will be held on Wednesday, January 27, 1988, at 10:00 A.M. at the offices of the Company at 19333 Vallco Parkway, Cupertino, California.

The formal notice of the Annual Meeting and the Proxy Statement have been made a part of this invitation.

After reading the Proxy Statement, please mark, sign, and return, at an early date, the enclosed proxy in the prepaid envelope addressed to the Bank of America, our agent, to assure that your shares will be represented. **YOUR SHARES CANNOT BE VOTED UNLESS YOU SIGN AND RETURN THE ENCLOSED PROXY OR ATTEND THE ANNUAL MEETING IN PERSON.**

A copy of the Company's Annual Report to Stockholders is also enclosed.

The Board of Directors and Management look forward to seeing you at the meeting.

Sincerely yours,

Thomas J. Perkins  
*Chairman of the Board*

James G. Treybig  
*President and Chief Executive Officer*

**TANDEM COMPUTERS INCORPORATED**

19333 Vallco Parkway • Cupertino, CA 95014 • (408) 725-6000



## TANDEM COMPUTERS INCORPORATED

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### Notice of Annual Meeting of Stockholders to be held January 27, 1988

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The Annual Meeting of Stockholders of Tandem Computers Incorporated (the "Company") will be held at the offices of the Company at 19333 Vallco Parkway, Cupertino, California, on January 27, 1988, at 10:00 A.M. for the following purposes:

1. To elect three Class II Directors to hold office until 1991.
2. To consider and vote upon a proposal to amend the Tandem Computers Incorporated Employee Stock Purchase Plan to increase the number of shares of common stock available for issuance under the Plan.
3. To consider and vote upon a proposal to amend the Stock Option Plan for Non-Employee Directors of Tandem Computers Incorporated to decrease, and to eliminate automatic adjustment of, the number of shares of Common Stock subject to annual option grants under the Plan.
4. To ratify the selection of Arthur Andersen & Co. as the Company's independent auditors.
5. To transact such other business as may properly come before the Meeting and any adjournment of the Meeting.

The Board of Directors has fixed the close of business on November 30, 1987, as the record date for determining the stockholders entitled to notice of and to vote at the Meeting and any adjournment of the Meeting. A complete list of stockholders entitled to vote will be available at the Company's headquarters, 19333 Vallco Parkway, Cupertino, California, for ten days before the meeting.

**IF YOU DO NOT EXPECT TO ATTEND IN PERSON, PLEASE PROMPTLY MARK, SIGN, AND RETURN THE ENCLOSED PROXY.**

THOMAS J. KLITGAARD  
*Secretary*

December 18, 1987



# TANDEM COMPUTERS INCORPORATED

## PROXY STATEMENT

This Proxy Statement is furnished in connection with the solicitation by the Board of Directors of Tandem Computers Incorporated, a Delaware corporation (the "Company"), with principal executive offices at 19333 Vallco Parkway, Cupertino, California 95014, of proxies in the accompanying form to be used at the Annual Meeting of Stockholders to be held on January 27, 1988, and any adjournment of the Annual Meeting. The shares represented by the proxies received in response to this solicitation and not revoked will be voted at the Annual Meeting. A proxy may be revoked at any time before it is exercised by submitting a later-dated proxy or by voting in person at the Annual Meeting. On the matters coming before the Meeting for which a choice has been specified by a stockholder by means of the ballot on the proxy, the shares will be voted accordingly. If no choice is specified, the shares will be voted FOR the election of the three nominees for director listed in this Proxy Statement and FOR approval of proposals 2, 3, and 4 described in the Notice of Annual Meeting and in this Proxy Statement.

Stockholders of record at the close of business on November 30, 1987, are entitled to notice of and to vote at the Annual Meeting. On November 30, 1987, the Company had 93,473,912 shares of Common Stock outstanding. Each holder of Common Stock is entitled to one vote for each share held as of the record date, except that in voting for directors each stockholder is entitled to cumulate votes for the election of directors whose names have been placed in nomination; that is, a stockholder may cast as many votes as there are directors to be elected multiplied by the number of shares which the stockholder holds. All such votes may be cast for one candidate or distributed among the nominees for director as the stockholder sees fit. The persons authorized to vote shares represented by executed proxies in the enclosed form (if authority to vote for the election of directors is not withheld) will have full discretion and authority to vote cumulatively and to allocate votes among any or all of the nominees for election to the Board of Directors as they may determine or, if authority to vote for a specified candidate or candidates has been withheld, among those nominees for whom authority to vote has not been withheld.

The expense of printing and mailing proxy materials will be borne by the Company. In addition to the solicitation of proxies by mail, solicitation may be made by certain directors, officers, and other employees of the Company by personal interview, telephone, or telegraph. No additional compensation will be paid to such persons for such solicitation. The Company has also engaged Corporate Investor Communications, Inc. to assist in the solicitation of proxies and will pay this firm a fee of approximately \$5,500 plus expenses. The Company will reimburse brokerage firms and others for their reasonable expenses in forwarding solicitation materials to beneficial owners of the Company's Common Stock.

This Proxy Statement and the accompanying form of proxy are being mailed to stockholders on or about December 18, 1987.

### **IMPORTANT**

**Please mark, date, and sign the enclosed proxy and return it at your earliest convenience in the enclosed postage-prepaid return envelope so that, if you are unable to attend the Annual Meeting, your shares may be voted.**



## ELECTION OF DIRECTORS

The Company has three classes of directors serving staggered three-year terms. Classes I and II consist of three directors and Class III consists of four directors. Three Class II directors are to be elected at the Annual Meeting for three-year terms expiring on the date of the Annual Meeting in 1991 or until each such director's successor shall have been duly elected or appointed.

Unless authority to vote for directors is withheld, it is intended that the shares represented by the enclosed proxy will be voted for the election of Messrs. Franklin P. Johnson, Jr., Thomas J. Perkins, and Thomas I. Unterberg as Class II directors, each of whom is currently a member of the Board of Directors of the Company. In the event any of such nominees becomes unable or unwilling to serve, the shares represented by the enclosed proxy will be voted for the election of the balance of those named and such other person as the Board of Directors may select. The Board of Directors has no reason to believe that any such nominee will be unable or unwilling to serve.

Set forth below are the names and ages of the nominees and directors, the class to which each has been elected or nominated for election, their principal occupations at present and for the past five years, certain directorships held by each, and the year in which each became a director of the Company. Information with respect to the Company includes the Company's predecessor California corporation.

<u>Name and Principal Occupation at Present and for the Past Five Years; Directorships</u>	<u>Director Since</u>	<u>Age</u>
<b>Class I</b>		
Morton Collins (1)(2).....	1975	51
General Partner of DSV Partners, DSV Partners III, and DSV Partners IV, Princeton, New Jersey, private investment partnerships, since 1974, 1981, and 1985, respectively; Director of The Liposome Company.		
Andrew Knight (3) .....	1984	47
Chief Executive, The Daily Telegraph plc, since February 1986; Editor, <i>The Economist</i> , Economist Newspaper Ltd., from 1974 to 1986; Chairman, Ballet Rambert; Governor of Imperial College of Science and Technology, University of London; Member of the Advisory Board of the Center for Economic Policy Research, Stanford University.		
Robert C. Marshall (4) .....	1980	56
Senior Vice President and Chief Operating Officer of the Company since July 1980.		
<b>Class II</b>		
Franklin P. Johnson, Jr. (1)(3) .....	1975	59
General Partner since 1982 of Asset Management Partners, a Palo Alto, California, private investment partnership; Owner since 1967 of Asset Management Company, a Palo Alto, California, investment management proprietorship; Director of Amgen, Boole & Babbage, Coherent, Inc., Ross Stores, Inc., SBE, Inc., and Teradyne, Inc.; Member of the Advisory Board of the Center for Economic Policy Research, Stanford University.		

(See footnotes on page 4)



Name and Principal Occupation at Present and for the Past Five Years; Directorships	Director Since	Age
Thomas J. Perkins (2)(3) ..... Chairman of the Board of the Company since 1974; General Partner since 1972, 1978, 1980, 1982, and 1986 of Kleiner & Perkins, Kleiner, Perkins, Caufield & Byers, Kleiner, Perkins, Caufield & Byers II, Kleiner, Perkins, Caufield & Byers III, and Kleiner, Perkins, Caufield & Byers IV, respectively, San Francisco, California, private investment partnerships; Chairman of the Board of Acuson Corporation and Genentech, Inc.; Director of Alliant Computer Systems Corporation and LSI Logic Corporation.	1974	55
Thomas I. Unterberg (1)(5) ..... Managing Director since January 1987 of Shearson Lehman Brothers Inc., an investment banking and securities brokerage firm; Chairman from January 1986 to December 1986 and Chief Executive Officer from March 1986 to December 1986 of L.F. Rothschild, Unterberg, Towbin Holdings, Inc., and Chairman and Senior Managing Director of its predecessor partnership, an investment banking and securities brokerage firm, from 1983 to 1985; Managing Partner of such firm from 1981 to 1982; General Partner of such firm from 1977 to 1980; Director of Applied Energy Services, Inc., ASK Computer Systems, Inc., LIN Broadcasting Corporation, and Systems & Computer Technology Corporation.	1985	56
<b>Class III</b>		
Thomas J. Davis, Jr. .... General Partner since 1973, 1979, 1981, and 1983 of Mayfield II, Mayfield III, Mayfield IV, and Mayfield V, respectively, Menlo Park, California, private investment partnerships; Director of Equatorial Communications Co.	1976	75
Robert G. Stone, Jr. (3) ..... Chairman of the Board of Kirby Exploration Company, Inc., an oil and gas exploration company, and its predecessor, General Energy Corporation, since 1971; Chairman of the Board of West India Shipping Company, Inc. from 1974 to 1983; Director of The Chubb Corporation, Combustion Engineering, Inc., Core Industries, Inc., Corning Glass Works, Great Northern Nekoosa Corporation, Hamilton Oil Corporation, The Japan Fund, Inc., The Pittston Company, Scudder International Fund, Inc., and Scudder New Asia Fund, Inc.	1978	64
James G. Treybig (2)(4) ..... President and Chief Executive Officer of the Company since 1974.	1974	47
Walter B. Wriston(3) ..... Chairman and Member, President's Economic Policy Advisory Board since 1982 and 1981, respectively; Chairman and Chief Executive Officer of Citicorp and Citibank, N.A., from 1970 to 1984; President and Chief Executive Officer of Citicorp from 1968 to 1970; President and Chief Executive Officer of Citibank, N.A., from 1967 to 1970; Director of Bechtel Investments, Inc., BRIntec Corporation, The Chubb Corporation, General Electric Company, J. C. Penney Company, Inc., Pan Am Corporation, Pfizer Inc., Reuters Holdings PLC, Sequoia Ventures, Inc., and United Meridian Corporation.	1986	68

(See footnotes on following page)



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- (1) Member of Audit Committee.
  - (2) Member of Compensation/Option Committee.
  - (3) Member of Nominating Committee.
  - (4) On October 2, 1984, the Securities and Exchange Commission (the "Commission") filed a civil action for injunctive and other equitable relief in the United States District Court for the Northern District of California against the Company, Messrs. Treybig and Marshall and a former officer of the Company. The Commission's complaint alleged that during fiscal 1982, the Company, aided and abetted by the named persons, engaged in certain conduct which resulted in improper recognition of revenue. This conduct was alleged to have resulted in the violation by the Company of certain provisions of the Securities Exchange Act of 1934 (the "Exchange Act") through the filing with the Commission of reports which overstated the Company's revenue and net income for the second and third fiscal quarters of 1982 and the issuance of a press release which overstated the Company's revenue and net income for the fourth fiscal quarter of 1982 and fiscal 1982 as a whole. The complaint further alleged that during fiscal 1982, the Company, aided and abetted by the named persons, violated certain accounting provisions of the Exchange Act relating to record keeping and internal accounting controls. The Company had restated its fiscal 1982 financial statements in December 1982 and the Commission did not seek a further restatement.

In order to avoid the time and expense of protracted litigation, without admitting or denying the allegations in the complaint, on October 2, 1984, the Company and the named persons consented to the entry of a final judgment permanently enjoining them from violating various provisions of the Exchange Act and requiring certain ancillary relief, including an annual review and report for three years by the Company's independent accountants of the Company's system of accounting and internal controls in specified areas, including revenue recognition.

- (5) From time to time, Shearson Lehman Brothers Inc. advises the Company with respect to investment banking matters.



## STOCK OWNERSHIP OF DIRECTORS AND OFFICERS

The following table sets forth information as of October 30, 1987, as to shares of Common Stock beneficially owned by the directors and nominees named under "Election of Directors" and the directors and officers of the Company as a group. Except as otherwise indicated, each person has sole investment and voting power with respect to the shares shown. Ownership information is based upon information furnished by the respective individuals.

	<b>Beneficial Ownership of Common Stock</b>	
	<b>Number of Shares (1)</b>	<b>Percent of Class</b>
Thomas J. Perkins .....	1,010,936	1.1
James G. Treybig (2) .....	774,266	0.9
Franklin P. Johnson, Jr. (3) .....	410,000	0.5
Robert C. Marshall .....	380,490	0.4
Robert G. Stone, Jr. (4) .....	157,200	0.2
Thomas I. Unterberg .....	54,000	(5)
Thomas J. Davis, Jr. ....	37,144	(5)
Andrew Knight .....	34,000	(5)
Morton Collins (6) .....	30,608	(5)
Walter B. Wriston .....	30,000	(5)
All officers and directors as a group (31 persons including the ten directors named above).....	4,410,005	4.7

(1) Includes shares which may be acquired within 60 days pursuant to the exercise of options or convertible securities as follows: Mr. Perkins, 10,000 shares; Mr. Treybig, 296,000 shares; Mr. Johnson, 10,000 shares; Mr. Marshall, 151,000 shares; Mr. Stone, 10,000 shares; Mr. Unterberg, 34,000 shares; Mr. Davis, 10,000 shares; Mr. Knight, 34,000 shares; Mr. Collins, 10,000 shares; Mr. Wriston, 28,000 shares; and all officers and directors as a group, 1,538,265 shares.

(2) Includes 3,600 shares held by trusts, of which Mr. Treybig is the trustee.

(3) Includes 400,000 shares held by Asset Management Partners, a partnership of which Mr. Johnson is general partner.

(4) Includes 14,400 shares held by trusts, of which Mr. Stone is a trustee, and 69,200 shares beneficially owned by Mr. Stone's wife and children, as to all but 1,200 of which shares Mr. Stone disclaims any beneficial interest.

(5) Less than one-tenth of one percent.

(6) Includes 2,800 shares held in a trust for the benefit of Mr. Collins' children, and as to which Mr. Collins disclaims any beneficial interest.



## COMPENSATION OF EXECUTIVE OFFICERS AND DIRECTORS

Information is set forth below as to the cash compensation paid or accrued during the 1987 fiscal year by the Company and its subsidiaries to each of the five most highly compensated executive officers of the Company individually, to all executive officers as a group, and to directors. Information is given only for the period each served as an executive officer or director of the Company. Information for the past three fiscal years as to stock options granted and amounts allocated to such persons, to all current executive officers as a group, to all directors as a group, and to all employees under the Company's employee benefit plans is set forth under "Stock Options" on page 7, "Approval of Amendment to the Tandem Computers Incorporated Employee Stock Purchase Plan" on page 8, "Approval of Amendment to the Stock Option Plan for Non-Employee Directors of Tandem Computers Incorporated" on page 12, and the description of each other plan under "Description of Other Plans" which commences on page 15 of this Proxy Statement.

### Cash Compensation of Executive Officers for Fiscal 1987

<u>Name of Individual or Number in Group and Capacities in Which Served</u>	<u>Amount</u>
James G. Treybig..... President, Chief Executive Officer, and Director	\$ 513,405
Robert C. Marshall..... Senior Vice President, Chief Operating Officer, and Director	\$ 385,743
David J. Rynne..... Vice President and Chief Financial Officer	\$ 356,630
Gerald L. Peterson..... Vice President—Marketing	\$ 314,908
Lawrence A. Laurich..... Vice President—Transaction Systems Division	\$ 313,502
All executive officers as a group (24 persons including the five named above) .....	\$5,867,644

For the 1987 fiscal year, directors who were not officers of the Company were paid an annual retainer of \$20,000, plus expenses, payable quarterly. For the same period, the Chairman of the Board was paid an additional annual retainer of \$5,000. For the 1988 fiscal year, directors who are not officers of the Company will be paid an annual retainer of \$25,000, plus expenses, payable quarterly, and the Chairman of the Board will be paid an additional retainer of \$2,500.

During the 1985 fiscal year, the Company guaranteed a bank loan under a \$2,000,000 bank line of credit to Lawrence A. Laurich in the principal amount of \$430,000, plus interest. The largest aggregate principal amount outstanding in fiscal 1987 was \$150,000, plus interest. Mr. Laurich paid his loan in full during the 1987 fiscal year. During the 1987 fiscal year, the Company guaranteed bank loans under the line of credit to Jan E. Jensen (Vice President—Human Resources), Thomas J. Klitgaard (Vice President, General Counsel and Secretary), and Gerald L. Peterson in the principal amounts of \$747,000, \$75,256, and \$100,000, respectively, plus interest, which were the largest aggregate amounts outstanding under such



guarantees in fiscal 1987. At September 30, 1987, the outstanding balances of the loans of Messrs. Jensen and Klitgaard were \$747,000 and \$75,256, respectively. Mr. Peterson paid his loan in full in fiscal 1987. The Company has not had to perform under the guarantees.

In addition to the guarantee discussed above, since May 9, 1983, the Company has made loans to Jan E. Jensen. These loans have been consolidated into a single loan bearing interest at the fixed rate of 9.5% accrued monthly. The principal of and interest on the loan are due in full on June 30, 1988. The largest aggregate principal amount outstanding under the loan during fiscal 1987 was \$205,406, all of which is currently outstanding.

On September 26, 1985, the Company loaned Mr. Treybig \$1,667,500 in consideration of his promissory note in that amount. The principal amount of the note is due September 26, 1989, and bears interest at 10% per annum payable quarterly. The note is fully secured. See "Description of Other Plans—Convertible Debenture Issuance" on page 18 of this Proxy Statement.

### STOCK OPTIONS

With respect to options to purchase shares of the Company's Common Stock granted to certain executive officers, all current executive officers as a group, and all directors as a group during the period October 1, 1984, to September 30, 1987, the following table sets forth (i) the aggregate amount of Common Stock subject to options granted (net of cancellations) during the specified period, (ii) the weighted average per share option exercise price of such options, and (iii) the net value of shares (market value less any exercise price) realized during the specified period upon the exercise of such options during the period. The information set forth below includes the options granted to current executive officers and directors, as the case may be, discussed under "Approval of Amendment to the Tandem Computers Incorporated Employee Stock Purchase Plan," "Approval of Amendment to the Stock Option Plan for Non-Employee Directors of Tandem Computers Incorporated," and "Other Plans," as well as options granted under the Company's 1981 and 1979 Stock Option Plans. Information is given only for the period each served as an executive officer or director of the Company.

<u>Common Stock(1)</u>	<u>James G. Treybig</u>	<u>Robert C. Marshall</u>	<u>David J. Rynne(2)</u>	<u>Gerald L. Peterson (2)</u>	<u>Lawrence A. Laurich(2)</u>	<u>All Current Executive Officers as a Group(2)</u>	<u>All Directors as a Group(3)</u>
Granted—October 1, 1984, to September 30, 1987:							
Number of shares.....	224,000	85,000	56,600	59,600	56,600	975,950	148,000
Weighted average per share exercise price.....	\$8.348	\$15.137	\$16.63	\$17.29	\$16.631	\$15.34	\$21.12
Exercised—October 1, 1984, to September 30, 1987:							
Net value realized in shares (market value less exercise price)(4).....	\$1,180,642	\$888,850	\$5,627	\$1,170,551	\$318,333	\$9,649,651	\$26,120

(1) Adjusted for stock splits.



- (2) Includes options granted under the Stock Option Grant Program of the Company's Employee Stock Purchase Plan, all of which have an exercise price of 85% of the market value of the shares on the date of grant. The numbers of options granted under such Plan to Messrs. Rynne, Peterson, and Laurich, and all current executive officers as a group during the period October 1, 1984, to September 30, 1987, are 600, 600, 600, and 7,800, respectively, and the weighted average per share exercise price of such options and the per share market price of the Common Stock on the date of grant are \$9.403 and \$11.063, respectively.
- (3) Excludes directors who are also executive officers.
- (4) Represents the difference between the exercise price and the fair market value of the Company's Common Stock on the date or dates of exercise of stock options for the specified individual or group. These amounts do not reflect, and may or may not bear any relationship to, the net realized value when or if the shares are sold. Pursuant to rules of the Securities and Exchange Commission, no executive officer or director of the Company may sell shares of the Company's Common Stock within six months prior to or after exercising an option without the possible imposition of a severe penalty.

During the period October 1, 1984 to September 30, 1987, employees other than the current executive officers and directors included in the above table were granted (net of cancellations) options to purchase 9,372,050 shares of Common Stock at an average per share option price of \$15.83. As of September 30, 1987, there were outstanding options under the Company's stock option plans to purchase 13,132,064 shares held by approximately 5,886 participants, and there were approximately 7,143 employees eligible to participate in such plans. The expiration dates of all such options range from November 30, 1987, to December 25, 1997, and the weighted average exercise price per share is \$15.10. Of such options, options to purchase 21,800 shares were granted to employees of a foreign subsidiary of the Company pursuant to the Tandem Computers Incorporated Stock Option Plan for Employees of Affiliated Companies at an exercise price of 70% of the market value of the shares on the date of grant. The average per share exercise price of such options and the per share market price of the Common Stock on the date of grant are \$11.955 and \$17.00, respectively. As of September 30, 1987, approximately 16,436,520 shares had been issued upon the exercise of options under the Company's stock option plans.

#### **APPROVAL OF AMENDMENT TO THE TANDEM COMPUTERS INCORPORATED EMPLOYEE STOCK PURCHASE PLAN**

On November 10, 1987, the Board of Directors adopted an amendment to the Tandem Computers Incorporated Employee Stock Purchase Plan (the "Purchase Plan") to increase the number of shares of Common Stock available for purchase under the Purchase Plan from 12,200,000 to 22,200,000 shares, subject to approval of the Company's stockholders. As of September 30, 1987, 3,981,448 shares remained available for purchase under the Purchase Plan, before giving effect to the amendment, and a total of 8,218,552 shares had been purchased under the Purchase Plan. Of the shares remaining available for purchase, 997,000 have been reserved for issuance upon the future exercise of options granted under the Stock Option Grant Program of the Purchase Plan described below.

The purpose of the Purchase Plan is to attract, retain, and motivate qualified employees by providing them with the opportunity to subscribe for and purchase Common Stock from the Company at a price lower than its market value at the time of purchase and to pay for such stock through payroll deductions. The Board of Directors believes that employee stock ownership is an effective means of securing to the



Company and its stockholders the advantages of the incentive inherent in stock ownership by participating employees, upon whose judgment, initiative, and efforts the Company is largely dependent for the successful conduct of its business. Consequently, the Board of Directors believes that the use of the Purchase Plan as a supplement to other forms of compensation paid by the Company is desirable.

An explanation of the Purchase Plan and a summary of its significant provisions is set forth below. A copy of the full plan may be reviewed by stockholders upon request to Patricia E. Hart at the offices of the Company at 19333 Vallco Parkway, Cupertino, California 95014, during normal business hours. The following summary is qualified in its entirety by reference to the plan document itself.

#### **Administration**

The Purchase Plan is administered by the Board of Directors. The Board of Directors may interpret the Purchase Plan, adopt rules and regulations for its administration, prescribe additional terms and limitations on the options, and delegate administration of the Purchase Plan to a committee consisting of not less than three members of the Board of Directors. The Board of Directors has delegated administration of the Purchase Plan to the Compensation/Option Committee (the "Committee").

#### **Eligibility**

All employees of the Company and its 50% or more owned subsidiaries, including officers, who customarily work more than five months in a calendar year are eligible to purchase shares under the Purchase Plan. Directors of the Company are not eligible to participate in the Purchase Plan. As of September 30, 1987, approximately 7,143 employees were eligible to participate in the Purchase Plan. No employee may be granted a right or an option to purchase Common Stock under the Purchase Plan which if exercised would result in (i) his or her owning stock possessing 5% or more of the total combined voting power or value of all classes of stock of the Company or any subsidiary or (ii) his or her ability to purchase stock under the Purchase Plan or similar plans of the Company in any one calendar year with a fair market value in excess of \$25,000 (determined as of the time such right or option is granted).

#### **Purchase Price and Terms**

The Purchase Plan has two segments, a Payroll Withholding Accumulation Program and a Stock Option Grant Program.

Under the Payroll Withholding Accumulation Program, an eligible employee may authorize the Company to withhold any whole percentage from 1% to 10% of his or her compensation. "Compensation" means, for this purpose, a participant's total quarterly compensation including bonuses and commissions but excluding special payments (such as moving expenses) and income with respect to stock options or other stock purchases. A participant is deemed to have elected to purchase the maximum number of whole shares of the Company's Common Stock which can be purchased with the amount withheld during a participation period (calendar quarters commencing on each July 1, October 1, January 1, and April 1 while the Purchase Plan is in effect). A participant may not purchase more than 1,500 shares in any one participation period. At the end of each participation period the participant's accumulated period payroll withholdings are divided by the purchase price for that period, which is the lesser of (i) 85% of the fair market value of a share of Common Stock on the last trading day before the participation period commences or (ii) 85% of the fair market value of a share of Common Stock on the last trading day during the participation period.



If a participant's employment terminates for any reason (including death), his or her participation in the Payroll Withholding Accumulation Program will terminate immediately and the entire amount credited to his or her Purchase Plan account will be refunded to the participant in cash, without interest.

During the period from October 1, 1984 to September 30, 1987, the aggregate difference between the purchase price and the fair market value on the dates of purchase of shares acquired pursuant to the Payroll Withholding Accumulation Program by all current executive officers as a group and by all employees (excluding current executive officers) was \$118,350 and \$8,518,409, respectively.

Under the Stock Option Grant Program, options for an identical number of shares of Common Stock are granted periodically at the discretion of the Committee to every participant who is eligible on the date of grant. The exercise price must not be less than 85% of the fair market value of a share of Common Stock on the date of grant. Options expire no later than 27 months after the date of grant. Shares purchased upon the exercise of an option must be paid for in full at the time of exercise. Payment may be by personal check or by delivery of an irrevocable direction to a securities broker, approved by the Company, to sell shares and deliver all or a portion of the proceeds to the Company in payment for the shares. In addition, with the Committee's approval given at the time the option is granted, payment may be by delivery of a full recourse, interest-bearing promissory note.

Upon termination of employment, an optionee may exercise an outstanding option granted under the Stock Option Grant Program (to the extent it was exercisable on the date of termination) within 30 days following the date of termination (but in no event later than the expiration date of such option), unless termination of employment is because of permanent disability, in which case the option may be exercised within three months following the date of termination. In the case of the death of an optionee while an eligible employee, the optionee's heirs or legal representative may exercise the option within one year after the date of death.

As of September 30, 1987, there were outstanding stock options under the Stock Option Grant Program to purchase 400, 2,800, and 994,200 shares held by Mr. Rynne, by all current executive officers as a group, and by all employees (excluding current executive officers), respectively. These options have a weighted average exercise price of \$22.50 and have expiration dates which range from February 10, 1988 to October 18, 1988. As of September 30, 1987, the aggregate market value of the shares subject to such options was \$33,150,250, based upon a closing price of \$33.25 per share for the Company's Common Stock on the New York Stock Exchange on that date.

#### **Adjustment Upon Recapitalization**

The Purchase Plan provides for appropriate adjustment by the Board of Directors of the number and price of shares and option price of any outstanding options and of the aggregate number of shares available for issuance under the Purchase Plan in the event of a reorganization, stock split, combination of shares, stock dividend, or other recapitalization of the Company.

#### **Term of the Plan, Amendment, and Termination**

The Board of Directors may at any time amend, modify, or terminate the Purchase Plan. Any increase in the aggregate number of shares to be issued under the Purchase Plan will not be effective until approved by the stockholders of the Company. Unless earlier terminated by the Board of Directors, the Purchase Plan will be in effect until June 30, 1998, pursuant to an amendment to the Purchase Plan adopted by the Board of Directors on November 10, 1987, extending the term of the Purchase Plan for 10 years.



## **Transferability**

A participant may not assign his or her rights or interest in the Purchase Plan, in any option granted under the Purchase Plan, or in any Common Stock or moneys to which he or she may become entitled under the Purchase Plan during a present or future participation period to any other person. Any such attempted assignment other than by will shall be treated as an election by the participant to withdraw from the Purchase Plan.

## **Federal Income Tax Information**

The following tax discussion is only a brief summary of current United States federal income tax consequences of participation in the Purchase Plan. The federal income tax laws have frequently been revised and may be changed again any time in the future. Beginning in 1988, net capital gain is taxed at the same rate as ordinary income. In addition, capital gain ceases to be an item of tax preference. Capital losses continue to be allowed up to \$3,000 of ordinary income, but now on a favorable one-for-one basis.

The Purchase Plan is intended to qualify as an "employee stock purchase plan" under the provisions of Section 423 of the Internal Revenue Code of 1954, as amended. No taxable income is recognized by a participant either at the time a right or an option is granted to purchase Common Stock under the Purchase Plan or at the time the shares are purchased thereunder.

If a participant does not dispose of shares acquired under the Purchase Plan before two years after the date of grant (which under the Payroll Withholding Accumulation Program is the first day of each participation period and under the Stock Option Grant Program is the date an option is granted) or, in the case of shares acquired under the Stock Option Grant Program, before six months after the date the shares are transferred to him or her, then upon such disposition the United States federal income tax consequences will be as follows: (1) the lesser of (a) the excess of the fair market value of the Common Stock on the date of disposition over the purchase price or (b) 15% of the fair market value of the shares on the date of grant will be taxed to the participant as ordinary income, but the Company will not be entitled to any deduction with respect thereto, and (2) the excess, if any, of the fair market value of the shares on the date of disposition over the sum of the purchase price and the amount of ordinary income recognized upon disposition will be taxed as capital gain. If such taxable disposition produces a loss (i.e., the value of the shares on the date of disposition is less than the purchase price) and the disposition involves certain unrelated parties, the loss will be a capital loss.

If a participant disposes of the shares earlier than two years after the date of grant, or in the case of shares acquired under the Stock Option Grant Program, earlier than six months after the date the shares are transferred to him or her, then upon such disposition the United States federal income tax consequences will be as follows: (1) the difference between the purchase price and the fair market value of the Common Stock on the date of purchase will be taxed to the participant as ordinary income in the year of disposition and will be deductible by the Company, and (2) the excess, if any, of the fair market value of the shares on the date of disposition over their fair market value on the date of purchase will be taxed as capital gain. If the value of the shares on the date of disposition is less than the sum of the purchase price and the amount of ordinary income recognized upon disposition, then such difference will result in a capital loss, provided the disposition is between certain unrelated parties. Any such loss will not affect the ordinary income realized upon the disposition.



Generally, a transfer of shares to a decedent's estate or to an heir by bequest or inheritance or to any transferee pursuant to certain tax-free exchanges is not considered a disposition by the participant for purposes of the foregoing rules. Also, a pledge of the shares is not considered a disposition unless the shares are actually disposed of pursuant to the pledge.

If a participant dies after purchasing shares under the Purchase Plan, then upon the participant's death he or she will realize ordinary income equal to the amount he or she would have recognized as ordinary income if he or she had made a qualifying disposition of the shares on the date of his or her death. The basis of the shares in the hands of the estate or legatee will be determined without regard to the realization of such ordinary income, and the Company will receive no deduction with respect thereto.

Because the capital gain deduction was repealed by the Tax Reform Act of 1986, it is no longer classified as an item of tax preference, and the entire capital gain upon the disposition of stock is included in "alternative minimum taxable income." Alternative minimum taxable income is defined as regular taxable income plus items of tax preference plus an add-back of certain itemized deductions which are not allowable for minimum-tax purposes.

If a taxpayer's alternative minimum taxable income exceeds \$40,000 in the case of a married individual filing a joint return (\$30,000 in the case of a single taxpayer), then the minimum tax equals 21% of the excess. The exemption amounts, e.g., \$40,000 and \$30,000, are reduced \$.25 for each dollar by which alternative minimum taxable income exceeds \$150,000 for joint returns (\$112,500 for single taxpayers and \$75,000 for married taxpayers filing separately). The minimum tax is payable if it exceeds the amount of the taxpayer's regular federal income tax for the same taxable year. The portion of a taxpayer's minimum tax attributable to certain items of tax preference (including the spread upon the exercise of an incentive stock option) can be credited against the taxpayer's regular tax liability in later years to the extent that liability exceeds the alternative minimum tax.

#### **Required Vote**

Adoption of the amendment to increase the number of shares of Common Stock available under the Purchase Plan requires the affirmative vote of a majority of the outstanding shares of Common Stock.

**The Board of Directors recommends a vote For the amendment to the Tandem Computers Incorporated Employee Stock Purchase Plan.**

### **APPROVAL OF AMENDMENT TO THE STOCK OPTION PLAN FOR NON-EMPLOYEE DIRECTORS OF TANDEM COMPUTERS INCORPORATED**

The Company believes it is important to encourage the Company's non-employee directors to acquire a proprietary interest in the Company and to continue their association with the Company or its subsidiaries. The Board of Directors therefore adopted the Stock Option Plan for Non-Employee Directors of Tandem Computers Incorporated (the "Directors' Plan") on November 3, 1986, which was effective February 20, 1987, upon being approved by the Company's stockholders. As of September 30, 1987, options to purchase 80,000 shares had been granted under the Directors' Plan pursuant to its terms which provided for an initial grant on February 20, 1987, to each of the eight non-employee directors of an option to purchase 10,000 shares (as adjusted for the two-for-one stock split effected in the form of a stock dividend on May 22, 1987). As of September 30, 1987, 420,000 shares remained available for option grants.



Under the terms of the Directors' Plan as approved by the stockholders at the 1987 Annual Meeting, each non-employee director would automatically receive on the date of each subsequent annual meeting of stockholders an option grant for 3,000 shares, subject to adjustment for a stock split, combination of shares, stock dividend, or similar event. Accordingly, to reflect the two-for-one stock split effected in the form of a stock dividend on May 22, 1987, annual grants to each non-employee director would be increased to 6,000 shares and would be subject to future adjustments. The Board of Directors has determined that, in order to be consistent with the procedures followed for option grants to new employees, the number of shares to be subject to the annual grants should remain at 3,000 shares. Therefore, on November 10, 1987, the Board amended the Directors' Plan, subject to approval of the stockholders at the Meeting, to provide that no adjustment in the number of shares subject to the annual option grants would be made for a stock split, combination of shares, stock dividend, or similar event. The number of shares and option price of shares subject to outstanding options and the aggregate number of shares to be issued under the Directors' Plan will remain subject to such adjustment.

An explanation of the Directors' Plan and a summary of its significant provisions is set forth below. A copy of the full plan may be reviewed by stockholders upon request to Patricia E. Hart at the offices of the Company at 19333 Vallco Parkway, Cupertino, California 95014, during normal business hours. The following summary is qualified in its entirety by reference to the plan document itself.

#### **Administration**

The Directors' Plan is administered by the Compensation/Option Committee of the Board of Directors. The Committee has the responsibility for carrying out all terms of the Directors' Plan. However, it has no discretion either to determine which directors shall receive option awards or to set the number of shares subject to such option awards.

#### **Eligibility**

The Directors' Plan provides for automatic annual option grants to each director who is not also an employee of the Company or a subsidiary.

#### **Exercise Price and Terms**

The exercise price for shares subject to options granted under the Directors' Plan is the fair market value of the shares at the date of the option grant. Payment of the exercise price must be made in cash or by the surrender of previously held shares of Common Stock, which shares will be valued for this purpose at their fair market value on the date of exercise, or a combination thereof.

Except as provided below, options granted under the Directors' Plan are not exercisable for a period of six months after grant. Thereafter, the option becomes exercisable as to an increasing amount on a daily basis, with the full amount exercisable 48 months after the date of grant. In the event that an optionee ceases to be a director within six months of the date on which the option was granted, the portion of the outstanding option which is not then exercisable will be forfeited. An optionee who ceases to be a director for any reason after six months from the grant date is entitled to exercise the portion of his or her option which is then exercisable within 12 months following such termination to the extent not previously exercised. All options granted under the Directors' Plan will lapse on the date 10 years following the date of grant of the option.



Following the Annual Meeting held on February 20, 1987, pursuant to the terms of the Directors' Plan each of the Company's eight non-employee directors received an option to purchase 10,000 shares at an exercise price of \$29.00 per share, the fair market value of the shares on such date (adjusted to reflect the two-for-one stock split effected in the form of a stock dividend on May 22, 1987), all of which are currently outstanding. These options expire on February 20, 1997. As of September 30, 1987, the aggregate market value of the shares subject to such options was \$2,660,000, based upon a closing price of \$33.25 per share for the Company's Common Stock on the New York Stock Exchange on that date.

#### **Amendment and Termination**

The Directors' Plan may be amended or terminated by the Board, except that stockholder approval is required for any amendment which would increase the number of shares subject to option under the plan, change the number of shares subject to option that may be granted each year, or decrease the price at which options may be granted.

#### **Transferability**

Options are not transferable, other than by will or the laws of descent and distribution, and are exercisable during the lifetime of an optionee only by the optionee.

#### **Federal Income Tax Information**

The options granted under the Directors' Plan are nonstatutory options (i.e., they do not have any special status under the tax laws).

The grant of a nonstatutory option is not taxable to the Director and the Company cannot claim a deduction on account of the grant. When a nonstatutory option is exercised, the Director is taxable at ordinary-income rates on the difference between (a) the exercise price and (b) the fair market value of the shares on the date six months after the date of exercise. However, the Director may file a section 83(b) election within 30 days after the date of exercise, in which case the amount of ordinary income to be recognized with respect to the exercise would be determined on the date of exercise. The Director's basis in shares acquired by exercising a nonstatutory option is equal to their fair market value on the date six months after the exercise date (or on the date of exercise, if a section 83(b) election is made). In the year in which the Director recognizes income, the Company is entitled to a deduction equal to the amount of ordinary income so recognized. Special tax rules apply to the exercise of an option upon the surrender of previously held shares of Common Stock.

#### **Required Vote**

Adoption of the amendment to decrease, and to eliminate automatic adjustment of, the number of shares of Common Stock to be subject to annual option grants under the Directors' Plan requires the affirmative vote of a majority of the outstanding shares of Common Stock.

**The Board of Directors recommends a vote For the amendment to the Stock Option Plan for Non-Employee Directors of Tandem Computers Incorporated.**



## DESCRIPTION OF OTHER PLANS

### Other Stock Option Plans

*Tandem Computers Incorporated 1981 Stock Option Plan.* The Tandem Computers Incorporated 1981 Stock Option Plan (the "1981 Plan") was approved by the stockholders at the Company's 1982 Annual Meetings of Stockholders and, as amended, at the 1985 and 1987 Annual Meetings of Stockholders. The 1981 Plan was subsequently amended by the Board of Directors on (i) February 20, 1987, to delegate administration on certain routine matters to the Non-Insider Option Committee (consisting of a person designated by the Board of Directors) and (ii) September 22, 1987, to provide for administration as to officers and directors by a committee of three disinterested members of the Board of Directors or the Board of Directors and to provide that an optionee may satisfy all withholding tax requirements incident to the exercise of a nonstatutory stock option with shares of the Company's Common Stock. Except as indicated above, the 1981 Plan is administered by the Compensation/Option Committee. All employees of the Company and its 50% or more owned subsidiaries, including officers and directors who are also employees, are eligible to receive options. Options may be either nonstatutory stock options or incentive stock options ("ISOs"). The maximum value of ISOs granted before 1987 is limited to \$100,000 per year for each employee, subject to certain carryover provisions. ISOs may be granted for any value after 1986; however, options first exercisable in a calendar year that exceed \$100,000 will be nonstatutory options. Options granted must have an option price of not less than 100% of the fair market value of the Company's Common Stock on the date of grant. Options may be made exercisable at such times as determined by the administering committee, provided that an ISO granted before 1987 may not be exercised while there is outstanding any ISO previously granted to the same employee. ISOs granted after 1986 need not be exercised sequentially and may be exercised prior to the exercise of ISOs granted before 1987. Except when an optionee's employment terminates because of death or permanent disability, an option may not be exercised for six months following the date of grant. Shares purchased upon the exercise of an option must be paid for in full at the time of exercise in cash or, with the consent of the Company, by (i) the surrender of previously-held shares of the Company's Common Stock, which shares will be valued for such purpose at their fair market value on the date of exercise, (ii) the surrender of shares and cash, (iii) delivery of a full recourse, interest-bearing promissory note to the Company, calling for periodic repayments over a period not to exceed 10 years from the date of exercise, or (iv) delivery of an irrevocable direction to a securities broker to sell shares and deliver all or a portion of the proceeds to the Company in payment for the stock. An optionee may satisfy all withholding tax requirements incident to the exercise of a nonstatutory stock option with shares of the Company's Common Stock. An option may not be exercised after 10 years from its effective date and is not transferable except by will or the laws of descent and distribution. In the event of a reorganization, stock split, combination of shares, stock dividend, or other recapitalization, the Compensation/Option Committee may make appropriate adjustments in the number and kind of shares available for issuance under the 1981 Plan, in the number and kind of shares as to which outstanding options will be exercisable, and in the exercise price specified in any agreement with respect to any unpurchased shares. The Compensation/Option Committee may determine that an option will provide that the shares to be issued upon exercise of the option shall be subject to certain rights of repurchase by the Company at the option price. In such case, the option agreement will provide that if the optionee's employment terminates, the Company may repurchase a specified percentage of the shares.



*Tandem Computers Incorporated 1979 Stock Option Plan.* The Tandem Computers Incorporated 1979 Stock Option Plan (the "1979 Plan") was approved by the stockholders at the Company's 1980 Annual Meeting of Stockholders and, as amended, at the 1987 Annual Meeting of Stockholders. The 1979 Plan has been subsequently amended in the same manner as the 1981 Plan. The 1979 Plan is administered in the same manner as the 1981 Plan. The provisions of the 1979 Plan and the terms of the options granted under the 1979 Plan are substantially similar to those of the 1981 Plan, except as follows. Only employees of the Company, including officers and directors who are also employees, and employees and directors of its 80% or more owned subsidiaries, are eligible to receive options. Certain options outstanding on January 1, 1981, could not be designated as incentive stock options.

*Tandem Computers Incorporated Stock Option Plan for Employees of Affiliated Companies.* The Tandem Computers Incorporated Stock Option Plan for Employees of Affiliated Companies (the "Affiliated Companies Plan") was adopted by the Board of Directors on August 1, 1986. The Affiliated Companies Plan is administered by the Compensation/Option Committee. Employees, including officers and directors, of certain designated subsidiaries of the Company are eligible to receive options. As of September 30, 1987, the only such designated subsidiary was Tandem Computers de Mexico, S.A. de C.V. In addition, options may be granted to employees of companies in which the Company owns voting securities but which are not deemed to be subsidiaries and to employees of companies with which the Company has established a business or commercial relationship. Only nonstatutory options may be granted under the Affiliated Companies Plan. Options granted may have an option price of 100%, or any percentage thereof as determined by the Compensation/Option Committee, of the fair market value of the Company's Common Stock on the date of grant. Options may be made exercisable at such times as determined by the Compensation/Option Committee, provided that an option may not be exercised after seven years from its date of grant. Payment may be made in cash or, with the consent of the Company, delivery of a promissory note or irrevocable sell direction to a securities broker as described above. The remaining provisions of the Affiliated Companies Plan are substantially similar to those of the 1981 Plan.

*Tandem Computers Incorporated Non-Qualified Stock Option Plan.* The Tandem Computers Incorporated Non-Qualified Stock Option Plan was approved by the stockholders at the Company's 1978 Annual Meeting of Stockholders and, as amended, at the 1979 Annual Meeting of Stockholders and was administered in the same manner as the 1981 Plan. The Non-Qualified Stock Option Plan expired on November 12, 1985, and no options granted under this plan are outstanding. The terms of the options granted under this plan were substantially similar to those of the 1981 Plan, except as follows. Only employees of the Company, including officers and directors, and employees and directors of its wholly-owned subsidiaries, were eligible to receive options. Payment for shares purchased upon the exercise of an option could be by personal check or, with the consent of the Company, by delivery of a full recourse, interest-bearing promissory note.

*Tandem Computers Incorporated Qualified Stock Option Plan.* The Tandem Computers Incorporated Qualified Stock Option Plan was approved by the stockholders in 1976 and was administered in the same manner as the 1981 Plan. The Qualified Stock Option Plan expired on November 12, 1985, and no options granted under this plan are outstanding. The terms of the options granted under this plan were substantially similar to those of the 1981 Plan, except as follows. Only key employees of the Company, including officers and directors, and its subsidiaries could be granted options. Options could not be exercised after five years from the date of grant. Under certain circumstances, options could not be



exercised while the optionee held another option previously granted at a higher option price. Payment for shares purchased upon the exercise of an option was by personal check.

*Individual Stock Option Agreements.* The Company has entered into Non-Qualified Stock Option Plans and Agreements with Messrs. Andrew Knight, Thomas I. Unterberg, and Walter B. Wriston, directors of the Company. Under the Plans, Messrs. Knight and Unterberg were each granted a five-year option to purchase 24,000 shares of the Company's Common Stock, and Mr. Wriston was granted a five-year option to purchase 20,000 shares of the Company's Common Stock. The per share exercise price of the options for Messrs. Knight, Unterberg, and Wriston are \$9.50, \$12.375, and \$14.063, respectively, which equal 100% of the market value of the Company's Common Stock on the dates of grant (as adjusted for the two-for-one stock split effected in the form of a stock dividend on May 22, 1987). The provisions of these Plans are substantially similar to those of the Non-Qualified Stock Option Plan except that no further grants are permitted under these Plans. Mr. John B.M. Place, a former director of the Company, was similarly granted, during his term as director, two options to purchase 4,000 (of which 2,006 have lapsed) and 20,000 (of which 12,108 have lapsed) shares of the Company's Common Stock at \$13.375 and \$14.563, respectively, per share.

#### **Incentive Cash Bonus Plan**

The Company has an incentive cash bonus plan (the "Bonus Plan") in which selected individuals who have material roles in achieving certain corporate goals are eligible to participate. Awards under the Bonus Plan are made if certain goals are met with respect to revenue and pretax profit, or in cases of special individual contribution. Prior to fiscal 1986, only executive officers of the corporation were eligible to participate. No awards were made for fiscal years 1982 through 1985. For fiscal years 1986 and 1987, Messrs. Treybig, Marshall, Rynne, Peterson, and Laurich, all current executive officers as a group, and all employees (excluding current executive officers) were awarded an aggregate of \$123,604, \$92,478, \$83,159, \$77,131, \$74,356, \$1,264,653, and \$4,827,874, respectively. Amounts awarded to current executive officers for fiscal 1987 are also included in the disclosure of management remuneration.

#### **1984 401(k) Investment Plan**

All non-union employees of the Company who are on its United States payroll, including directors who are employees of the Company, and the employees of certain participating subsidiaries, are eligible to participate in the Company's 1984 401(k) Investment Plan (the "Investment Plan"). The Investment Plan was amended and restated on November 7, 1985, to comply with the Tax Reform Act of 1984 and the Retirement Equity Act of 1984, and to make certain additional changes, including, but not limited to, an increase in maximum participant contributions from 10% to 12% of compensation. The amended and restated Plan was amended in January and September of 1986 to add a fourth investment fund and to provide for the crediting of interest to amounts distributed to terminated participants. The Plan was also amended, effective January 1, 1987, to comply with the Tax Reform Act of 1986 and, effective October 1, 1987, to permit maximum participant contributions of 18% of compensation.

Each participant may elect to contribute from 2% to 18% of his or her compensation, and the Company matches 25% of the first 6% of the employee's quarterly compensation contributed to the Investment Plan, subject to a maximum Company matching contribution of \$1,200 per employee per plan year ending September 30. An employee's contributions are made by deferring that portion of his or her



compensation, thereby enabling such contributions to be made on a pretax basis. Effective for taxable years beginning January 1, 1987, only \$7,000 may be contributed by a participant during a calendar year on a pretax basis. A participant is at all times fully vested in his or her contributions and becomes fully vested in Company contributions upon the last day of the fourth calendar quarter following the quarter for which such contributions were made. Contributions are held and invested by the Investment Plan trustee in four different funds. A participant may designate, within certain limitations, in which funds his or her accounts are to be invested. The Investment Plan permits participants to make hardship withdrawals and to borrow from their accounts at market rates under certain conditions. In general, the vested portion of a participant's accounts is distributed in a single-sum cash payment upon his or her termination of employment.

Between October 1, 1984 and September 30, 1987, the Company made matching contributions under the Investment Plan for the accounts of Messrs. Marshall, Rynne, Peterson, and Laurich, all current executive officers as a group, and all employees (excluding current executive officers) in the aggregate amounts of \$3,600, \$3,600, \$3,335, \$3,600, \$50,488, and \$5,129,294, respectively. Amounts of Company contributions for current executive officers for fiscal 1987 are also included in the disclosure of management remuneration.

#### **Convertible Debenture Issuance**

On September 26, 1985, the Company issued a 9.5% Convertible Subordinated Debenture Due September 26, 1989, (the "Debenture") in the principal amount of \$1,667,500 to Mr. Treybig. The Company may redeem the Debenture in whole or in part. The Debenture is convertible into shares of the Company's Common Stock at \$8.338 per share, which was 115% of the closing sale price of the Common Stock on the date of issuance of the Debenture (as adjusted for the two-for-one stock split effected in the form of a stock dividend on May 22, 1987). The principal amount which may be converted at any time is limited to the greater of (i) the amount which has been called for redemption but not yet redeemed or (ii) 25% of the aggregate principal amount commencing September 26, 1986, and an additional 25% each September 26 thereafter through 1989, unless Mr. Treybig is disabled or dies or a "change in control," as defined, occurs in which case the entire amount then outstanding is convertible. The Debenture may not be transferred by Mr. Treybig except upon his death.

#### **RATIFICATION OF INDEPENDENT AUDITORS**

Upon the recommendation of the Audit Committee, the Board of Directors has reappointed the firm of Arthur Andersen & Co. as the Company's independent auditors for the 1988 fiscal year, subject to ratification by the stockholders. Representatives of Arthur Andersen & Co. are expected to be present at the Company's Annual Meeting. They will have an opportunity to make a statement, if they desire to do so, and will be available to respond to appropriate questions.

**The Board of Directors recommends a vote For ratification of the appointment of Arthur Andersen & Co.**



## **BOARD OF DIRECTORS MEETINGS AND COMMITTEES**

The Company's Board of Directors held six meetings during the 1987 fiscal year. All directors attended at least 75% of the aggregate number of meetings of the Board and of the committees on which such directors serve.

The Board of Directors of the Company has appointed an Audit Committee, Nominating Committee, and Compensation/Option Committee of the Board.

The current members of the Audit Committee are Messrs. Morton Collins, Franklin P. Johnson, Jr., and Thomas I. Unterberg. The Audit Committee held eight meetings during the 1987 fiscal year. Its functions are to monitor the effectiveness of the audit effort, to supervise the Company's financial and accounting organization and financial reporting, and to select a firm of certified public accountants, whose duty it is to audit the books and accounts of the Company for the fiscal year for which they are appointed.

The current members of the Nominating Committee are Messrs. Franklin P. Johnson, Jr., Andrew Knight, Thomas J. Perkins, Robert G. Stone, Jr., and Walter B. Wriston. The Nominating Committee held one meeting during the 1987 fiscal year. The Nominating Committee's function is to select nominees for election as directors. The Nominating Committee will consider nominees recommended by stockholders. Such recommendations should be submitted in writing to the Nominating Committee in care of the Secretary of the Company at its address set forth on the front page of this Proxy Statement.

The current members of the Compensation/Option Committee are Messrs. Morton Collins, Thomas J. Perkins, and James G. Treybig. The Compensation/Option Committee held nine meetings during the 1987 fiscal year. The Compensation/Option Committee's functions are to determine and supervise compensation to be paid to officers and directors of the Company and to supervise and manage the Company's Employee Stock Purchase Plan and stock option plans (except with respect to options granted to directors).

## **BENEFICIAL OWNER**

As of November 13, 1987, The Equitable Life Assurance Society of the United States, 787-7th Avenue, New York, New York 10019, owned 5,577,613 shares (or 5.97%) of the Company's outstanding Common Stock. The Equitable Life Assurance Society of the United States has advised the Company that the shares are held by it and four of its subsidiaries. These entities have sole investment power with regard to 5,577,513 shares, shared investment power with regard to 100 shares, sole voting power with regard to 3,174,013 shares, shared voting power with regard to 454,800 shares, and no voting power with regard to 1,948,800 shares (as to which shares, the entities' clients have retained voting power).

## **STOCKHOLDER PROPOSALS**

To be considered for presentation at the Annual Meeting of Stockholders to be held in 1989, a stockholder proposal must be received at the offices of the Company, 19333 Vallco Parkway, Cupertino, California 95014, not later than August 21, 1988.



OTHER MATTERS

The Board of Directors knows of no other business which will be presented at the Annual Meeting. If any other business is properly brought before the Annual Meeting, it is intended that proxies in the enclosed form will be voted in accordance with the judgment of the persons voting the proxies.

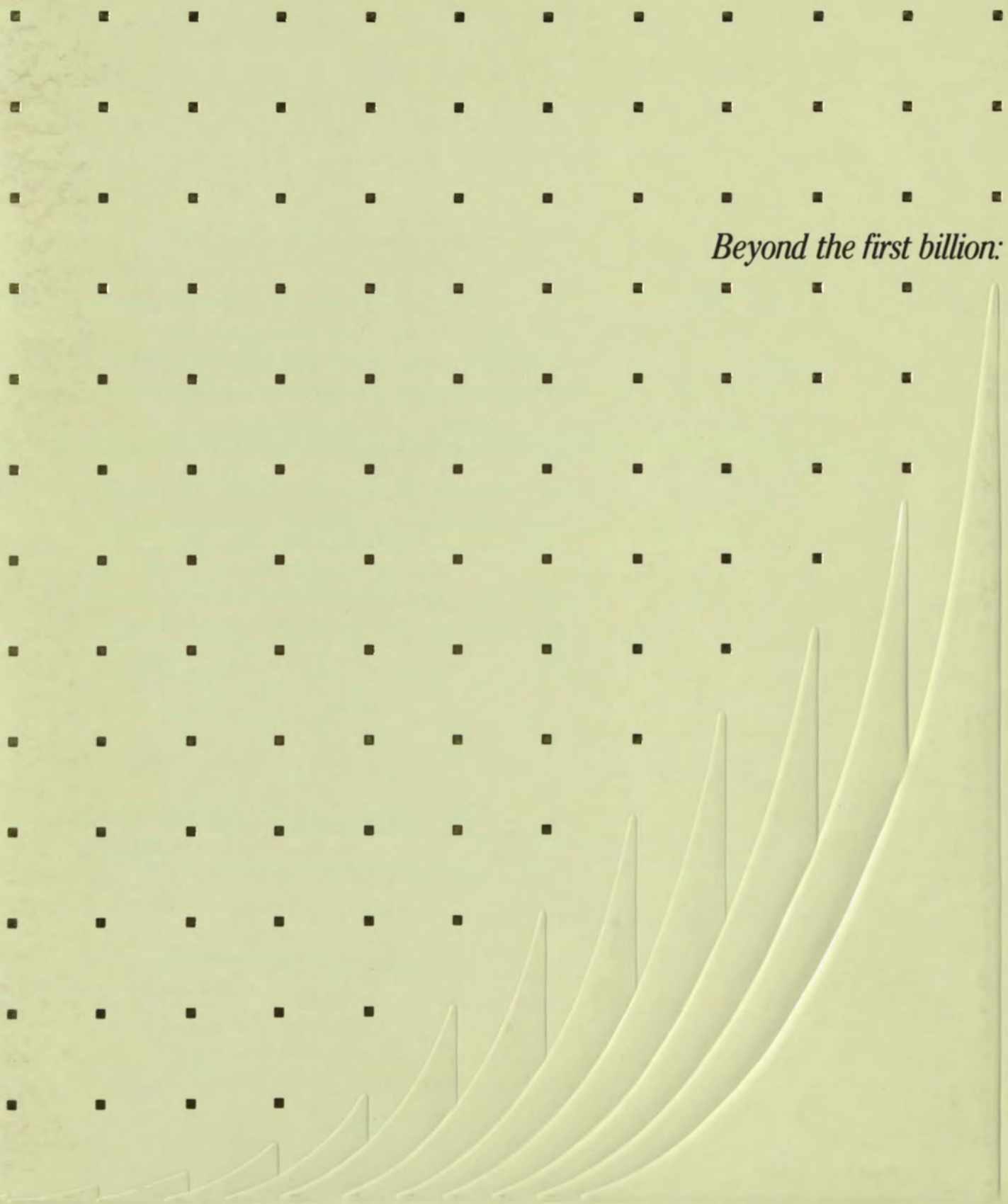
Whether you intend to be present at the Annual Meeting or not, we urge you to return your signed proxy promptly.

By order of the Board of Directors,

THOMAS J. KLITGAARD  
Secretary



*Beyond the first billion:*





## Highlights

Fiscal Year Ended September 30	1987	1986	1985
Revenue	\$1,035,495,000	\$767,793,000	\$624,138,000
Operating income	\$ 170,688,000	\$105,978,000	\$ 50,081,000
Operating margin	16.5%	13.8%	8.0%
Net income	\$ 105,604,000	\$ 63,766,000	\$ 34,374,000
Earnings per share	\$ 1.08	\$ .72	\$ .41
Working capital	\$ 495,540,000	\$384,419,000	\$297,964,000
Total assets	\$ 967,241,000	\$705,025,000	\$552,344,000
Stockholders' investment	\$ 720,919,000	\$534,680,000	\$420,408,000
Number of employees	7,007	5,719	5,494

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Tandem Computers Incorporated, founded 13 years ago, today ranks as a Fortune 500 company and employs over 7,000 people worldwide. It is a leading supplier of computer systems and networks for on-line transaction processing. Tandem systems are widely used to run ATM and point-of-sale networks, stock exchanges, factories, and other enterprises where hundreds of business transactions must be processed each second and recorded instantly.

Tandem provides the fully compatible family of NonStop systems that

span the range of performance requirements for on-line transaction processing applications. NonStop systems can run the same applications and can be networked with each other and with equipment from other vendors to provide a single computing resource for an organization. The Company also offers a UNIX<sup>®</sup> based system, as well as two lines of workstations.

Tandem supports its customers from over 150 locations worldwide and manufactures its products in the United States, Mexico, and West Germany.



Tandem is moving beyond its first billion-dollar year with momentum and strength.

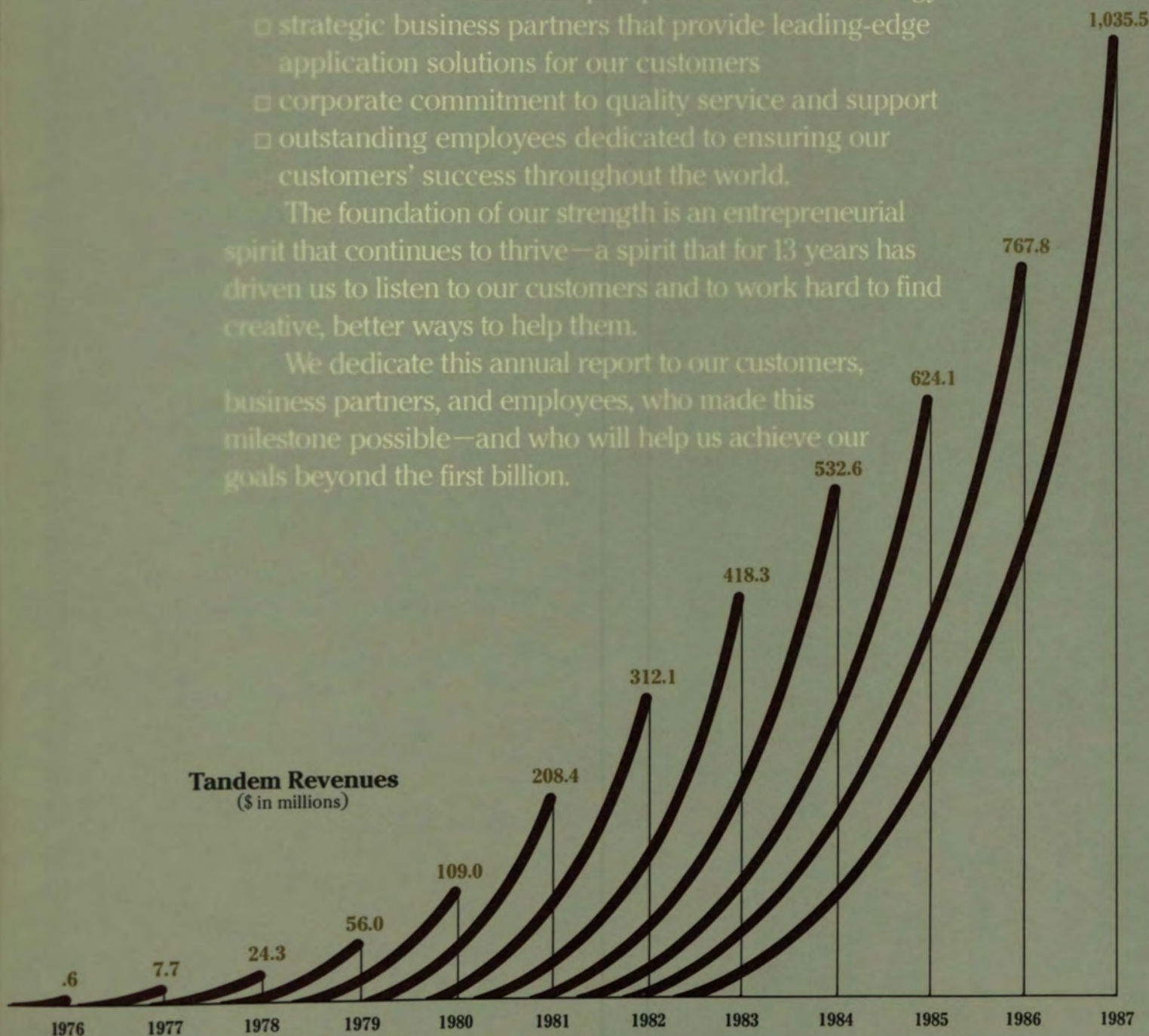
The winning strategies of Tandem customers worldwide drive that momentum—strategies significantly enhanced by Tandem's:

- excellence and leadership in products and technology
- strategic business partners that provide leading-edge application solutions for our customers
- corporate commitment to quality service and support
- outstanding employees dedicated to ensuring our customers' success throughout the world.

The foundation of our strength is an entrepreneurial spirit that continues to thrive—a spirit that for 13 years has driven us to listen to our customers and to work hard to find creative, better ways to help them.

We dedicate this annual report to our customers, business partners, and employees, who made this milestone possible—and who will help us achieve our goals beyond the first billion.

**Tandem Revenues**  
(\$ in millions)





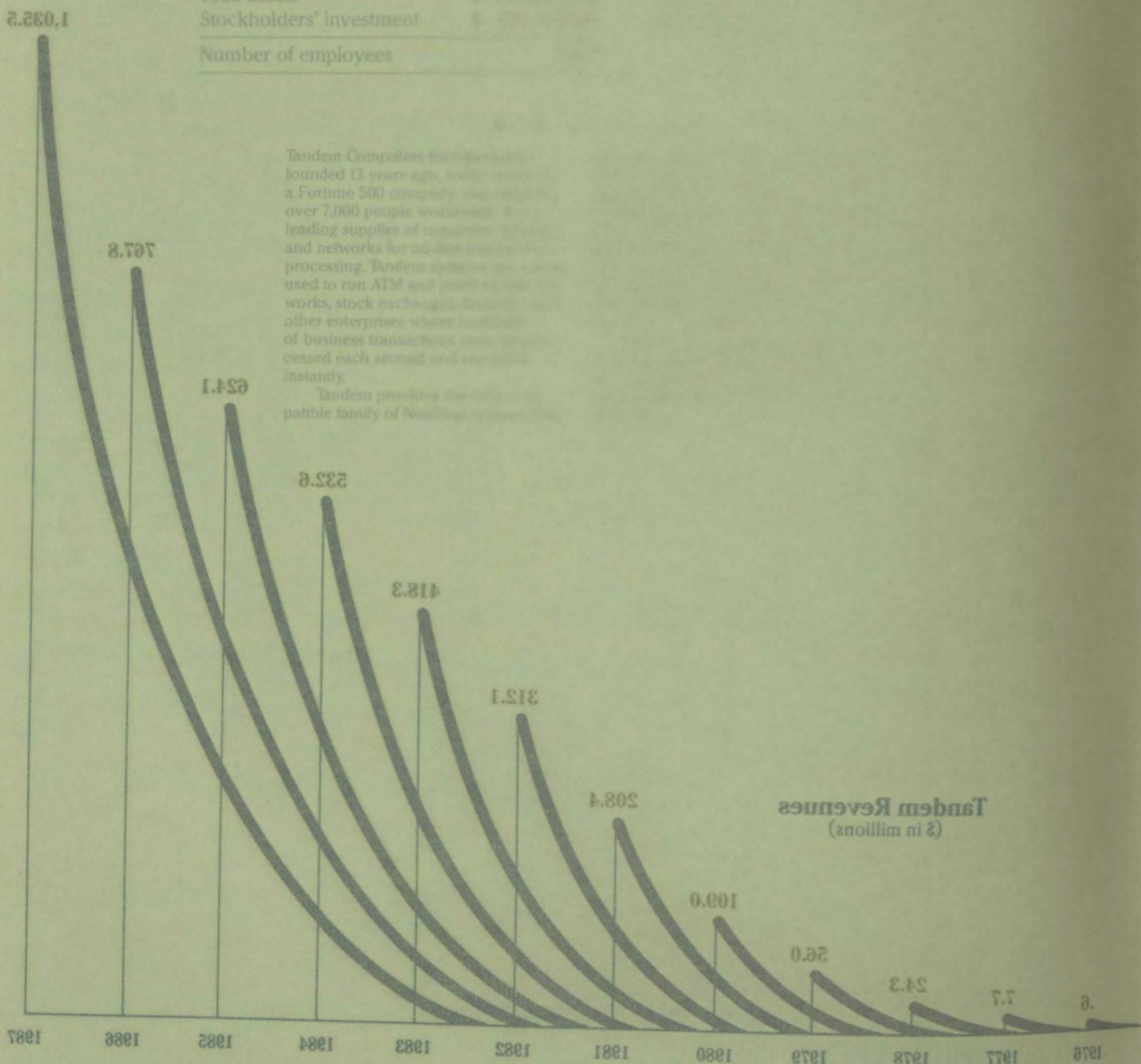
## Highlights

Fiscal Year Ended September 30, 1987

Revenue	\$1,032.1
Operating income	\$ 235.6
Operating margin	22.8%
Net income	\$ 183.1
Earnings per share	\$ 1.83

Working capital	\$ 235.6
Total assets	\$ 235.6
Stockholders' investment	\$ 235.6

Number of employees





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**T**his has been a year of tremendous achievement for Tandem. We reached a major milestone by surpassing \$1 billion in revenue for fiscal 1987, with strong earnings growth over last year.

Our fiscal 1987 results reached record levels in both revenue and earnings. Compared with fiscal 1986, revenue grew 35 percent to \$1.035 billion, up from \$768 million, and earnings per share grew 50 percent to \$1.08, up from \$.72.

Worldwide, our business showed significant strength. U.S. sales improved markedly, up 27 percent from fiscal 1986. International business grew 47 percent and now accounts for 43 percent of our revenue.

In April 1987, Tandem Common Stock was traded for the first time

on the New York Stock Exchange. Listing on the Exchange increases our visibility in international markets and allows our stock to be traded more widely.

### Strategic New Products

During the year, we announced a record number of hardware and software products.

The NonStop SQL distributed relational database management

system, based on the industry-standard Structured Query Language (SQL) interface, provides the industry's first relational data-

base software that combines high productivity with high performance. It significantly expands the markets for our products and gives us a competitive advantage.

At the high end of our product offerings, we added six models to the NonStop VLX mainframe line. At the low end, we significantly strengthened our position to meet the growing demand for distributed processing and networking by extending our GUARDIAN software-based product family with the introduction of the CMOS-based NonStop CLX system.

The LXN multiuser system, also introduced in 1987, is Tandem's first offering for users of UNIX software. It is an important product for us, one that will allow us to open new markets and develop additional distribution channels.

To capture transactions generated on the desktop, we added new models to our 6AX workstation family; and, late in the year, we announced the PSX workstations, a new line of MS-DOS- and OS/2-based workstations designed around Intel 80286 and 80386 microprocessors.

To address the important area of workstation integration, we began installing our MULTILAN local

area network product at customer sites. MULTILAN allows customers to connect workstations to Tandem systems through nearly every type





of local area network.

Recognizing the need to integrate and manage large networks of distributed systems and applications, we introduced the Distributed Systems Management software.

### Developing New Markets

Tandem continued to focus on strategic relationships with other companies to develop opportunities in new industries and to expand current markets.

We worked to strengthen relationships with more than 280 software providers and value-added resellers (VARs) in Tandem's Alliance program and, through agreements with VARs, we opened new distribution channels.

Responding to the market opportunity for automation and integration in manufacturing, we announced the Tandem Integrated Manufacturing Environment (T.I.M.E.) strategy. We joined with three industry leaders, Electronic Data Systems (EDS), Boeing Computer Services, and MSA Advanced Manufacturing Inc., to develop new software solutions for this market.

Also in 1987, we signed an agreement with a value-added reseller, Ultimate Corporation, which allows us to offer OLTP capabilities to the user base that has developed applications on the PICK operating system.

We made equity investments in companies whose strategies complement our own. Netlink, a leading-edge supplier of SNA interfaces, strengthens our ability to integrate Tandem systems into SNA networks. Automated Moni-

toring and Control International, Inc. (AMCI), a joint venture with Union Pacific and SEL Canada, will allow us to seek new opportunities in the transportation industry.

Shortly after the close of the fiscal year, we agreed to acquire Atalla Corporation, a leading supplier of secure transaction systems. Atalla's market presence and extensive experience in security systems complement our own position in

financial and retail markets.

### Excellence in Service and Support

During the year, we significantly strengthened our service and support organizations. Emphasizing our commitment to quality service for customers, we added a vice president of Customer Engineering to our executive staff and introduced a number of new service and support options.

To reduce service costs and enhance flexibility, we introduced our first user-serviceable systems, which diagnose faults and alert the computer operator. In the U.S., users will be able to order parts by phone and have them dispatched for overnight delivery.





### Outstanding Employee Productivity

To ensure quality support for a growing customer base and to support our future growth, we made the first material increase in our employee population since 1984, adding employees in sales, support, field administration, and research and development. At the end of fiscal 1987, the number of employees worldwide reached 7,007, compared to 5,719 at the close of fiscal 1986.

Employee productivity is at an all-time high, with annual revenue per employee reaching a record \$163,000. People remain our most important asset, and we are investing in them through innovative educational and management development programs.

We are proud of our results in fiscal 1987. This annual report provides a perspective of the past and the future of the Company. It includes statements from Tandem's original business plan. This plan is used at the Stanford Graduate

School of Business as an example of a strategy successfully implemented.

Our original business strategy has been the foundation for our success. The ongoing evolution and implementation of our long-term market and product strategies provide momentum for our goal of continued growth.

The management and employees of Tandem have their sights set well beyond the first billion. We believe we have put the programs and products in place to help us achieve that goal.



James G. Treybig (left), President and Chief Executive Officer; Thomas J. Perkins, Chairman of the Board.

Sincerely,

James G. Treybig  
President and Chief Executive Officer

Thomas J. Perkins  
Chairman of the Board

November 13, 1987



*Beyond the first billion:*

**Tandem's unique parallel architecture and leading-edge products designed for the on-line transaction processing market provide the Company and its customers with strategic competitive advantages.**

*"Multiprocessing is the next major direction in computing.... Computers, as conventionally designed, are not intended to work together, and these redundant systems are slow, difficult to program, excessively expensive, difficult or impossible to expand, and, sadly, not fail-safe."  
- Tandem's original business plan, 1974*



The New York Stock Exchange on one of the record-breaking volume days in October 1987.

6

1976

The Securities Industry Automation Corporation (SIAC) is charged with the monumental task of providing automation support to the New York and American stock exchanges.

SIAC uses Tandem systems to support almost every area of the securities industry, including order processing, trading, and market data reporting for the New York Stock Exchange.

In 1976, anticipating dramatic growth in stock trading volume and the need for a highly reliable computer system that could grow efficiently with it, SIAC looked to two-year-old Tandem Computers.

At the time, typical daily trading volume on the New York Stock Exchange was 20 to 30 million shares. As predicted by SIAC, this volume increased steadily over the next ten years. By the end of fiscal 1987, SIAC was using a network of 22 Tandem systems (more than 200 processors) to handle an average of 170 million shares daily.

A critical test for the Tandem systems came on October 19 and 20, 1987, when the 22 systems, intended to process up to 450 million shares daily, successfully handled over 600 million shares on successive days.

As it did ten years ago, SIAC today forecasts sweeping changes in trading floor support systems, and it plans to work with Tandem to meet these new opportunities.

◆ ◆ ◆ ◆ ◆  
*Around the world, 28 securities and commodities exchanges and over 40 brokerage firms use Tandem systems—positioning the Company to grow as deregulation and competition drive the industry toward greater efficiency, 24-hour trading, and greatly increased transaction rates.*

*Winning products for the securities industry*







In 1976, Tandem revolutionized the computer industry by introducing a totally new parallel computer architecture designed specifically for the on-line transaction processing (OLTP) marketplace.

OLTP is characterized by the continual need for instantaneous information to support vital aspects of business operations. OLTP is the industry's most demanding environment because system failures and loss of or damage to a user's databases can seriously disrupt business operations.

In stock exchanges, retail stores, factories, communications companies, airlines, and other organizations, the number of transactions that must be processed is burgeoning, creating an increasing demand for on-line transaction processing systems that market analysts forecast will exceed \$49 billion within the next five years.

Customers have come to trust and depend on Tandem products to run mainstream applications for one simple reason: Tandem systems provide a competitive advantage.

Many industry experts consider the Company a technology leader

in OLTP. At Tandem, technology leadership starts with a unique parallel computer architecture.



### Tandem Sets the OLTP Standard

We believe that Tandem sets the standard by which all other OLTP systems must be judged. Many users of on-line systems have found the fundamental elements of Tandem's architecture—linear expandability, data integrity, fault tolerance, inherent networking, and high performance—are requirements in the demanding OLTP environment.

Tandem's flexible, parallel architecture has become a strategic competitive advantage to many customers who have been first in their industries to deliver new revenue-generating services with OLTP systems.

Because of their network foundation, Tandem systems are well suited to meet the increasing demand for distributed computing and networking. There are Tandem systems for virtually any transaction processing need—from small, stand-alone systems to those handling hundreds of transactions per second in a single mainframe or across networks of branch office systems.

Over the years, Tandem has enriched its product offerings by using higher performance, state-of-the-art

technologies, without sacrificing software compatibility. This allows customers to increase processing power while maintaining their investments in existing software applications.

Improving the ratio of price to performance is a key part of Tandem's strategy. In April, Tandem addressed the requirement for cost-effective, low-end systems with the introduction of the NonStop CLX and LXN systems for smaller network nodes or remote locations.

Equally important is the Company's emphasis on the development of software that makes distributed processing easier and more cost-effective.



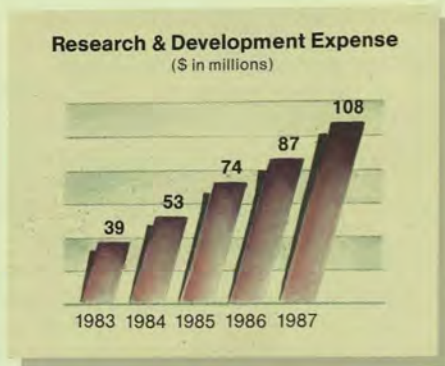
### Distributed Database Management

The cornerstone of Tandem's distributed processing strategy is an important new product, the NonStop SQL relational database management system. We believe it provides a compelling reason for customers to develop new applications on Tandem systems.

NonStop SQL software conforms to an emerging industry standard for relational database management systems that provides significant productivity improvements for application developers.

Before the introduction of NonStop SQL software, the industry





lacked a relational database management system that could provide the high performance necessary for OLTP. NonStop SQL provides a ratio of price to performance that is *up to five times* better than other SQL products running on the industry's largest mainframes.

Tandem's NonStop SQL software is also the industry's first *fully distributed* relational database management system. A single transaction can transparently query or update information in multiple Tandem systems wherever they are located in the network.

#### ◆ ◆ ◆ ◆ ◆ **Networking and Distributed Systems**

There is an emerging demand to link together workstations and dispersed systems to gain the numerous advantages of distributed computing.

For customers wanting to bring the benefits of OLTP to the desktop, Tandem offers the MULTILAN products. With these products, users have

the flexibility to choose virtually any local area network that uses standard NETBIOS protocols—extending Tandem system capabilities, such as fault tolerance and data integrity, to personal computer applications.

In addition, users must have tools to *manage* systems and networks.

Tandem's Distributed Systems Management (DSM) products, announced in fiscal 1987, meet this requirement. This flexible software allows the management of systems, applications, and devices in a Tandem network to be centralized, distributed, or both, depending on the customer's needs. DSM software tools increase operator productivity by providing a single view of the network.

#### ◆ ◆ ◆ ◆ ◆ **Adding Value to Standards**

Tandem is committed to adopting and making contributions to international and national standards such as SQL, SNA, the Ada<sup>®</sup> language, UNIX, OSI, and local area network standards.

For example, in 1987, we introduced NonStop SQL software, Tandem Ada, and MULTILAN products. We also began shipping our new LXN multiuser system that gives customers with standard UNIX applications access to Tandem OLTP networks, adding a high degree of data integrity and system reliability.

Standards are important to Tandem because they provide users with lower costs and better connectivity, and will help them leverage their investments in other computer systems.

#### ◆ ◆ ◆ ◆ ◆ **Defining the Future of OLTP**

The future requires innovation in technology, and Tandem is committed to advancing the state of the art in its products. The Company's strategic investments in its own VLSI circuit prototype fabrication laboratory and computer-aided design systems have produced the circuit designs for the NonStop VLX systems and controllers.

Using silicon compilation techniques, we have been able to increase our circuit design productivity to develop products more rapidly. In 1987, we announced the first result of our efforts, the NonStop CLX system. This system will enable us to bring Tandem's unique architectural advantages to users at smaller locations.

Tandem's commitment to technological excellence in hardware and software, combined with future product plans and a strategy to add value to industry standards, provides the momentum to help us achieve our goal to grow beyond the first billion.



Testing in November 1987 in Chicago of J.C. Penney's new *Telaction* home shopping system.

1985

9

## TELACTION

*Shopping at the speed of life*

FIELD TEST  
0101204

J.C. Penney selected Tandem systems in 1985 to accomplish a major data processing project. The \$15 billion retailer enhanced its information resource to become its industry's leader in low-cost transactions. Using this transaction processing information resource, J.C. Penney provides high-quality customer service. And, simultaneously, the company leverages its data processing investment by marketing its value-added network services.

Initially, the company chose Tandem systems to integrate point-of-sale credit authorization into its existing IBM SNA network. This move improved reliability and dramatically decreased average response time to within three seconds at the company's 70,000 point-of-sale terminals. In winning the account, Tandem demonstrated a capability to deliver 50 percent more than the 100 transactions per second required by J.C. Penney.

In 1987, J.C. Penney announced a revolutionary interactive television home shopping service using Tandem NonStop computers. Called *Telaction*, it brings the products of many retailers to cable television viewers. The first consumer-controlled home shopping system, it should be available in 60 major cities over the next five years.

◆ ◆ ◆ ◆ ◆  
*Faced with increasing competition, major retailers look to Tandem systems to help them expand customer services, reduce costs, and more efficiently manage their multistore operations.*

*Winning products for the retail industry*



*Beyond the first billion:*

**By providing superior solutions  
to customers, Tandem and its  
strategic partners are winning  
major new business in high-  
growth markets.**

"Tandem believes that it is address-  
ing a very large market with a  
new and extremely attractive so-  
lution. The potential opportunity  
and competitive advantage are  
larger than those enjoyed by any  
previous new computer company.  
The growth rates being projected  
are ambitious by many standards,  
but are achievable and extremely  
realistic based upon the market  
Tandem is pioneering."  
—Tandem's original business plan, 1974



**L**eading businesses and government organizations are demanding comprehensive solutions—proven, cost-effective combinations of computer hardware and application software that complement their long-term strategies. Business solutions are critical to the success of Tandem as well as of its customers.

Tandem has aggressively established a broad range of strategic relationships to offer customers quality business solutions and to leverage our position in specific industries, geographic markets, and technologies.

Tandem's strategic partnerships take several forms: equity investments, joint ventures, acquisitions, and the highly successful Alliance program.



### Tandem Alliance Program

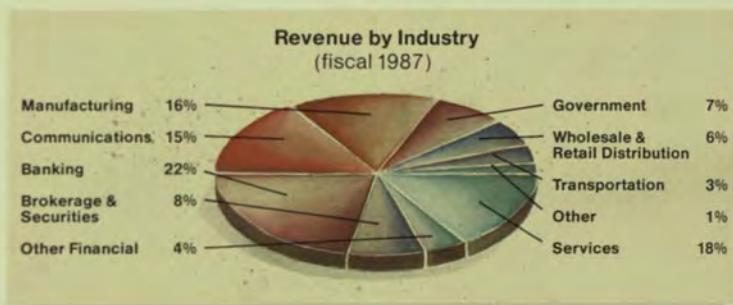
The Tandem Alliance program encourages the development of application software solutions and new distribution channels. It has established relationships with more than 280 software providers and value-added resellers.

The Tandem Alliance program provides sales, marketing, and technical support to help ensure the success of its partners.

The majority of Tandem Alliance members are independent application software houses that provide either off-the-shelf or custom programs that run on Tandem systems. They focus on industries identified by Tandem as high-growth OLTP markets.

Among Alliance members are some of the world's largest and most respected software houses. They commit development and marketing resources to Tandem systems because Tandem's architecture enhances their own products and competitiveness.

Some Alliance participants are Tandem customers who have developed sophisticated application software for their own use and then have





joined with Tandem to license their solutions to others.

To increase the availability of Tandem systems and industry solutions for a wider spectrum of customers, the Alliance program has aggressively sought new channels of distribution through its value-added reseller program. During 1987, revenue generated by value-added resellers doubled.

In 1987, as part of Tandem's Alliance value-added reseller program, the Ultimate Corporation began marketing Tandem systems packaged with software enabling them to run applications based on the PICK operating system. Since PICK is an industry-standard operating system that runs an estimated 75,000 applications, this represents an important market opportunity for Tandem.

◆ ◆ ◆ ◆ ◆

#### **Strategic New Ventures**

With the increasing sophistication of customer organizations and their OLTP application plans, Tandem foresees a growing need by customers for solutions that are not currently available. Tandem is fulfilling that need with

equity investments, joint ventures, and acquisitions to broaden its OLTP industry offerings.

During 1987, to bring the benefits of OLTP to the transportation industry, Tandem joined with SEL Canada and Union Pacific Railroad as stockholders in a new company, Automated Monitoring and Control International, Inc. (AMCI). AMCI will initially concentrate on developing an Advanced Train Control System (ATCS) to enhance safety and significantly improve operating efficiency.

◆ ◆ ◆ ◆ ◆

#### **Leveraging Product Development**

To complement its own development efforts, Tandem has made equity investments in companies whose technologies we believe can be leveraged for OLTP.

In 1987, Tandem invested in Netlink, Inc., to strengthen further Tandem's position in providing products for integration with IBM's Systems Network Architecture (SNA). Netlink's experience in providing solutions for the evolving SNA communications environment complements and extends our own technical capabilities in SNA. Netlink and Tandem will jointly develop and market products that enhance the SNA-connectivity of Tandem systems with IBM systems.

Shortly after the close of the fiscal year, Tandem agreed to acquire Atalla Corporation. Atalla provides secure system solutions in the areas of network interchange, electronic payment, and computer security. These products complement Tandem's own capabilities in OLTP and will provide new product offerings for the financial and retail point-of-sale markets.

◆ ◆ ◆ ◆ ◆

#### **Meeting Worldwide Needs**

Tandem invests in selected companies that offer software application design and support for key geographic markets.

In 1987, Tandem formed Twinac, a joint venture with the VOLMAC group, a leading Dutch software company with more than 2,000 employees.

Similar to Vartecs (Tandem's joint venture in Japan), Twinac will help meet the growing demand for OLTP systems in the Netherlands by providing project management and contract consulting services.

Tandem will continue to develop these relationships and seek others that benefit customers as we work to move beyond the first billion.



Girobank automated teller machines are located at post offices throughout England.

**1975**

In 1975, Applied Communications, Inc. (ACI), a start-up company with three employees, made a bold, strategic decision to entrust the future of its business to the entirely new computer architecture of another start-up company, called Tandem. ACI is now a leading provider of electronic delivery systems to the financial industry.

To gain the competitive edge, ACI developed its software for automated teller machines (ATM) on Tandem systems. Its customers could depend on the high availability of their systems and the integrity of the data. And as customers' businesses grew, computing capacity could be expanded cost-effectively to meet business needs.

The strategy worked. ACI has won the largest share of the world's ATM networks, with over 250 installations in 34 countries. In 1986, ACI was acquired by U S WEST, Inc., the \$8 billion telecommunications company with nine million customers in the 14 western states.

Today, ACI, with 25 percent of its business in nonfinancial markets, is expanding its offerings in the retail, petroleum, and telecommunications markets—with a business strategy still based on Tandem systems. According to ACI, "It was the right strategy 12 years ago, and it's the right strategy for the future."

◆ ◆ ◆ ◆ ◆  
*With installations at more than 300 banks worldwide, Tandem and its Alliance partners are poised to capitalize on the forces of deregulation and competition that are driving the expansion of OLTP into new areas of banking.*

*Winning solutions for the banking industry*



Businesspeople in Australia are using Telecom Australia's *Telememo*.

**1986**

Telecom Australia, the continent-wide telecommunications company serving all of Australia's businesses and 16 million people, began expanding its traditional revenue base in 1986 by introducing attractive new services that run on Tandem systems. Telecom chose the software and systems for these new services because they have been proven successful in other parts of the world by other Tandem customers.

Telecom inaugurated its public electronic mail service, called *Telememo*, in 1986, and plans to launch a public database access service called *iLink* (for "intelligent link") in 1988. *iLink* will provide users easy access to a variety of interactive databases.

Both of these new services demonstrate how Tandem customers often become marketing "partners" with Tandem by offering other companies in their industry proven, proprietary packages that run on Tandem systems. *Telememo* is derived from the *Telemail* package, developed to run on Tandem systems by GTE Telenet and licensed to Telecom. *iLink* was originally developed, also on Tandem systems, as *iNet* by Bell Canada and licensed to Telecom.

In preparation for a more deregulated telecommunications environment in Australia, and to compete effectively against other private international networking organizations, Telecom has created a separate division called Custom Link that is dedicated to pursuing other value-added-service opportunities.

◆ ◆ ◆ ◆ ◆  
**A significant player in the dynamic telecommunications industry, Tandem presently has more than 70 customers worldwide and is anticipating an even bigger role as part of this industry's exciting future.**

**Winning solutions for the telecommunications industry**





*Beyond the first billion:*

**Sustained growth can be attained only through satisfied, successful customers. Tandem is dedicated to helping ensure the continued success of our customers by striving to provide the highest quality, most comprehensive service and support available in the industry.**

*"The Tandem computer in a typical application has significantly higher throughput at a much lower cost compared to the competitive alternative. The customer will find these two characteristics of compelling interest."*

*- Tandem's original business plan, 1974*



**C**ustomer satisfaction has played a major role in Tandem achieving its first billion-dollar year.

A fundamental reason why Tandem continues to rank high in customer satisfaction surveys is the Company's emphasis on excellence in customer service and support.

Tandem systems are designed to meet the demanding requirements of on-line transaction processing. To many of our customers, this means that their systems must be running 24 hours a day. This high level of system availability not only requires computer systems designed to operate despite component failures, but also a service and support team that can maintain and repair the systems while business operations continue.

As Tandem installations grow in size and sophistication, so do the service requirements. Tandem, in turn, continues to expand its offerings to meet

these needs. Just as Tandem's goal is to set the standard for OLTP, it also seeks to set the industry standard for quality service and support.



### **Quality Service Today**

Today, Tandem offers flexible service and support alternatives, from 24-hour on-site service to telephone consultation. In addition, the Company provides project and program management, network and application design and assistance, operations consulting, performance evaluation, and capacity planning.

Tandem also offers classroom training at education centers and customer sites around the world, and self-paced computer-aided instruction for selected products.



### **Improved Serviceability by Design**

Tandem is continuing to emphasize serviceability as a key engineering design goal for every new product. Technical innovation in product design supports Tandem's goal to offer a high level of service and reduced service costs. And, because equipment can be

serviced more easily and quickly, the customer's decision to install an increased number of distributed Tandem systems is simplified.

Perhaps even more important to customers implementing large-scale projects is Tandem's commitment to joint strategic planning. This joint planning helps Tandem customers meet their business objectives and reflects the Company's dedication to providing the highest level of customer support in the industry.



### **New Services in 1988**

The environment for computer users is growing more exciting every day, as new technologies and capabilities emerge. This environment is also becoming more complex. Tandem's goal is to make computing easier for its customers.

For example, Tandem systems are typically connected to a wide variety of other vendors' devices. In 1988, the Company plans to broaden its service offerings to include support of some of



**1982**

In 1982, Saab Scania AB decided to introduce just-in-time manufacturing techniques for the production of its increasingly popular automobiles. To control its already highly automated plants, Saab selected Tandem computer systems because of its requirements for an on-line information resource that could grow easily and inexpensively to meet the anticipated increase in demand for its cars. Since then, Saab has steadily increased both production and its computer capacity. By 1989, it expects to produce 50 percent more cars than it did in the early 1980s.

Saab's Tandem systems now control every phase of manufacturing at the company's two plants in Sweden. All cars are manufactured to advance customer orders on an assembly line that has been segmented into many small "minilines," each with 20 to 30 workers and its own quality control group. Part of the role of the Tandem systems is to direct parts assemblies from numerous off-site locations to each miniline just in time to build a specific car to the advance order.

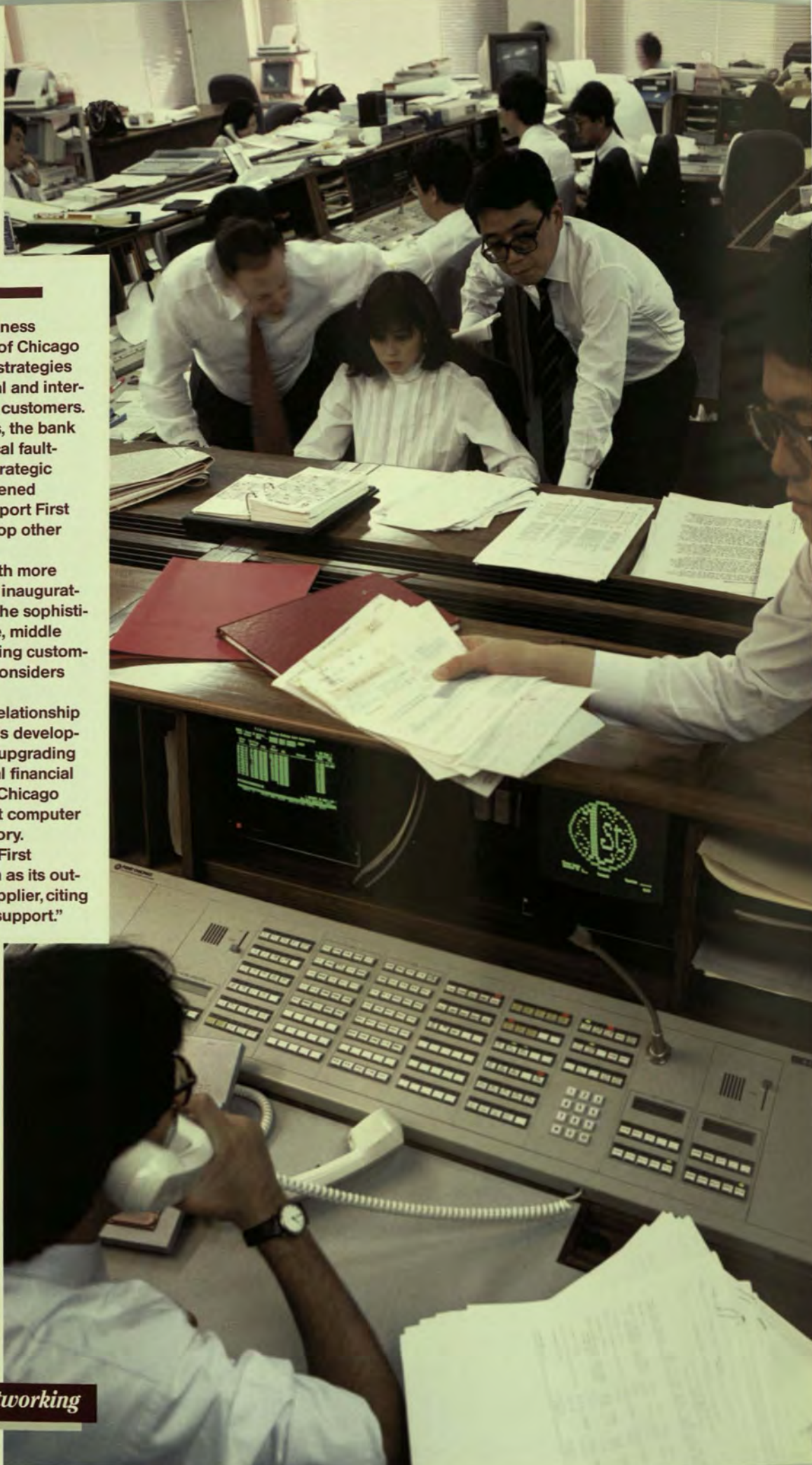
Saab's future goals are ambitious. A third, state-of-the-art plant is planned. In addition, the company intends to integrate the production systems with its robotic control systems. For greater efficiency, productivity, and employee satisfaction, it expects to develop a Tandem EXPAND network to link all three plants.

◆ ◆ ◆ ◆ ◆  
*With more than 240 manufacturers worldwide using Tandem systems, the Company is well positioned to play a leading role in the challenging market for computer-integrated manufacturing.*

*Winning support for the manufacturing industry*



The foreign exchange trading room at First Chicago's Tokyo office.



18

1978

At a pivotal point for its business in 1978, First National Bank of Chicago developed new long-range strategies to meet the growing national and international requirements of its customers. To help accomplish its goals, the bank chose Tandem, with its critical fault-tolerant technology, as a "strategic partner." In turn, Tandem opened new overseas offices to support First Chicago, as well as to develop other international business.

Today, First Chicago, with more than \$44 billion in assets, is inaugurating new strategies to meet the sophisticated needs of its corporate, middle market, and consumer banking customers. And First Chicago still considers Tandem a strategic partner.

Extending its working relationship with Tandem, First Chicago is developing new applications and is upgrading its existing systems in global financial centers. In fiscal 1987, First Chicago awarded Tandem the largest computer order in First Chicago's history.

For the past two years, First Chicago has named Tandem as its outstanding data processing supplier, citing "distinguished service and support."

◆ ◆ ◆ ◆ ◆  
*Distributed relational databases, flexible networking, and gateways offer all industries more efficient ways to handle information. In this area of tremendous potential growth, the Tandem architecture has distinct advantages.*

**Winning support for networking**



these key devices. Tandem also plans to expand its customized services for large users who want a single source of support.

Some Tandem customers are planning to implement large networks by purchasing quantities of Tandem's lower-cost CLX, EXT, and LXN systems and installing them in numerous geographically remote locations. To support these customers, Tandem plans to establish and staff additional service and support centers in locations throughout the world. These centers will become the first points of contact for customers, either by telephone or other electronic connections, providing prompt system diagnosis.



**Enhanced Support Programs**

The Company is enhancing its on-line Customer Information Service, through which subscribing customers can keep abreast of a broad range of Tandem technical topics. Educational

offerings also are being made available in more flexible formats and through new delivery systems, such as the Tandem Television Network.

Tandem plans to open an advanced customer support facility in Cupertino, California, to provide services to Tandem customers worldwide. The facility will house centers for expanded benchmark operations, application software conversion, design assistance, and network assurance to test large network configurations prior to installation.

Tandem's High-Performance Research Center in Frankfurt, West Germany, also has been expanded to provide additional consulting capabilities to Tandem's key customers and software houses around the world. As more customers move to distributed computing and networked environments, the high level of service and support Tandem provides will become even more important.

Customer satisfaction remains a cornerstone of our success. Tandem plans to continue investing in new service and support offerings to achieve its goals beyond the first billion.





*Beyond the first billion:*

**In the end, customer satisfaction depends on the people who design and deliver quality products and services.**

**Tandem will continue as a leader in developing people as well as computer systems.**

*"Tandem will be a multi-million-dollar corporation with the dominant share of its sector. Its strategy will now be focused on keeping ahead."*

*—Tandem's original business plan, 1974*



**T**andem is a recognized leader and innovator in employee relations, making significant investments in its most important asset—Tandem employees.

“We develop people as well as systems” exemplifies Tandem’s attitude toward and development of this strategic resource.

Over the years, Tandem has implemented numerous programs aimed at a single goal: attracting and retaining outstanding employees. The benefits of these programs extend beyond



the employees themselves to our customers, who are the beneficiaries of the experience and motivation of Tandem people.

The heart of Tandem’s programs is communication. The Company believes that employees who are informed and encouraged to participate will be more productive and build a far stronger company. History has proven Tandem right.

The results of these programs are impressive: an employee turnover rate well below the industry average; one of the highest employee productivity levels in the nation; and a 1987 ranking of Tandem by *Business Week* magazine as one of the 50 most competitive U.S. corporations.

The Company invests in the latest communication technology. Tandem goes beyond the usual employee newsletter to electronic mail, teleconferencing, and incentive programs that facilitate communication across job functions and organizational and geographic boundaries.

◆ ◆ ◆ ◆ ◆  
**Electronic Open Door**

Tandem has extended its traditional open door policy through the use of a private, worldwide electronic mail system.

PS MAIL software, a standard Tandem product, operates over the Company’s worldwide network, instantly linking more than 7,000 employees in 19 countries.

In addition to communicating important business news, PS MAIL allows employees to have access to Tandem’s technical specialists around the world, efficiently leveraging our resources to support customers.

◆ ◆ ◆ ◆ ◆  
**Tandem Television Network**

The Company’s use of television as an employee communication medium began in 1982 with monthly broadcasts. Originating from the Cupertino headquarters, the first teleconferences reached 15 sites in the United States.

Today, the Tandem Television Network (TTN) is an award-winning private broadcast network reaching 68 sites in North America. Several times each year, it broadcasts to European sites also.

Originally designed to improve internal communication, TTN has become a valuable corporate resource



Tandem's Harald Sammer, at left, with Dr. Andreas Reuter of the University of Stuttgart.

22

One of the world's foremost academic experts in the field of transaction processing is now pursuing practical, productive research into high-performance parallel processing, largely due to the initiative of a Tandem employee who secured a grant from Tandem.

Independent research under the direction of Dr. Andreas Reuter at the Department of Computer Science at the University of Stuttgart was hampered by the lack of the ideal computer.

In Frankfurt, Harald Sammer, director of Tandem's High-Performance Research Center, asked Tandem management to donate a system to the university. Working with the Corporate Contributions Committee, he won approval for the gift of a NonStop TXP system, valued at over \$600,000.

"The best system for our PROSPECT research program—which stands for Processor Organization Supporting Parallel Execution of Complex Transactions—is the Tandem system with its inherent parallel processing capabilities and message-based operating system." The PROSPECT team's objective is to develop a programming interface for parallel processing that is as simple as classical, sequential programming and that executes automatically.

Tandem also provided training for a group of faculty members and graduate students, and maintained the system. The state government now provides funding for full-time researchers, and Sammer's staff supports them with consultation and exchange of ideas.

In addition to its use in advanced research, the Tandem system is used to teach undergraduate students the basics of database, transaction processing, and expert systems.

◆ ◆ ◆ ◆ ◆  
*Tandem remains an exciting company by attracting quality individuals who want demanding challenges in a creative, stimulating environment.*

*Winning strategy for hiring outstanding people*





extended to our customers. During 1987, TTN broadcast several International Tandem Users' Group teleconferences and the Tandem VISIONS series, which features noted authorities discussing future business, economic, and social trends.

This year, Tandem began an exciting new venture, Educational Television (ETV). Designed to deliver technical information to employees, customers, and business partners, ETV provides cost-effective, comprehensive education to a wide audience.



#### **Rewarding Outstanding Performance**

Tandem offers a wide variety of benefit programs, developed to reward excellence in performance.

Employee stock purchase and option programs, for instance, are designed to allow all employees to share financially in the success of the Company. Virtually all employees own or have options to purchase Tandem stock.

In addition, several times each year, selected individuals are recognized for exceptional achievement by nomination to Tandem Outstanding Performers (TOPS). TOPS winners come from all job functions, organizations, and locations. The winners are invited to attend an off-site meeting that provides an opportunity to exchange ideas and information with senior management.



#### **Sabbatical Programs**

Another valued employee benefit is our sabbatical program. Tandem's program (available worldwide, except in countries where local customs allow extended annual vacations) grants an employee, on each fourth anniversary of employment, a six-week, fully paid leave—in addition to vacation time.

In 1987, the scope of that program was expanded to include the Public Service Sabbatical, which reflects the Company's commitment to return some of the rewards of success to the community.

Under the Public Service Sabbatical program, employees volunteer to

work with a charitable organization.

Tandem grants the volunteer additional leave-time, as well as monetary support for travel and living expenses for the employee and immediate family.

New benefit programs constantly are under development and introduction. Among those inaugurated during 1987 are childcare referral and dependent care assistance programs; a health and wellness program that provides on-site physical examinations as well as fitness and nutritional counseling; and financial planning seminars.

Tandem's focus on hiring, developing, and retaining outstanding people—along with continuing investments in programs to support those goals—will help the Company grow beyond the first billion.



Martha Jennings took her Tandem Public Service Sabbatical in rural Senegal.

24

Village women of Senegal were among the first beneficiaries of Tandem's newly inaugurated Public Service Sabbatical program, which supports employees' desires to perform volunteer work.

Martha Jennings, who joined Tandem in 1982 as a marketing support specialist, developed an interest in the role of women in Third World cultures during her years working at Tandem locations throughout Asia.

When the time came for her Tandem sabbatical, Martha became one of the first participants in Tandem's Public Service Sabbatical program. This program enables employees to combine public service with the regular six-week, fully paid leave that employees earn every four years. Tandem extends the sabbatical and helps pay expenses.

Martha chose to spend five weeks as a volunteer with the U.S. Agency for International Development, teaching rural Senegalese women in seven different villages how to make money from ongoing projects such as cattle raising. Her courses covered choosing a feasible project, marketing the product, and understanding credit systems. Drawings were used in the makeshift outdoor classrooms because the women were unable to read.

Martha is now a project leader in the Strategic Planning/New Ventures group at Tandem headquarters.

◆ ◆ ◆ ◆ ◆  
*Tandem is as innovative in designing programs that encourage employee loyalty as it is in designing systems.*

*Winning strategy for retaining outstanding people*





*Beyond the first billion:*

**The on-line transaction processing marketplace, pioneered by Tandem, is now a mainstream segment of data processing. Tandem believes it has the momentum to continue to lead the way.**

*"In summary, Tandem has identified a major market sector of high growth rate potential. By being first, and achieving an early dominant market share, Tandem can generate the profits required to finance continued growth at a rate faster than any single competitor, thereby assuring the retention of high share and the accruing high profit margins."*

*-Tandem's original business plan, 1974*



### **Overview**

Tandem Computers seeks to provide leadership in the expanding market for on-line transaction processing (OLTP) systems and networks. The Company believes that its computer architecture has major advantages in satisfying the fundamental requirements for such systems and networks. Achieving its goal of leadership involves many factors, including strategic market positioning, a commitment to product development, customer satisfaction, and an organizational structure and philosophy that foster employee productivity and creativity. Additionally, Tandem believes it is important to maintain a strong financial position to compete effectively in the rapidly growing OLTP marketplace.

### **Financial Condition**

Throughout fiscal 1987, the Company strengthened its financial position. Cash and cash investments grew for the fifth consecutive year, from \$240 million at September 30, 1986, to \$317 million at September 30, 1987. Contributing to the growth of the cash balance were income from operations, employee stock purchases, and improvements in asset management. In fiscal 1987, net income increased 66 percent over the prior fiscal year, and cash flow from operations reached \$159 million, compared with \$138 million in fiscal 1986 and \$91 million in fiscal 1985.

The Company believes that attracting and retaining high-quality employees are key to success. Methods to achieve these objectives include employee stock option and stock purchase programs. These programs also serve as a source of funds for the Company. As a result of these programs, the Company received \$81 million in fiscal 1987, \$51 million in fiscal 1986, and \$11 million in fiscal 1985 in the form of employee stock purchases and related tax benefits.

The Company continues its emphasis on asset management. During fiscal 1987, accounts receivable grew at a rate lower than that of revenue. Accounts receivable days outstanding improved to 80 days at year-end, compared with 82 days at the end of fiscal 1986 and 86 days at the end of fiscal 1985. Inventories at fiscal year-end increased \$28 million over the fiscal 1986 year-end level. Although inventory days increased slightly to 80 days in fiscal 1987 from 78 days in fiscal 1986, current inventory management represents a substantial improvement over the 110 days recorded in fiscal 1985. The Company believes the current inventory level is appropriate.

During fiscal 1987, the Company invested \$161 million of cash in property, plant and equipment, and other assets, compared with \$71 million and \$67 million in each of the previous two fiscal years. The increased investment primarily supported the Company's rapid growth. For example, the Company installed its newest computer systems in field offices, expanded systems to accommodate personnel growth, and invested in field-replaceable parts to support an expanding customer base.

In addition, during the year, Tandem purchased two buildings in Cupertino, California. Previously, Tandem had not owned the buildings it occupied in its headquarters area. In fiscal 1987, the Company began implementing a program to create a permanent headquarters complex. This program includes projects to improve owned and leased buildings. In fiscal 1988, the Company plans to purchase at least five additional buildings in the community, including some that it currently leases. The additional space will allow for expansion and for relocation of employees housed in other Santa Clara County, California, locations.

Tandem believes that demonstrated financial strength is important in order to compete effectively in high technology markets. Consequently, the Company considers it strategically important to maintain a sound ratio of current assets to current liabilities and a conservative capital structure. The current ratio at fiscal year-end remained strong at 3.6:1, although it declined slightly from 3.9:1 at the end of the prior year. This was primarily the result of capital acquisitions programs that invested cash in long-term assets. At the end of fiscal 1987, the ratio of long-term debt and capital lease obligations remained at a very low 1.2 percent of total capital. Lines of credit totaled \$65 million, all of which were unused. The equity base grew to \$721 million in fiscal 1987, from \$535 million in fiscal 1986.

### **Results of Operations**

The following table summarizes the changes in selected operating indicators. The percentages on the left show the relationships of various income and expense items to revenue. The percentages on the right measure the year-to-year increases or decreases.



Percent of Revenue			Percent Increase (Decrease)		
Fiscal Year			1987	1986	
1987	1986	1985			
83	82	84	Product revenue	36	21
17	18	16	Service and other revenue	29	35
100	100	100	Total revenue	35	23
22	23	30	Cost of product	29	(6)
13	14	13	Cost of service and other	26	26
35	37	43	Total cost of revenue	28	4
10	11	12	Research and development	25	18
			Marketing, general and administrative	35	27
16	14	8	Operating income	61	112
1	1	1	Interest income, net	67	36
18	15	9	Pretax income	62	103
8	7	4	Provision for income taxes	56	131
10	8	6	Net income	66	86
			Earnings per share	50	76

Amounts may not total due to rounding.

### Revenue

Tandem's revenue growth rate again increased in fiscal 1987, as the Company expanded its position as a leading supplier of on-line transaction processing systems and networks. Revenue grew 35 percent to \$1.035 billion in fiscal 1987 over the \$768 million posted in fiscal 1986. The fiscal 1986 revenue growth rate was 23 percent. Tandem's revenue gains over the past two years resulted from increased shipments of hardware and software products to new and existing customers and from an increased number of customers using its support and training services.

Over the past two years, the Company introduced a number of new products, including systems, software, storage products, and peripherals, which contributed to revenue growth. In particular, the NonStop VLX computer system, introduced in fiscal 1986, and related products opened new high-end markets for the Company. Product revenue in fiscal 1987 grew 36 percent, partly due to continued customer acceptance of these products. Service and other revenue in fiscal 1987 grew 29 percent, somewhat slower than product revenue, in part because new technology lowered service costs to customers.

Domestic business strengthened throughout the year, growing at 27 percent in fiscal 1987, compared with 11 percent in fiscal 1986. As in the prior fiscal year, international revenue growth exceeded domestic growth. Revenue from Europe grew 46 percent in fiscal 1987, somewhat slower than the prior fiscal year's rate of 52 percent. International business accelerated in non-European countries by 50 per-

cent in fiscal 1987, compared with 37 percent in fiscal 1986.

International business continued to grow as a percent of revenue. Europe contributed 29 percent of fiscal 1987 revenue, compared with 27 percent in fiscal 1986 and 22 percent in fiscal 1985. Other international business contributed 14 percent of revenue in fiscal 1987 versus 13 percent in fiscal 1986 and 11 percent in fiscal 1985. While the United States remained the largest contributor to revenue, with 57 percent of the Company's business coming from domestic customers, its share was 60 percent in fiscal 1986 and 67 percent in fiscal 1985.

### Operating Income

Operating income increased sharply, reaching \$171 million, or 16 percent of revenue, in fiscal 1987. This represents a significant improvement from the \$106 million, or 14 percent of revenue, recorded in fiscal 1986 and the \$50 million, or 8 percent of revenue, recorded in fiscal 1985. The improvement in operating margin is largely attributable to higher gross profit margins resulting from a favorable product mix and the Company's continued improvements in manufacturing and service operations.

### Cost of Revenue

The improvement in cost of revenue as a percentage of revenue is due to several factors. Tandem successfully continued its programs to increase the efficiency of its manufacturing and service operations. In addition, cost of product as a percentage of revenue declined over the past three years. The percentage improved because the Company sold a favorable mix of products, many of which incorporate new technologies that provide greater performance at lower cost. The improvement in cost of service and other as a percentage of revenue was partially attributable to dramatic improvements in reliability of peripheral subsystems, such as the XL8 disk subsystem.

Cost of product increased 29 percent in fiscal 1987 over its fiscal 1986 level, primarily due to increases in volume. In fiscal 1986, cost of product declined 6 percent from the fiscal 1985 level, as manufacturing efficiencies offset volume-related cost increases. The 26 percent increases in cost of service and other recorded in both fiscal 1987 and 1986 were primarily attributable to growth in the installed base.

### Research and Development

Research and development expenditures declined as a percentage of revenue over the past three years. This was partially attributable to higher than anticipated revenue, as well



as capitalization of certain software expenditures. Although declining as a percentage of revenue, research and development expenditures increased over the past three years to support new product development efforts and programs to enhance existing products. Research and development activities focus on meeting the needs of customers who are implementing on-line systems at single sites and in geographically distributed information processing networks. Among the products announced in fiscal 1987 that resulted from prior years' research and development spending were NonStop SQL software, the NonStop CLX computer system, and the Distributed Systems Management software. The Company expects to increase expenditures on research and development in fiscal 1988.

#### **Marketing, General and Administrative**

The Company's marketing strategy emphasizes direct sales to organizations that are implementing on-line transaction processing applications critical to their businesses. The Company believes that offering solutions to customers' business problems and providing a high level of service and support are essential to meeting the needs of the customer base. To do this, Tandem has built a direct selling and support organization in the United States and in international industrial markets. Direct sales activities are complemented by relationships established with third-party application software developers, equipment remarketers, and distributors.

Over the past three years, the Company introduced products that required expenditures to bring those products to market. Despite this, in fiscal 1987, marketing, general and administrative expenditures as a percentage of revenue remained unchanged from the prior year, although they were slightly higher than in fiscal 1985.

The level of marketing, general and administrative expenditures has increased over the past three years as the Company continued to build its marketing organization, to train new and existing sales, service, and support personnel, and to develop marketing relationships with third parties in order to support the Company's growth. Tandem has also invested in joint ventures and taken equity positions in companies whose product, market, or geographic strengths support the Company's strategies.

#### **Net Income and Earnings Per Share**

The rate of change in net income has differed from that of operating income over the past three years because of the factors discussed above and because of changes in the Company's interest income and effective tax rate. In fiscal 1987, net interest income was almost \$6 million higher than in fiscal 1986, and \$8 million higher than in fiscal 1985. Net interest income increased primarily because of significantly higher balances of interest-earning investments.

The effective tax rate in fiscal 1987 was 43 percent,

compared with rates of 44 percent in fiscal 1986 and 39 percent in fiscal 1985. The decline in the effective tax rate in fiscal 1987 versus 1986 was primarily the result of lower federal statutory tax rates brought about by the passage of the Tax Reform Act of 1986, offset by the repeal of the investment tax credit. The effective tax rate in fiscal 1986 was higher than in fiscal 1985 primarily because of higher levels of pretax income and a reduction of the research and development credit. Under the Tax Reform Act of 1986, the Company anticipates a lower tax rate in fiscal 1988 due to the lowering of statutory rates.

Earnings per share in fiscal 1987 were \$1.08, compared with earnings per share in fiscal 1986 of \$.72 and in fiscal 1985 of \$.41. (Earnings per share reflect a two-for-one stock split effected in the form of a stock dividend in the 1987 fiscal year.) In each of the last three fiscal years, the growth in earnings per share differed from that of net income because of a higher number of weighted average shares outstanding. Under the treasury stock method of calculating weighted average shares outstanding, higher stock prices result in a greater dilutive effect from outstanding stock options. Sales of stock to employees under the stock purchase plan and grants under option plans, combined with higher stock prices, resulted in increases in weighted average shares outstanding of 11 percent in fiscal 1987, 6 percent in fiscal 1986, and 1 percent in fiscal 1985.

#### **Personnel**

In fiscal 1987, to support growth experienced over the past three fiscal years, Tandem increased personnel by 23 percent. This compares with a 4 percent personnel increase in fiscal 1986 and a 5 percent personnel increase in fiscal 1985. While hiring occurred in all functional areas, the greatest percentage increases were in research and development and marketing, reflecting investments in areas the Company believes are critical to its success.

#### **Impact of Currency**

In fiscal 1987, the weakness of the U.S. dollar against foreign currencies had a positive influence on revenue; however, the Company believes the impact was largely moderated by price reductions taken to maintain consistent pricing across international boundaries. This factor, combined with the negative effect of strengthening currencies on international expenditures, resulted in an overall impact that the Company believes was not significant to operating income.

#### **Effect of Inflation**

The effect of inflation on the Company's financial results has not been significant.

Certain prior period amounts have been reclassified to conform with the current period presentation. See footnote 2 to the financial statements.



For the Five Years Ended September 30, 1987

(In thousands except per share amounts)	1987	1986	1985	1984	1983
<b>Revenue</b>	\$1,035,495	\$767,793	\$624,138	\$532,620	\$418,282
Cost of revenue	358,228	279,924	268,589	233,846	188,228
Research and development	108,474	87,024	73,832	52,982	39,489
Marketing, general and administrative	398,105	294,867	231,636	194,691	140,794
<b>Operating Income</b>	170,688	105,978	50,081	51,101	49,771
Interest income, net	14,223	8,504	6,269	5,183	730
Provision for income taxes					
Current period	79,307	50,716	21,976	23,076	19,696
Benefit of DISC tax reversal	—	—	—	(9,700)	—
<b>Net Income</b>	\$ 105,604	\$ 63,766	\$ 34,374	\$ 42,908	\$ 30,805
<b>Earnings Per Share</b>	\$ 1.08	\$ .72	\$ .41	\$ .52	\$ .38
Total assets	\$ 967,241	\$705,025	\$552,344	\$501,873	\$415,525
Long term debt and capital lease obligations	\$ 9,013	\$ 5,725	\$ 11,765	\$ 16,871	\$ 23,922
Stockholders' investment	\$ 720,919	\$534,680	\$420,408	\$375,122	\$310,993

Certain prior period amounts have been reclassified to conform to the current period presentation. See footnote 2 to the financial statements.



Shown above are some of the newer members of the Tandem product line. Clockwise, from left, are the NonStop CLX, NonStop VLX, and NonStop EXT25 systems, the PSX workstation, and the LXN system.



For the Three Years Ended September 30, 1987

(In thousands except per share amounts)	1987	1986	1985
<b>Revenue</b>			
Product revenue	\$ 861,042	\$632,277	\$523,413
Service and other revenue	174,453	135,516	100,725
Total revenue	1,035,495	767,793	624,138
<b>Costs and Expenses</b>			
Cost of product revenue	226,804	175,239	185,565
Cost of service and other revenue	131,424	104,685	83,024
Research and development	108,474	87,024	73,832
Marketing, general and administrative	398,105	294,867	231,636
Total costs and expenses	864,807	661,815	574,057
<b>Operating Income</b>	170,688	105,978	50,081
Interest expense	(1,588)	(1,979)	(2,407)
Interest income	15,811	10,483	8,676
<b>Income Before Income Taxes</b>	184,911	114,482	56,350
<b>Provision For Income Taxes</b>	79,307	50,716	21,976
<b>Net Income</b>	\$ 105,604	\$ 63,766	\$ 34,374
<b>Earnings Per Share</b>	\$ 1.08	\$ .72	\$ .41
Weighted average shares outstanding	97,711	88,402	83,530

The accompanying notes are an integral part of these statements.



As of September 30, 1987 and 1986

(In thousands except share amounts)	1987	1986
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash investments	\$317,461	\$239,819
Accounts receivable, net of allowances of \$8,378 in 1987 and \$7,292 in 1986	254,758	197,658
Inventories	92,315	64,229
Prepaid expenses and other	22,776	17,505
<b>Total current assets</b>	<b>687,310</b>	<b>519,211</b>
<b>Property, Plant and Equipment, at cost</b>		
Land and buildings	54,336	38,652
Machinery and equipment	80,395	62,302
Computer equipment and spares	199,901	137,388
Leasehold improvements	41,348	34,270
Construction in process	21,821	9,513
	397,801	282,125
Accumulated depreciation and amortization	(145,000)	(107,103)
<b>Net property, plant and equipment</b>	<b>252,801</b>	<b>175,022</b>
<b>Other Assets</b>	<b>27,130</b>	<b>10,792</b>
<b>Total Assets</b>	<b>\$967,241</b>	<b>\$705,025</b>
<b>Liabilities and Stockholders' Investment</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 78,714	\$ 50,768
Accrued liabilities		
Accrued payroll and payroll related	27,925	21,290
Accrued vacation	15,789	10,795
Accrued commissions to third parties	13,008	4,996
Deferred income	13,521	2,719
Income taxes	10,989	21,670
Other	30,324	16,585
Current portion of long term debt and capital lease obligations	1,500	5,969
<b>Total current liabilities</b>	<b>191,770</b>	<b>134,792</b>
<b>Long Term Debt and Capital Lease Obligations</b>	<b>9,013</b>	<b>5,725</b>
<b>Deferred Income Taxes</b>	<b>45,539</b>	<b>29,828</b>
<b>Stockholders' Investment</b>		
Common stock \$.025 par value, authorized 200,000,000 shares, outstanding 93,160,054 in 1987 and 87,837,512 in 1986	2,329	2,196
Additional paid-in capital	368,845	288,343
Retained earnings	349,745	244,141
<b>Total stockholders' investment</b>	<b>720,919</b>	<b>534,680</b>
<b>Total Liabilities and Stockholders' Investment</b>	<b>\$967,241</b>	<b>\$705,025</b>

The accompanying notes are an integral part of these balance sheets.



For the Three Years Ended September 30, 1987

(In thousands)	Common Stock		Additional Paid-In Capital	Retained Earnings	Total
	Shares	Amount			
<b>Balance September 30, 1984</b>	81,234	\$2,031	\$227,090	\$146,001	\$375,122
Sale of common stock					
under stock option plans	704	17	3,866	—	3,883
Sale of common stock					
under stock purchase plan	836	21	6,173	—	6,194
Tax benefit from employee					
transactions in common stock	—	—	835	—	835
Net income	—	—	—	34,374	34,374
<b>Balance September 30, 1985</b>	82,774	2,069	237,964	180,375	420,408
Sale of common stock					
under stock option plans	4,286	107	39,199	—	39,306
Sale of common stock					
under stock purchase plan	778	20	5,916	—	5,936
Tax benefit from employee					
transactions in common stock	—	—	5,264	—	5,264
Net income	—	—	—	63,766	63,766
<b>Balance September 30, 1986</b>	87,838	2,196	288,343	244,141	534,680
Sale of common stock					
under stock option plans	4,859	121	51,839	—	51,960
Sale of common stock					
under stock purchase plan	463	12	7,613	—	7,625
Tax benefit from employee					
transactions in common stock	—	—	21,050	—	21,050
Net income	—	—	—	105,604	105,604
<b>Balance September 30, 1987</b>	93,160	\$ 2,329	\$368,845	\$349,745	\$720,919

The accompanying notes are an integral part of these statements.



For the Three Years Ended September 30, 1987

(In thousands)	1987	1986	1985
<b>Funds</b> (Cash and cash investments) at beginning of period	\$239,819	\$128,676	\$106,862
<b>Funds Provided by Operations</b>			
Net income	105,604	63,766	34,374
Items not requiring current outlay of funds			
Depreciation and amortization	52,025	43,242	35,616
Deferred income taxes	15,711	(2,890)	12,296
Net book value of property, plant and equipment sold or retired	14,868	8,742	13,810
Funds provided by (used for) working capital items			
Increase in accounts receivable	(57,100)	(34,280)	(17,036)
Decrease (increase) in inventories	(28,086)	14,733	13,413
Net change in prepaid expenses and non-debt current liabilities	56,176	45,161	(1,795)
Total provided by operations	159,198	138,474	90,678
<b>Funds Invested to Support Operations</b>			
Investment in property, plant and equipment	142,364	65,011	67,568
Increase (decrease) in other assets, net	18,646	5,860	(511)
Total invested to support operations	161,010	70,871	67,057
<b>Funds Provided by (Used for) Financing Activities</b>			
Decrease in long term debt and capital lease obligations, net	(1,181)	(6,966)	(12,719)
Sale of common stock under employee stock option and stock purchase plans	59,585	45,242	10,077
Tax benefit from employee transactions in common stock	21,050	5,264	835
Total provided by (used for) external financing activities	79,454	43,540	(1,807)
Net increase in cash and cash equivalents	77,642	111,143	21,814
<b>Funds</b> (Cash and cash investments) at end of period	\$317,461	\$239,819	\$128,676

The accompanying notes are an integral part of these statements.



## 1. Summary of Significant Accounting Policies

### Consolidation

The consolidated financial statements include the accounts of Tandem Computers Incorporated and its wholly owned subsidiaries after elimination of intercompany accounts and transactions.

### Revenue Recognition

The Company generally recognizes revenue from equipment sales at the time of shipment. Service and other revenue are recognized ratably over the contractual period or as the services are provided.

### Translation of Non-U.S. Currency Amounts

Assets and liabilities of the Company's subsidiaries which are denominated in the local currency of the subsidiary are translated into U.S. dollars (the functional currency) at year-end exchange rates, except for inventories and property, plant and equipment, which are translated at approximate rates prevailing when the assets were acquired. Income and expense items are translated at average rates of exchange prevailing during the year, except that cost of revenue and depreciation are translated at historical rates. The Company enters into forward exchange contracts to reduce the impact of foreign currency fluctuations on asset and liability positions of foreign subsidiaries. The net gains and losses arising from foreign currency transactions are generally not significant and are included in income as incurred.

### Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market and include materials, labor, and manufacturing overhead. The components of inventories as of September 30 were:

(In thousands)	1987	1986
Purchased parts and subassemblies	\$53,166	\$31,191
Work-in-process	16,567	12,138
Finished goods	22,582	20,900
Total	\$92,315	\$64,229

### Income Taxes

The Company accounts for investment and research and development tax credits as a reduction of the provision for income taxes in the year in which the related credits

are generated. In general, the Company's practice is to provide U.S. federal taxes on all undistributed international earnings.

### Cash and Cash Investments

Short-term cash investments are valued at cost, which approximates market, and principally include certificates of deposit, time deposits, treasury notes, preferred stocks, municipal notes, and commercial paper.

### Property, Plant and Equipment

Systems spares (original cost of \$54,963,000 and \$34,785,000 at September 30, 1987 and 1986, respectively) are depreciated over a five-year period using an accelerated depreciation method. All other property, plant and equipment are depreciated using the straight-line method. The estimated useful lives are:

Buildings	30 years
Machinery and equipment	5-10 years
Computer equipment	3-7 years
Leasehold improvements	Lease term

Included in the land and buildings and the construction in process balances at September 30, 1987 and 1986 were approximately \$26,743,000 and \$26,575,000, respectively, of costs relating to land and land improvements on a parcel held for future development.

### Software Development Costs

During fiscal 1986, the Company adopted the Financial Accounting Standards Board Statement No. 86, which requires the capitalization of certain software development costs. The Company capitalizes costs as the development of products becomes "technologically feasible" and amortizes those costs as a charge to the income statement when, and as, the particular products are shipped. However, in no event will the amortization be less than that which would be achieved by amortizing such costs on a three-year straight-line basis from the date of product release. The amounts of unamortized software development cost included in other assets at September 30, 1987 and 1986 were \$8,419,000 and \$2,982,000, respectively. The amounts amortized and charged to expense for 1987 and 1986 were \$1,090,000 and \$190,000, respectively.

### Earnings Per Share

Earnings per share have been computed based upon the weighted average number of common and common equivalent shares outstanding. Common equivalent shares



result from the assumed exercise of outstanding stock options and a convertible debenture that have a dilutive effect when applying the treasury stock method. Fully diluted earnings per share are substantially the same as reported earnings per share.

## 2. Reclassifications

The current period income statement has been reformatted to distinguish "Cost of product revenue" from "Cost of service and other revenue." In addition, to conform to industry trends in financial reporting, certain items previously classified as marketing, general and administrative expenses have been reclassified to cost of product revenue and research and development expense. Similar amounts for 1986 and 1985 associated with revenue and costs and expenses have also been reclassified in order to conform to the current period presentation. Certain other prior period amounts have also been reclassified to conform to the current period presentation.

## 3. Leasing Program

In fiscal 1986, the Company entered into a vendor leasing program and associated remarketing arrangement with a bank, whereby up to \$15,000,000 of trade lease receivables may be financed either through limited recourse sales of the receivables or borrowings. In the event of a default by a lessee, recourse by the bank is limited to the collateralized computer equipment and the amount available, if any, in a limited recourse pool established as a percentage of each associated group of financed lease transactions. In addition, upon repossession, the Company may, at its option, repurchase the equipment from the bank at the greater of the bank's book or fair market value. Under the agreement, the Company may also be required to remarket the computer equipment on a "best efforts" basis on the bank's behalf. All administration and collection of lease receivables are carried out by the bank. In fiscal 1987, \$7,462,000 was received as financing for lease receivables, of which \$2,550,000 (see note 5) was received in the form of borrowings and \$4,912,000 was received as a result of sales of such receivables. At September 30, 1987, approximately \$433,000 was accrued as a reserve for recourse liabilities on the sales of lease receivables.

## 4. Income Taxes

The provision for income taxes included the following deferred (prepaid) items:

(In thousands)	1987	1986	1985
Federal:			
Current	\$40,235	\$26,037	\$ 2,950
Deferred (Prepaid)	4,750	(3,923)	4,610
	44,985	22,114	7,560
State:			
Current	9,261	6,880	3,522
Deferred	3,171	89	423
	12,432	6,969	3,945
Foreign:			
Current	20,804	21,686	12,005
Deferred (Prepaid)	1,086	( 53)	(1,534)
	21,890	21,633	10,471
Total Provision	\$79,307	\$50,716	\$21,976

Sources of deferred (prepaid) taxes were as follows:

(In thousands)	1987	1986	1985
Installment sale method			
for income tax reporting	\$10,300	\$(8,043)	\$ 9,752
DISC income	—	—	(6,117)
Accelerated depreciation	1,606	447	2,586
Effect of intercompany profit eliminations	(10,227)	2,048	( 90)
Other (including expenses recognized for financial statements, but not for income tax reporting)	7,328	1,661	(2,632)
Total Deferred (Prepaid)	\$9,007	\$(3,887)	\$ 3,499

The provision for income taxes differs from the amount obtained by applying the federal statutory income tax rate to income before taxes as follows:

	1987	1986	1985
Federal statutory tax rate	43.0%	46.0%	46.0%
State taxes, net of federal income tax benefit	3.8	3.2	3.8
Investment tax credits	—	(2.1)	(2.6)
Research and development tax credits	(2.1)	(0.8)	(7.6)
Tax exempt DISC and FSC income	(2.5)	(2.0)	(4.3)
Other	0.7	—	3.7
Effective Tax Rate	42.9%	44.3%	39.0%

In fiscal 1986, the Company provided taxes pursuant to tax laws in effect on September 30, 1986. On October 22, 1986, the Tax Reform Act of 1986 was passed



into law and, as expected, had an immaterial impact on the fiscal 1986 tax provision. The negative effects of the Tax Reform Act (repeal of investment tax credit, reduction of research and development tax credit, and certain changes in international provisions) were largely offset by the reduction in the federal statutory tax rate from 46% to 43% in fiscal 1987. A scheduled reduction of the federal statutory tax rate to 34% in fiscal 1988, currently provided in the legislation, is expected to further reduce the Company's effective tax rate in the future.

In September 1986, the Financial Accounting Standards Board issued an Exposure Draft, entitled "Accounting for Income Taxes." The currently proposed changes, if adopted, are not expected to have a material impact on the Company's results of operations.

### 5. Long Term Debt, Capital Lease Obligations, and Other Commitments

Long term debt and capital lease obligations as of September 30 consist of the following:

(In thousands)	1987	1986
5.7% and 5.6% promissory notes payable to a bank in Japanese yen, due November 1989 and December 1989, respectively	\$ 3,552	\$ 3,292
Installment notes payable to a bank through 1990, at a weighted average interest rate of 8.75%, collateralized by lease receivables	2,441	—
Convertible subordinated debenture payable to an officer of the Company, bearing interest at 9.5% and due September 1989	1,667	1,667
Industrial revenue bond, bearing interest at 12%, due July 1992	1,000	1,000
Industrial revenue bond, bearing interest at 12.4%, due July 1992 and collateralized by certain equipment	1,000	1,000
Obligations under capital leases, interest ranging from 6% to 19%, net of imputed interest totaling \$99 and \$749, in 1987 and 1986, respectively	853	4,735
	10,513	11,694
Less current portion	1,500	5,969
Long Term Debt and Capital Leases	\$ 9,013	\$ 5,725

The \$1,667,500 convertible subordinated debenture is convertible into 200,000 shares of Common Stock at a price of \$8.3375. The debenture becomes convertible as to 50,000 shares each year beginning in September 1986

and is subject to conversion acceleration in the event of certain occurrences.

Interest costs of \$213,000, none, and \$594,000 were capitalized during fiscal 1987, 1986, and 1985, respectively, relating to construction projects in process during those fiscal years.

The Company has entered into unsecured credit agreements totaling \$65,000,000 with several banks for working-capital purposes. The agreements provide for revolving borrowings through March 1988, at which time outstanding amounts may be converted to term loans to be amortized through 1991. Domestic borrowings bear interest at or below the banks' prime rates through March 1988 and approximately 1/4% above these rates through 1991. The Company is required to pay a commitment fee of 1/4% per annum. There were no compensating balances required, and there were no borrowings outstanding at September 30, 1987, under any of these arrangements.

Certain financial covenants and restrictions are included in the loan agreements. The Company was in compliance with all such covenants and restrictions at September 30, 1987.

The Company has guaranteed payment of loans made to officers and other key employees totaling \$913,000 at September 30, 1987, under a \$2,000,000 bank line of credit. In addition, the Company has a \$1,667,500 note receivable from an officer, included in other assets, which matures in September 1989 and bears interest at an annual rate of 10%.

The Company leases its headquarters, field offices, certain equipment, automobiles, and most of its operating facilities under operating lease agreements. The Company also has capital leases for certain equipment. Future minimum lease payments as of September 30, 1987, are as follows:

Fiscal Year	Lease Obligations	
	Capital	Operating
1988	\$ 757	\$ 47,720
1989	64	42,015
1990	64	34,189
1991	35	30,649
1992	32	25,432
Thereafter	—	76,713
Total minimum lease payments	\$ 952	\$256,718

The cost of assets held under capitalized leases totaled \$3,547,000 and \$11,981,000 at September 30, 1987 and 1986, respectively, and are included in the machinery and



equipment and computer equipment and spares classifications in the financial statements. The accumulated depreciation associated with these assets totaled \$3,254,000 and \$8,894,000 at September 30, 1987 and 1986, respectively.

Rent expenses were \$50,767,000 in 1987, \$43,092,000 in 1986, and \$38,213,000 in 1985.

**6. Capital Stock**

The Company's authorized capital stock consists of 2,400,000 shares of preferred stock (of which 800,000 have been designated Series A Participating Preferred), 4,000,000 shares of Junior Common Stock, and 196,000,000 shares of Common Stock. At September 30, 1987, 21,095,790 shares of Common Stock were reserved for future issuance under stock option plans, the employee stock purchase plan and a convertible subordinated debenture. There were no shares of preferred stock or Junior Common Stock outstanding at September 30, 1987.

**Stock Split**

On April 27, 1987, the Board of Directors declared a two-for-one stock split of the Company's Common Stock, effected in the form of a stock dividend. The additional shares were issued on June 12, 1987, to stockholders of record on May 22, 1987. Accordingly, the Common Stock, additional paid in capital, and all common share and per share data in the financial statements have been retroactively adjusted to reflect the split.

**Preferred Stock Rights**

During 1985, the Company declared a dividend of one preferred share purchase right for each then outstanding share of Common Stock. In addition, one right will be issued with each share of Common Stock issued by the Company before the date the rights become exercisable, are redeemed by the Company, or expire on May 17, 1990. The rights will not be exercisable, or transferable apart from the Common Stock, until 10 days after another person or group of persons acquires 20% of the Common Stock or commences, or announces its intention to commence, a tender or exchange offer for at least 30% of the Common Stock. Each right entitles the holder to buy one one-hundredth of a share of a series of preferred stock of the Company, par value \$.10 per share, designated as Series A Participating Preferred Stock, at an exercise price of \$80.00. In certain circumstances, the right will entitle its holder to purchase a larger amount of preferred stock or stock in an acquiring company.

**Stock Option Plans**

The Company has employee stock option plans under which permanent employees may be granted options to purchase shares of Common Stock generally at 100% of fair market value at the time of the grant. Options generally vest over a four-year period, become exercisable six months after the effective date, and expire no later than ten years after the effective date. At the discretion of the Board of Directors, options granted under the stock option plans may qualify for Incentive Stock Option treatment under the Economic Recovery Tax Act of 1981. At September 30, 1987, options for 5,015,355 shares were available for future grant.

**Employee Stock Purchase Plan**

Under the plan, the Company may offer shares to employees by two methods. Under one method, eligible employees may elect to purchase shares of Common Stock at 85% of fair market value as of the last trading day before, or the last trading day of, the participation period. Under this method, in fiscal years ended September 30, 1987, 1986, and 1985, employees purchased 463,000 shares for aggregate proceeds of \$7,625,000; 778,000 shares for aggregate proceeds of \$5,936,000; and 836,000 shares for aggregate proceeds of \$6,194,000, respectively. Under a second method, the Company may grant to all employees the option to purchase the same number of shares of Common Stock at not less than 85% of fair market value at the grant date. As of September 30, 1987, the Company has reserved 3,981,448 shares of Common Stock for future issuance under its employee stock purchase plan.

Information concerning the combined option activity during the three fiscal years ended September 30, 1987, under the stock option and employee stock purchase plans is summarized as follows:

	1987		1986		1985	
	Aggregate Shares	Price	Aggregate Shares	Price	Aggregate Shares	Price
(In thousands except per share amounts)						
Beginning of year	13,799	\$154,521	13,867	\$146,900	12,485	\$137,071
Options granted	4,516	110,103	5,384	59,968	3,225	26,581
Options exercised (\$2.62 to \$37.00 per share)	(4,859)	(51,960)	(4,286)	(39,306)	(704)	(3,883)
Options cancelled	(324)	(4,240)	(1,166)	(13,041)	(1,139)	(12,869)
End of year	13,132	\$208,424	13,799	\$154,521	13,867	\$146,900
Options at year end						
Exercisable	11,503		11,360		12,611	
Vested	7,062		7,536		8,195	



Although all outstanding dilutive stock options and a convertible debenture are considered common stock equivalents in presenting earnings per share under the treasury stock method, the following table shows the maximum share dilution that would occur from assumed option exercises under existing options based upon vesting in future years within specified price ranges. The Company has had a long-standing policy of encouraging all levels of employees to become stockholders through various stock option and purchase programs. This policy is based upon a belief that all stockholders will benefit from the higher productivity, lower turnover, and improved customer satisfaction realized by providing employees with a personal stake in the Company's future success.

Maximum number of existing options vested each fiscal year							
Exercise Price Range	Aggregate Price	Shares	1987 and Prior	1988	1989	1990	1991
(In thousands except price ranges)							
\$ 0-\$10	\$ 36,865	4,211	2,771	893	510	37	—
\$10-\$20	97,126	6,523	4,110	844	793	677	99
\$20-\$30	31,536	1,079	81	278	270	270	180
\$30-\$40	42,897	1,319	100	408	310	310	191
	\$208,424	13,132	7,062	2,423	1,883	1,294	470

Common and Common Equivalent Shares			
	Outstanding Shares	Outstanding Equivalents	Total
Fiscal 1987 weighted average	90,927	6,784	97,711
At September 30, 1987	93,160	6,119	99,279

## 7. Contingencies

The Company, along with one former and two present principal officers, was named as a defendant in a class action complaint filed in the United States District Court for the Northern District of California on October 23, 1984, purporting to state claims for alleged violations of federal securities laws and pendent state claims arising out of the Company's December 1982 restatement of revenue and earnings for fiscal 1982. The court dismissed the complaint as to the individual defendants in March 1985 with leave to amend. In September 1985, the court granted the defendant's motion for summary judgment and dismissed the suit. The plaintiff filed a notice of appeal in October 1985. On June 3, 1987, the Federal Court of Appeals for the Ninth Circuit reversed the lower court's dismissal of the suit, reinstated claims against the individual defendants, and remanded the case for further proceedings. No provision has been made in the financial statements concerning possible liability because, in the

opinion of management, it is unlikely that the ultimate disposition of the suit would have a material effect on the Company's financial position.

In addition, there are various actions or claims which have been brought or asserted against the Company. Management does not consider them to be material to the Company's financial position.

## 8. Geographic Segment Information

The following table sets forth information about the Company's operations in different geographic regions for the three fiscal years ended September 30, 1987.

(In thousands)	1987	1986	1985
<b>Revenues</b>			
United States-customers	\$ 587,634	\$ 463,705	\$ 417,460
United States-interarea	249,034	118,989	111,742
Europe-customers	302,966	207,670	136,307
Europe-interarea	22,383	57,032	75,583
Americas/Pacific-customers	144,895	96,418	70,371
Americas/Pacific-interarea	10,813	—	—
	1,317,725	943,814	811,463
Eliminations	(282,230)	(176,021)	(187,325)
Total revenue	\$1,035,495	\$ 767,793	\$ 624,138
<b>Pretax Income</b>			
United States	\$ 146,503	\$ 73,716	\$ 34,586
Europe	37,229	39,821	15,496
Americas/Pacific	7,726	1,007	6,555
	191,458	114,544	56,637
Eliminations	(6,547)	(62)	(287)
Total pretax income	\$ 184,911	\$ 114,482	\$ 56,350
<b>Identifiable Assets</b>			
United States	\$ 707,454	\$ 541,381	\$ 436,835
Europe	213,688	131,853	101,836
Americas/Pacific	105,791	63,701	47,386
	1,026,933	736,935	586,057
Eliminations	(59,692)	(31,910)	(33,713)
Total identifiable assets	\$ 967,241	\$ 705,025	\$ 552,344

Interarea transfers are made at arm's-length prices, which include manufacturing profits attributable to each respective area's operations. Identifiable assets are those assets of the Company that are identified with the operations of the corresponding geographic area. United States customer revenue includes export sales of \$12,390,000 in 1987, \$10,048,000 in 1986, and \$7,053,000 in 1985. The Company operates primarily in one industry segment which includes the manufacture, servicing, and marketing of computer systems.



## 9. Unaudited Quarterly Financial Data

(In thousands except per share amounts)

Quarters Ended	Dec. 31	March 31	June 30	Sept. 30
Year ended September 30, 1987				
<b>Revenue</b>				
Product revenue	\$198,725	\$202,010	\$218,838	\$241,469
Service and other revenue	39,310	40,358	45,140	49,645
Total revenue	238,035	242,368	263,978	291,114
<b>Costs and Expenses</b>				
Cost of product revenue	53,581	54,912	57,028	61,283
Cost of service and other revenue	27,837	30,061	36,164	37,362
Research and development	24,315	25,867	27,416	30,876
Marketing, general and administrative	86,761	96,235	102,346	112,763
Total costs and expenses	192,494	207,075	222,954	242,284
Operating Income	45,541	35,293	41,024	48,830
Interest income, net	2,847	3,233	3,934	4,209
Income Before Income Taxes	48,388	38,526	44,958	53,039
Provision For Income Taxes	21,291	16,082	19,341	22,593
Net Income	\$ 27,097	\$ 22,444	\$ 25,617	\$ 30,446
Earnings Per Share	\$ .29	\$ .23	\$ .26	\$ .31
Year ended September 30, 1986				
<b>Revenue</b>				
Product revenue	\$140,293	\$146,109	\$163,361	\$182,514
Service and other revenue	29,768	30,218	37,492	38,038
Total revenue	170,061	176,327	200,853	220,552
<b>Costs and Expenses</b>				
Cost of product revenue	43,310	41,500	43,431	46,998
Cost of service and other revenue	22,821	24,754	26,924	30,186
Research and development	19,847	21,287	22,337	23,553
Marketing, general and administrative	64,768	68,788	77,560	83,751
Total costs and expenses	150,746	156,329	170,252	184,488
Operating Income	19,315	19,998	30,601	36,064
Interest income, net	1,673	2,362	2,054	2,415
Income Before Income Taxes	20,988	22,360	32,655	38,479
Provision For Income Taxes	9,340	9,950	14,531	16,895
Net Income	\$ 11,648	\$ 12,410	\$ 18,124	\$ 21,584
Earnings Per Share	\$ .14	\$ .14	\$ .20	\$ .23

## 10. Merger of Subsidiary Subsequent to Year End (unaudited)

On November 12, 1987, the Company and one of its wholly owned subsidiaries entered into an agreement with Atalla Corporation (Atalla) which will result, subject to approval by Atalla's shareholders, in Atalla becoming a wholly owned subsidiary of the Company. The agreement provides for the exchange of Atalla common stock into Tandem Common Stock. Atalla provides secure system solutions in the areas of network interchange, electronic payment, and computer security. The merger transaction will be accounted for as a pooling of interests.

## Auditors' Report

To Tandem Computers Incorporated:

We have examined the consolidated balance sheets of Tandem Computers Incorporated (a Delaware corporation) and subsidiaries as of September 30, 1987 and 1986, and the related consolidated statements of income, stockholders' investment, and changes in financial position for each of the three years in the period ended September 30, 1987. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of Tandem Computers Incorporated and subsidiaries as of September 30, 1987 and 1986, and the results of their operations and the changes in their financial position for each of the three years in the period ended September 30, 1987, in conformity with generally accepted accounting principles applied on a consistent basis.

San Jose, California  
October 20, 1987

Arthur Andersen & Co.

## Tandem Stock Price

Fiscal Quarter	High	Low
1987 4th Quarter	33 1/4	26 1/2
3rd Quarter	36 7/8	30 7/8
2nd Quarter	37 1/4	17 1/2
1st Quarter	19 3/8	16 3/4
1986 4th Quarter	19 5/8	14
3rd Quarter	16 3/4	11 3/8
2nd Quarter	13 1/8	10
1st Quarter	11 7/8	6 5/8
1985 4th Quarter	9 1/8	7
3rd Quarter	11 7/8	7 5/8
2nd Quarter	14 1/4	9 1/4
1st Quarter	9 7/8	7 1/2

Through April 6, 1987, Tandem Computers Incorporated was traded via the NASDAQ National Market System under the trading symbol TNDM. On April 7, 1987, the Company's Common Stock began trading via the New York Stock Exchange under the trading symbol TDM. All quotations shown represent the high and low closing sale prices as reported in the *Wall Street Journal*. The Company has not declared or paid any cash dividends on its Common Stock and has no plans to do so in the foreseeable future.



**Board of Directors**

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Chairman of the Board;  
General Partner,  
Kleiner, Perkins, Caufield & Byers

Morton Collins,  
General Partner, DSV Partners

Thomas J. Davis, Jr.,  
General Partner, Mayfield Fund

Franklin P. Johnson, Jr.,  
General Partner,  
Asset Management Partners

Andrew Knight,  
Chief Executive,  
*The Daily Telegraph*

Robert C. Marshall,  
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Chief Operating Officer,  
Tandem Computers Incorporated

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Tandem Computers Incorporated

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Walter B. Wriston,  
Chairman, President's Economic  
Policy Advisory Board

**Advisor to the Board of Directors**

Washington SyCip  
Chairman, The SGV Group

**Auditors**

Arthur Andersen & Co.  
San Jose, California

**Registrar and Transfer Agent**

Bank of America N.T. & S.A.  
San Francisco, California

**Form 10-K**

A copy of the Company's Report on Form 10-K for the 1987 fiscal year, as filed with the Securities and Exchange Commission, is available on written request. Please direct your request to:

Manager of Investor Relations  
Tandem Computers Incorporated  
19333 Vallco Parkway  
Cupertino, California 95014-2599

**Annual Meeting**

The annual meeting of stockholders will be held at 10:00 a.m. on Wednesday, January 27, 1988, at the Company's headquarters.

**Corporate Headquarters**

19333 Vallco Parkway  
Cupertino, California 95014-2599  
(408) 725-6000

**Officers**

James G. Treybig,  
President and  
Chief Executive Officer

Robert C. Marshall,  
Senior Vice President and  
Chief Operating Officer

Michael K. Bateman,  
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Ottawa

Scarborough

Toronto

Vancouver

**DENMARK**Tandem Computers A/S  
Glostrup (Copenhagen)**FRANCE**

Tandem Computers S.A.

Paris

Strasbourg

**HONG KONG**Tandem Computers (Hong Kong)  
Limited

Kowloon

**ITALY**

Tandem Computers Italia S.p.A.

Milan

Rome

**JAPAN**

Tandem Computers Japan, Limited

Nagoya

Osaka

Tokyo

**THE NETHERLANDS**

Tandem Computers B.V.

Hoofddorp (Amsterdam)

**NEW ZEALAND**

Tandem NonStop Pty. Ltd.

Auckland

Wellington

**NORWAY**Tandem Computers  
(Norway) A/S

Hovik (Oslo)

**SINGAPORE**Tandem Computers International  
Incorporated

Singapore

**SPAIN**

Tandem Computers Iberica, S.A.

Madrid

**SWEDEN**

Tandem Computers AB

Spanga (Stockholm)

**SWITZERLAND**

Tandem Computers AG

Zurich

**UNITED KINGDOM**

Tandem Computers Limited

Birmingham

Glasgow

High Wycombe

London

Northolt

Rochdale

**WEST GERMANY**

Tandem Computers GmbH

Bonn

Dortmund

Frankfurt

Hamburg

Hilden (Duesseldorf)

Mannheim

Neufahrn (Munich)

Stuttgart

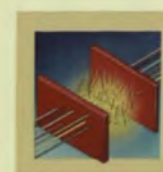


1988 ANNUAL REPORT ♦ ♦ ♦ THE ON-LINE ENTERPRISE

Tander  
challen  
anyor



FOR  
WHAT  
AMERICA  
MAKES  
BEST





## Highlights

For the years ended September 30

(Dollars in thousands except per share amounts)	1988	1987	1986
Revenue	\$1,314,721	\$1,047,532	\$778,014
Operating income	\$ 147,261	\$ 170,439	\$107,013
Operating margin	11.2%	16.3%	13.8%
Net income	\$ 94,485	\$ 105,229	\$ 64,258
Earnings per share	\$ .96	\$ 1.07	\$ .72
Working capital	\$ 278,465	\$ 497,713	\$387,042
Total assets	\$1,318,377	\$ 973,040	\$710,024
Stockholders' investment	\$ 856,861	\$ 723,855	\$537,978
Number of employees	8,624	7,077	5,784

*Tandem Computers Incorporated, a FORTUNE 500 company, is a leading supplier of on-line transaction processing computer systems and enterprise-wide networks.*

*Founded in 1974, Tandem employs more than 8,600 people worldwide. Tandem systems around the world run ATM and point-of-sale networks, stock exchanges, factories, and other enterprises where hundreds of business transactions must be processed each second and recorded instantly.*

*The Tandem NonStop system family spans the range of performance requirements for on-line transaction processing applications. NonStop systems are software compatible and can run the same application programs. They can be connected in networks with each other and with equipment from other vendors to provide a single computing resource for an organization.*


*Through its wholly owned subsidiaries Ungermann-Bass, Inc., and Atalla Corporation, Tandem provides additional products for enterprise-wide networks and security applications, respectively. Tandem's wholly owned subsidiary, Tandem Telecommunications Systems, Inc., is developing network services software for the telecommunications industry.*

*Tandem and its wholly owned subsidiaries manufacture products in the United States, Mexico, West Germany, and Japan, and support customers from more than 150 locations worldwide.*

### ON THE COVER:

Tandem fundamentals for on-line transaction processing form the foundation for the on-line enterprise. These fundamentals, illustrated on the bottom row from left to right, are price/performance, networking, distributed data, linear expandability, data integrity, security, and fault tolerance.





## THE ON-LINE ENTERPRISE




Today, more than ever before, organizations need a competitive edge. Whether managing people, inventory, or the bottom line, improving productivity and meeting customer needs are no longer merely sound business practices — they are necessary for survival.

Nowhere are the requirements more demanding, the pace of change faster, or the competitive advantages greater than in the area of on-line computer systems.

The market Tandem helped pioneer, on-line transaction processing, has been both a force for change and a tool with which to manage it.

The environment of the 1990s will demand a dramatic shift in thinking. Business must be more global. Decisions must be made faster. Entire organizations must be brought on-line to weld together the power of enterprise-wide resources.

We believe that no company is better prepared or more dedicated than Tandem to bringing to reality the emerging phenomenon we call the on-line enterprise.





## To Our Stockholders:



1988 was an important, strategic year for Tandem — a year in which we continued to strengthen our foundation for the future. Among our accomplishments were several mergers that will enable us to serve our customers better and to maintain our leadership position as we meet the needs of the developing on-line enterprise.

Revenue growth of 26 percent in fiscal 1988 over the prior year was good, considering the weak market for large systems in the United States. Revenue reached \$1.3 billion in fiscal 1988, up from \$1.0 billion a year earlier.

Although we achieved record revenue in fiscal 1988, earnings were affected by our investments in mergers, the resolution of a class-action lawsuit, revenue below our plan due to softness in the U.S. market for computers, and some product delays which were resolved during the year. Earnings per share were \$.96, compared with \$1.07 in fiscal 1987.

International operations performed especially well during fiscal 1988, accounting for 50 percent of our annual revenue. In the fourth quarter, our U.S. business became more robust as well.

### THE NEW TANDEM

Today Tandem is more than just one company dedicated to on-line transaction processing (OLTP). Although OLTP remains at the heart of Tandem, we are now a family of

companies focused on the evolution of OLTP to the on-line enterprise.

Most significant to this change was our merger with Ungermann-Bass, Inc., a leader in open, enterprise-wide networks.

Tandem and Ungermann-Bass merged not only because our product lines are complementary, but also because our strategies match very well. We are both committed to standards in networking. We both sell primarily to the largest corporations, and we focus on similar industries. We are both entrepreneurial Silicon Valley companies that believe in the importance of high growth.

Since the completion of the merger in June, each company has opened the door to new opportunities for the other.

Two other mergers were completed in fiscal 1988 that sharpen our focus on serving the enterprise.

As OLTP networks increase in size and scope, data security becomes more complex and critical. To strengthen Tandem's leadership in this area, we merged with a leader in secure transaction systems, Atalla Corporation. Atalla currently focuses on the finance and retail industries, but its expertise will help enhance security offerings for Tandem's entire product line.

We also merged with Integrated Technology, Inc., renamed Tandem Telecommunications Systems, Inc. (TTSI). TTSI is developing advanced products for the telecommunications industry, where new services and applications are being sought aggressively.



TANDEM SUPPORTS THE ENRICHMENT OF LIFE IN MANY COMMUNITIES WHERE IT OPERATES. IN FISCAL 1988, THE COMPANY SPONSORED THE FIRST FAR EAST TOUR IN 30 YEARS BY SAN FRANCISCO BALLET, AMERICA'S OLDEST PROFESSIONAL BALLET COMPANY.



We are excited to welcome the people of Ungermann-Bass, Atalla, and TTSI to Tandem. They have dynamic, positive cultures of their own. We look forward to working together to create an even more successful Tandem.

Open communication has been instrumental to the success of integrating our new companies. Tandem television programs help create understanding among our groups. Electronic mail is used to communicate joint sales opportunities. And people from all of our new groups have the opportunity to meet other Tandem employees at our symposiums for outstanding performers and at our educational seminars.

### STRENGTH FROM PEOPLE

The mergers and our shift to a broader market view led Tandem to reorganize into five operating groups. Our goal is to maintain the entrepreneurial spirit of the merged companies and our operating groups, while incorporating the processes and procedures that underlie the strength of a large company.

One operating group develops and manufactures our OLTP systems and networks. Another markets these products. Ungermann-Bass remains an independent group, pursuing its complementary activities. The Tandem Companies Group manages Atalla and TTSI, our equity investments, and our Micro Products Division.

The fifth group provides Tandem's highly regarded worldwide customer service and support.

We strongly believe that Tandem's outstanding employee programs bond this organization together. In fact, our employee turnover rate in 1988 was just above eight percent—far superior to the industry average. Tandem has been very successful in attracting and retaining top-flight people.

While adding more than 1,500 outstanding people through our mergers and select hiring in 1988, we also expanded our Board of Directors and initiated an International Advisory Board.

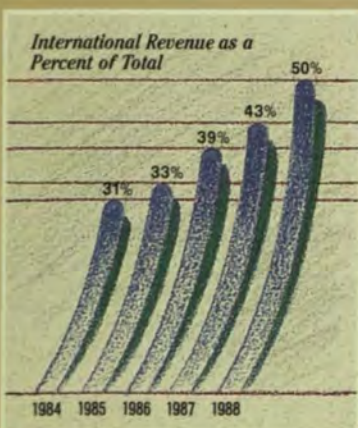
The new members of our Board of Directors are Jack F. Bennett, a senior vice president and director of Exxon Corporation, and Ralph K. Ungermann, president and chief executive officer of Ungermann-Bass. Dr. Martin M. (John) Atalla, founder of Atalla Corporation, is a new advisor to the Board of Directors. These members provide insight in the strategic areas of international and economic issues, enterprise networking, and security, respectively.

The International Advisory Board will further our international success by giving us a greater understanding of the special needs of markets worldwide.

### MOVING THE ENTERPRISE ON-LINE

More and more computing functions of major enterprises are moving on-line. Tandem is a leader in meeting the requirements of this emerging environment. The products we delivered in 1988 will help customers make this transition.

The record number of new customers who turned to Tandem for solutions in the last two





TANDEM'S PUBLIC SERVICE SABBATICAL PROGRAM SUPPORTS VOLUNTEER WORK BY EMPLOYEES. PARTICIPANT ROSEMARIE HALL WORKED FOR SIX WEEKS IN FISCAL 1988 FOR THE CALIFORNIA MARINE MAMMAL CENTER, A PRIVATE, NON-PROFIT GROUP THAT RESCUES, REHABILITATES, AND RELEASES DISTRESSED MARINE MAMMALS.



quarters of 1988 is indicative of the increasing strength of our product line.

Customers are looking for a wide range of capabilities. They want the flexibility to put their computing power where it is needed—whether in a large central site, at multiple remote locations, or on desktops. And they want the ability to tie all their data together with a fully distributed database.

The NonStop CLX system, which became fully available in the fourth quarter, showed its potential. More than half of our new customers in the last quarter purchased CLX systems.

The CLX system is designed for remote sites and for distributed applications, where price/performance, ease of use, and ease of maintenance are particularly critical. When it is coupled with NonStop SQL software, our relational database management system, customers have a powerful solution for their distributed applications.

Our computer-room system, the NonStop VLX, continued to be well-received in fiscal 1988. Enhancements are making this flagship product even more powerful. Expanded memory modules and ultra high-capacity disk storage facilities target the demand for cost-effective processing of large numbers of transactions.

The proliferation of workstations and personal computers is a phenomenon that we saw accelerate in 1988. We believe in future years this trend will enhance Tandem's growth. Tandem systems can be the critical connection to bring this desktop power into the on-line enterprise. As database servers, our systems can capture and process the millions of transactions created on the desktops of large organizations.

To help make this possible, we are working with the leaders of emerging standards in personal computers — Apple Computer, Inc., and Microsoft Corporation — as well as with providers of leading personal computer database tools and application-generation tools.

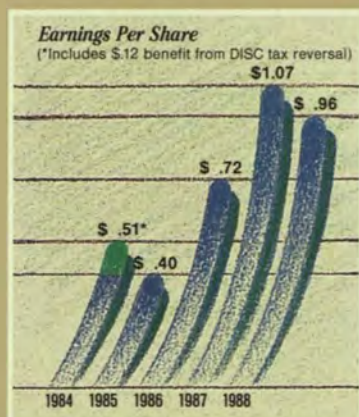
Reduced instruction set computing (RISC) is now recognized as an important technology for advanced system architectures. Tandem is working closely with MIPS Computer Systems, Inc., a leader in this technology, to apply RISC to future UNIX® systems from Tandem. This relationship was further strengthened when Jim Treybig was elected to the MIPS board of directors.

## ENTERPRISE-WIDE NETWORKS

To integrate the many elements of the on-line enterprise, customers need the ability to connect to a variety of standard networks.

Tandem has strong offerings for SNA connectivity. Along with our own development projects in SNA, our investment in Netlink, Inc., is helping us maintain this leadership position. This partnership already has led to new SNA product offerings and joint sales.

Ungermann-Bass's leadership in open, enterprise-wide networking, combined with Tandem's leadership in providing the fundamentals of OLTP, will be key to taking entire enterprises on-line.





During 1988, Ungermann-Bass introduced its Access/One network delivery system, which exceeded sales projections in its first two quarters of general availability. The Access/One product sets new standards with the most advanced combination of networking and wiring capabilities in the industry.

We also have made important investments to address products for public networks. We believe that TTSI and a new partnership with AT&T will help put Tandem at the forefront of Integrated Services Digital Network (ISDN) technology, which combines voice, data, and other information on a single telephone line. This emerging technology is expected to have a major impact on the telecommunications industry worldwide well into the next century.

### LEADERSHIP IN SOLUTIONS

We are also excited about the directions of our markets. New OLTP applications are constantly being created that make our customers more productive and more competitive.

Major software houses and system integrators are joining us in providing solutions. For example, this year we welcomed NYNEX Information Solutions Group, Inc., into our Alliance program.

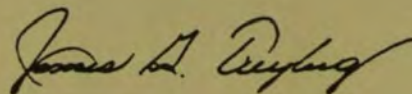
We are pleased to be working with firms such as Electronic Data Systems, Boeing Computer Services, and MSA Advanced Manufacturing, Inc., in connection with OLTP systems for manufacturing. These three are codevelopers of T.I.M.E., the Tandem Integrated Manufacturing Environment, which provides an architecture to integrate various manufacturing applications.

We plan to apply this concept to other Tandem markets moving toward the on-line enterprise.

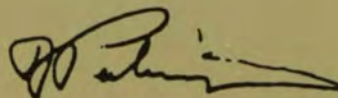
### LOOKING FORWARD

We are excited about our future. The challenge going forward is to reach our potential. We must remain cautious about the U.S. marketplace and currency movement and the impact they can have. But, as this report will show, we believe that strategic actions taken in 1988 make Tandem better equipped than ever to compete and grow.

Sincerely,



James G. Treybig  
President and Chief Executive Officer



Thomas J. Perkins  
Chairman of the Board

December 1, 1988



JAMES G. TREYBIG (RIGHT),  
PRESIDENT AND CHIEF EXECUTIVE  
OFFICER; THOMAS J. PERKINS,  
CHAIRMAN OF THE BOARD



# POWERFUL SYSTEMS AND DATABASE PRODUCTS



*Quality is important in every aspect of Tandem products—from the OLTP advantages they offer on-line enterprises to their reliability, serviceability, and overall design.*

*Because of this attention to design, several Tandem products received prestigious awards in fiscal 1988. West Germany's Hannover Faire presented its Good Industrial Design award to the NonStop CLX system, V80 disk storage facility, and PSX workstation—all three of which were first delivered to Tandem customers in fiscal 1988. Japan's Ministry of International Trade and Industry (MITI) gave its Good Design Prize for Foreign Products to the high-performance NonStop VLX system.*

*Pictured, from left to right, are the V80 disk storage facility, NonStop VLX and NonStop CLX systems, and PSX workstation.*



## TANDEM OLTP SYSTEMS AND DATABASES OFFER FUNDAMENTAL ADVANTAGES FOR THE ON-LINE ENTERPRISE.



Organizations are recognizing the advantages of instant access to accurate, up-to-date information. Entire businesses and government groups are moving to on-line transaction processing (OLTP) systems to ensure their competitiveness in a changing world.

Meanwhile, computing environments are changing dramatically. Gone are the days when a massive central computer could answer the varying needs of a growing organization. Companies today need to harness the power of many different systems, from large to small, including numerous personal computers valued for their inexpensive power and ease of use.

The proliferation of different systems and resulting isolation of information present a new challenge to computer vendors. How can systems and data be united to extend the advantages of on-line systems throughout organizations without creating data processing chaos? And, how can the productivity bonuses of resources such





THE FOREIGN OFFICE OF THE GERMAN FEDERAL REPUBLIC IS INSTALLING TANDEM NONSTOP CLX SYSTEMS AT WORLDWIDE LOCATIONS.



Volume shipments of Tandem's well-received, entry-level NonStop CLX systems began during fiscal 1988.

A large order came from The Foreign Office of the German Federal Republic, which began to implement a far-reaching program to streamline communications between Bonn and its embassies and consulates worldwide.

As many as 80 Siemens desktop computers at each facility will be linked via a local area network and Tandem's MULTILAN product to each of the distributed-processing CLX systems, replacing typewriters and integrating isolated word processors.

Three CLX systems were installed at Bonn during the year, including one in the

foreign minister's private office. Three more systems were installed in New York, including one at the German representation to the United Nations. And shipments began to other locations worldwide, a process that will continue at an accelerated rate during 1989 and beyond.

Key considerations of The Foreign Office in selecting CLX systems included the ease of

use, self-maintainability, and tolerance of power fluctuations and failures.







In 1988, FORTUNE magazine named Tandem's distributed database management technology among the "100 Products That America Makes Best"

Tandem's NonStop SQL distributed relational database management system combines the productivity of the SQL standard with high performance for OLTP. At the same time, NonStop SQL software incorporates Tandem OLTP fundamentals.



as personal computers and local area networks (LANs) be added to OLTP systems?

The answers lie in an emerging kind of computing environment Tandem calls the on-line enterprise. Here, the potential synergy between on-line systems and other powerful computing resources throughout the enterprise becomes reality.

We believe the product strengths and market experience of an OLTP pioneer such as Tandem are required to lead the way to the on-line enterprise. In fiscal 1988, Tandem took strategic actions to position itself better to address these emerging needs.



#### OLTP LEADERSHIP

For over a decade, Tandem has provided OLTP solutions to customers. In OLTP applications, transactions must be handled and data updated instantly—so that the most current state of the business is always accurately reflected.

OLTP systems are central to the minute-by-minute operations of businesses. Understanding this, Tandem offers a rich combination of fundamental system advantages that protects applications, data,

and customers' competitive positions. These fundamentals include fault tolerance, data integrity, linear expandability, superior price/performance, distributed data, networking, and security.

These combined strengths become even more valuable in the on-line enterprise because so many systems and applications depend on each other.

From the high-end NonStop VLX system to the mid-range NonStop CLX system to NonStop SQL relational database software, Tandem products address the requirements of the on-line enterprise.

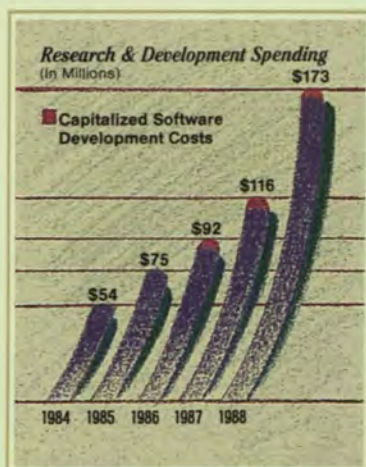


#### DISTRIBUTED POWER THROUGHOUT THE ENTERPRISE

For locations far from headquarters resources, users need systems that are cost-effective and easy to install and maintain, yet ensure availability and protect the integrity of data.

The NonStop CLX system, first delivered in fiscal 1988, fills this vital role in the on-line enterprise. Designed to work in the office environment, this system is ideal for regional centers or branch offices.

The CLX system combines superior price/performance with all of the other OLTP fundamentals of NonStop systems. It offers fault tolerance and expandability, and is







ENHANCED CUSTOMER SERVICE IS THE PRIMARY OBJECTIVE OF AN IMPORTANT NEW APPLICATION AT PACIFIC BELL IN CALIFORNIA.



Since becoming a Tandem customer in 1981, Pacific Bell has used Tandem systems in a number of projects.

In 1987, Pacific Bell began developing a major project intended to assist its 5,000 customer service representatives, who handle some 80,000 requests daily at the company's 48 California business offices.

The project is based on a network of Tandem NonStop

VLX and CLX systems and PSX workstations, as well as local area networks (LANs) from Tandem subsidiary Ungermann-Bass, Inc. (Ungermann-Bass also provides Pacific Bell with LAN products for many other applications throughout the company.)

Scheduled to begin implementation in late 1988, the project will allow customer service representatives to use

the advanced presentation capabilities of desktop workstations to access and display data simultaneously from several different customer service programs.

Later phases of the project are planned to refine and enhance the presentation further. And, elsewhere within Pacific Bell, other applications are under development on Tandem systems.

Pacific Bell is a subsidiary of Pacific Telesis Group, one of the seven U.S. Regional Bell Holding Companies. Pacific Telesis has more than 70,000 employees and annual revenue of more than \$9 billion.







BANK OF TOKYO HEADQUARTERS IN JAPAN IS CONNECTED TO MORE THAN 250 LOCATIONS WORLDWIDE BY A NETWORK OF TANDEM VLX SYSTEMS.



Bank of Tokyo, Ltd. (BOT), Japan's foremost international financial institution, began in 1986 to build what is today, according to BOT, the world's largest international banking network.

Over 250 BOT and subsidiary locations worldwide are tied together through four nodes of Tandem VLX systems

in Tokyo, New York, London, and Hong Kong—the latter coming on-line during 1988. Operating around the clock, the network handles an



average of 40,000 foreign exchange transactions daily, in addition to administrative communications.

Through its foreign exchange, capital market, and international corporate finance activities, BOT plays an important role in the international development of the Japanese economy. In the coming year and beyond, BOT plans to expand its Tandem network in

Europe and the United States to keep pace with the global expansion of Japanese businesses.

Anticipated business growth and the ability of Tandem systems to expand in small increments were key considerations in the bank's selection of a Tandem network.

BOT has assets of more than \$160 billion.



easily added to a network of other NonStop systems.

The CLX system is designed for ease of service. Nearly all component failures are user-serviceable. Should a component fail, the computer itself can automatically report the failure to a Tandem support center.



### **HIGH-PERFORMANCE COMPUTER-ROOM SYSTEMS**

Headquarters sites in the on-line enterprise require powerful systems that can handle very high transaction volumes with excellent response times and can store vast amounts of data cost-effectively.

Designed for the computer-room, the high-performance NonStop VLX system is capable of handling many hundreds of transactions per second.

With its new VLX Large Memory modules, introduced shortly after the fiscal year ended, the VLX system can store large amounts of information in main memory, where data can be directly accessed by application programs to speed processing further.

The new XL80 disk storage facility, first delivered to customers in fiscal 1988, increases the VLX system's already powerful ability to handle the growing databases of on-line enterprises. This product stores large amounts of data in a small floor area—preserving costly computer-room space—and offers low-cost-per-megabyte storage.



### **ENTERPRISE DATABASE ARCHITECTURE**

Information is the lifeblood of a successful enterprise. As organizations move on-line, OLTP databases are increasingly becoming the main repositories of information: the corporate databases of record.

In the on-line enterprise, databases must satisfy a wide range of demands. High performance is essential to keep pace with ever-increasing transaction volumes. Databases must be distributed throughout a network so that information is stored close to where it is used most often, yet must be available to the entire network. And to make programmers more productive, databases need the emerging industry standard Structured Query Language (SQL).

Tandem's commitment to implementing standards—while adding value to them—is reflected

*In the on-line enterprise, performance is more essential than ever. Advanced memory and storage products are key contributors to transaction-processing performance.*

*In 1988, Tandem invested in Anamartic Limited of Cambridge, England. Anamartic is developing a new class of high-performance storage subsystems that combines Anamartic's own proprietary whole-wafer integration architecture with state-of-the-art semiconductor technology.*







*Building on a strategy of integrating powerful desktop devices with on-line transaction processing networks, Tandem entered into an agreement in fiscal 1988 with Apple Computer, Inc., under which Tandem will sell, support, and service Apple Macintosh computers for its OLTP customers. Tandem will also develop products to link the Macintosh computer with Tandem systems.*

*Pictured are James G. Treybig, Tandem President and CEO (on left), and John Sculley, Apple Chairman and CEO, with a Tandem NonStop CLX system; and (bottom photograph) an Apple Macintosh IIx computer.*



in the Company's NonStop SQL software, the industry's first fully distributed relational database management system.

Generally available to customers in fiscal 1988, NonStop SQL software combines the productivity of SQL with high OLTP performance. At the same time, because NonStop SQL software runs on Tandem NonStop systems, it benefits from fundamental OLTP strengths.

We believe Tandem database technology offers customers an important strategic advantage in the new environment of the on-line enterprise.



### **PRODUCTIVE APPLICATION ENVIRONMENTS**

The on-line enterprise will require a single, open computing environment for a variety of application types. Some OLTP applications will continue to use terminals to capture transactions. Others will provide database services to connected personal computers. In other applications, personal computers and host systems will share processing tasks. Tandem is leveraging its decade of experience with OLTP database technology and its NonStop SQL software to meet these needs.

To make application programming more productive, Tandem plans to market application-development and decision-support tools from well-known third-party vendors. Because these tools are

common throughout the industry, they will allow programmers to create Tandem applications faster and more easily.



### **MANAGING COMPLEX RESOURCES**

The trend toward increasingly distributed networks of systems, data, and applications means users must be equipped to manage these complex resources efficiently.

Tandem's Distributed Systems Management (DSM) software, first delivered to customers in fiscal 1988, manages resources throughout a network of Tandem systems, including remote systems, applications, and communications facilities.

DSM software gives users the freedom to consolidate or decentralize the management and control of systems, applications, and networks according to business needs. Its architecture will support future capabilities to automate critical applications such as problem management and tracking.



### **POWERFUL ANSWERS FOR THE ON-LINE ENTERPRISE**

Systems and databases that meet the diverse needs of organizations are all-important to today's—and tomorrow's—computing environments. Tandem strives to add value to these core elements to give our customers solutions that provide a competitive edge.

When connected through enterprise networks, these systems, databases, and management tools become the foundation for serving the on-line enterprise.





FOR GREATER PRODUCTIVITY, PROGRAMMERS AT MICROSOFT'S CAMPUS-LIKE HEADQUARTERS NEAR SEATTLE SHARE RESOURCES OVER AN UNGERMANN-BASS, INC., NETWORK.



Microsoft Corporation, the world's largest producer of microcomputer software, has used Net/One products from Ungermann-Bass, Inc., since 1985. The firm's growing corporate network includes one of the largest local area networks (LANs) in the United States.

Microsoft's network is crucial to the productivity of hundreds of programmers at the firm's sprawling facilities in the Seattle area. Using the network



Heiltsuk, Bella Bella  
Indian Art USA 15c

to share critical source code and other resources, Microsoft is consistently able to meet release dates of new products.

The network also handles some one million electronic mail messages each month.

With a total of 4,200 nodes, the network links domestic sales offices and international subsidiaries. By the end of 1988, over 1,000 of these nodes were connected to the network by Access/One systems. The Access/One system is Ungermann-Bass's new offering that allows the use of conventional twisted-pair telephone wiring for network

connections, providing superior flexibility and broad connectivity to a wide variety of devices.

Microsoft, which is expanding its marketing activities worldwide, had Ungermann-Bass networks at 16 locations at the end of 1988. Net/One products are slated for installation at 11 new locations during 1989.





*In a major move to position itself for the future, US Sprint, the Kansas City based provider of state-of-the-art telecommunications services, has installed the first nationwide all-digital fiber-optic network.*

*As a second important step, US Sprint has deployed Signaling System 7, the system that supports inter-LATA intelligent network features and services. These services include enhanced 800-number translation, calling-card validation, and virtual private networks.*

*High-transaction-rate Data Control Points for the network are provided by Tandem Telecommunications Systems, Inc. (TTSI), and run on Tandem NonStop VLX systems.*



## CONNECTING THE ENTERPRISE

### STRATEGIC MOVES IN 1988 BUILD A FOUNDATION FOR LEADERSHIP IN ENTERPRISE NETWORKING.



In the on-line enterprise, computing is strategically tied to networking. As more databases move on-line, more users demand immediate access to this always-current information. To provide this access, on-line systems must allow different systems to connect to on-line resources through LANs and through the support of major networking standards.

Because the success of an organization can depend on the success of its on-line applications, enterprise networks also require fast response time, availability, data integrity, and security.

Tandem has long been a leader in providing networks with fundamental OLTP advantages. In fiscal 1988, strategic mergers, new relationships, and new products further strengthened the Company's capabilities in enterprise networks,

workstation integration, support of standards, and security. We believe these moves position Tandem to serve the networking needs of the on-line enterprise.



### UNGERMANN-BASS, INC. — A LEADER IN ENTERPRISE NETWORKING

Today, processing power is moving to computers on users' desktops. These systems need to access and share data with others and with corporate resources.

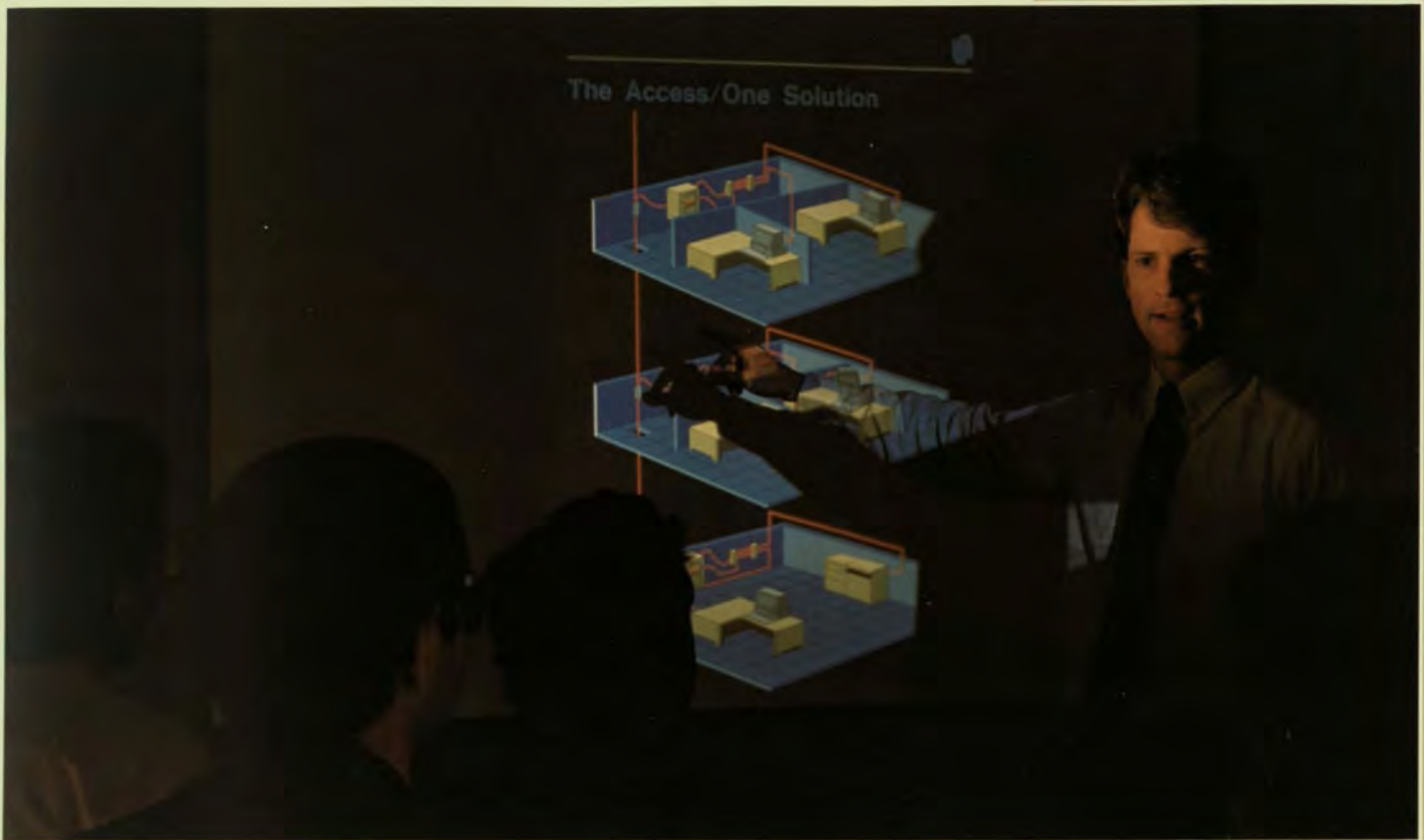
Such developments mean that vendors who want to meet the requirements of customers in the 1990s need to offer complete networking capabilities that link LAN-based systems with other organizational resources.

To address this key market need, Tandem joined with an industry leader: Ungermann-Bass, Inc.

Through enterprise networks, Ungermann-Bass products connect workstations and other intelligent devices to each other and to a variety of resources, including file servers and host systems from different vendors.

Ungermann-Bass is committed to supporting open networking standards. An example of Ungermann-Bass's approach to standards is the Access/One network delivery system, introduced in fiscal 1988.





The Access/One system gives network planners and end users a common architectural platform for distributing network services to personal computers and workstations over ordinary telephone wiring.

This system integrates personal-computer LANs into enterprise networks. It works in environments of mixed systems from a variety of vendors and supports both industry networking standards and international standards. The Access/One system also includes features for high network availability and modular growth, and powerful tools for network management and control.

Tandem and Ungermann-Bass are cooperating in product development and jointly calling on major customers—and generating significant opportunities for both companies. We believe that Tandem and Ungermann-Bass can grow together by meeting market needs for OLTP systems and enterprise networks.



#### **LINKING WORKSTATIONS AND TANDEM SYSTEMS**

Since before its merger with Ungermann-Bass, the Company's strategy has been to allow workstations to access the OLTP benefits of Tandem systems. Customers can then use personal computers for what they do best—provide sophisticated, user-friendly interfaces—while Tandem OLTP systems

*Tandem and Ungermann-Bass merged not only because our product lines are complementary, but also because our strategies match well. We are committed to standards in networking, sell primarily to the largest corporations, and focus on similar industries.*







*Security products from Atalla Corporation, a wholly owned Tandem subsidiary, have helped reduce operating expenses and increase customer satisfaction at San Francisco based Wells Fargo Bank since 1983.*

*The bank uses the Atalla Card Activation and PIN Selection System (CAPS), in conjunction with a Tandem NonStop VLX system. The CAPS product allows the bank's customers to choose their own debit and credit card personal identification numbers (PINs) with security and ease.*

*Wells Fargo has an active card base well beyond the banking industry average. The use of customer-selected PINs has contributed to this success because customers can remember them more easily than bank-generated PINs.*

*As part of its fraud prevention program, Wells Fargo also uses Atalla Security Modules attached to Tandem VLX systems to verify encrypted PINs from the bank's 1,200 ATMs.*



process transactions and manage on-line data.

Tandem's MULTILAN products are examples of this strategy. They allow a wide variety of standard LANs to connect to Tandem systems. This capability lets customers implement cooperative processing, whereby personal computers and Tandem systems share application tasks.

In fiscal 1988, we began working with Microsoft Corporation to extend similar support to OS/2 based personal computers.

Tandem is committed to supporting a wide variety of personal computers and workstations, including workstations running the UNIX® operating system and Apple Macintosh computers.

Reflecting this commitment, in 1988 we entered into a value-added reseller agreement with Apple Computer, Inc., under which Tandem will sell, support, and service Macintosh computers as part of Tandem OLTP systems. Tandem, Ungermann-Bass, and Apple are developing new products to connect Macintosh computers and Tandem systems.



## **STANDARDS FOR WIDE-AREA NETWORKS**

Networking standards are increasingly important to our customers. Not just LAN and workstation standards, but also other networking standards are key.

An international networking standard independent of any single vendor, Open Systems Interconnection (OSI) is important to Tandem's



future. Customers can today implement OSI applications using capabilities Tandem provides, and work is underway to strengthen our offerings for this standard.

Another important standard is IBM's Systems Network Architecture (SNA). Tandem already provides a wide range of SNA connectivity solutions.

Tandem strengthened its SNA offerings in fiscal 1988. The Company delivered software that supports LU6.2, a strategic SNA protocol. In addition, Tandem became a reseller of the SNA\_Hub product from Netlink, Inc., in which Tandem has an equity investment. This product lets devices in an SNA network access the benefits of OLTP applications running on Tandem systems.

The Company is working to provide more ways for users to add Tandem systems to SNA networks. Our goal is to add the value of Tandem OLTP fundamentals while protecting customers' existing network investments.



### OLTP BENEFITS FOR TELECOMMUNICATIONS NETWORKS

Around the world, telecommunications networks are being upgraded to enable telephone companies to provide new services, improve service quality, and lower operating costs. Key to these changes are international networking standards

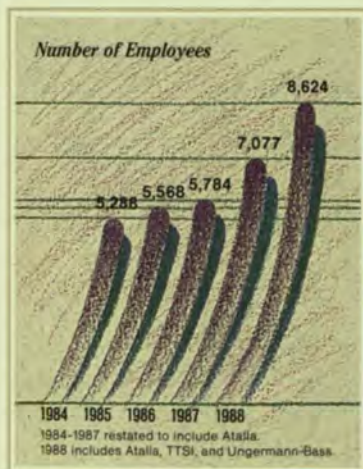
that will allow computers to connect to telecommunications networks to provide services, including ones based on on-line applications.

Two important actions in fiscal 1988 reflect Tandem's commitment to becoming a leader in this exciting new arena.

Tandem merged with Integrated Technology, Inc. Renamed Tandem Telecommunications Systems, Inc. (TTSI), this wholly owned subsidiary is developing products that we believe will allow Tandem systems to provide a variety of services and applications within telecommunications networks.

We also signed a cooperative agreement with AT&T to develop Integrated Services Digital Network (ISDN) applications for OLTP. ISDN is an international standard for combining transmission of voice, data, and other information over a single phone line.

Making Tandem equipment compatible with specific AT&T equipment will enable telephone companies and many Tandem system users to offer new OLTP-based services.



### SECURITY: THE NEW IMPERATIVE

As networks grow, more users require access. Inevitably, data security becomes increasingly crucial.

In fiscal 1988, Tandem merged with Atalla Corporation, a supplier of secure transaction systems to financial and retail industries worldwide.

Tandem and Atalla are jointly marketing secure financial and retail payment systems. Shortly after the end of the fiscal year, Atalla announced that its Card Activation and PIN Selection System (CAPS) will now run on Tandem NonStop systems.

Atalla plans to continue to develop its expertise in security and to apply its knowledge to OLTP networks.



### PREPARING FOR THE FUTURE OF OLTP

Strategic moves in fiscal 1988 expanded Tandem's capabilities in enterprise networking, workstation integration, support of networking standards, telecommunications, and security.

Combined with Tandem's OLTP product strengths in systems and database, we believe the past year's achievements enhance our ability to serve the needs of the on-line enterprise.



# LEADERSHIP IN SOLUTIONS



*T.I.M.E.—the Tandem Integrated Manufacturing Environment—is designed to enhance productivity and quality by linking islands of automation in engineering, planning, and production.*

*Maybelline Cosmetics will implement T.I.M.E. factory control systems with software from MSA Advanced Manufacturing, Inc., at its 800,000-square-foot plant in North Little Rock, Arkansas. This massive plant produces and distributes all Maybelline cosmetics sold in the United States.*

*Maybelline is part of the Consumer Operations Division of Schering-Plough Corp., with headquarters in Memphis, Tennessee.*



## MARKET UNDERSTANDING AND INNOVATIVE SOLUTIONS MAKE TANDEM A LEADER IN OLTP.



On-line transaction processing is a dynamic marketplace—one of the fastest growing in commercial data processing. InfoCorp, a leading market research firm, estimates worldwide OLTP revenue will nearly double by 1993.

Businesses faced with increased competition, government regulation, and changing economic conditions look to on-line systems for solutions that enhance service, quality, profitability, and accountability.

OLTP systems have transformed the way many organizations conduct business. Users have strengthened competitiveness through increased efficiency and through completely new services—automated teller machines, automated gasoline pumps, and computerized home shopping.

We believe Tandem's understanding of this complex market and our advanced approach to





A BARCLAYCARD HOLDER MAKES A PURCHASE AT LONDON'S FAMED FORTNUM & MASON DEPARTMENT STORE.



An ambitious program will make electronic funds transfer (EFT) available at retail points of sale (POS) throughout the United Kingdom during 1989.

Of the 14 participants of EftPos U.K. Ltd—which include the U.K.'s largest banks and building societies, and the major bank credit card consortium—12 have installed or ordered Tandem systems in



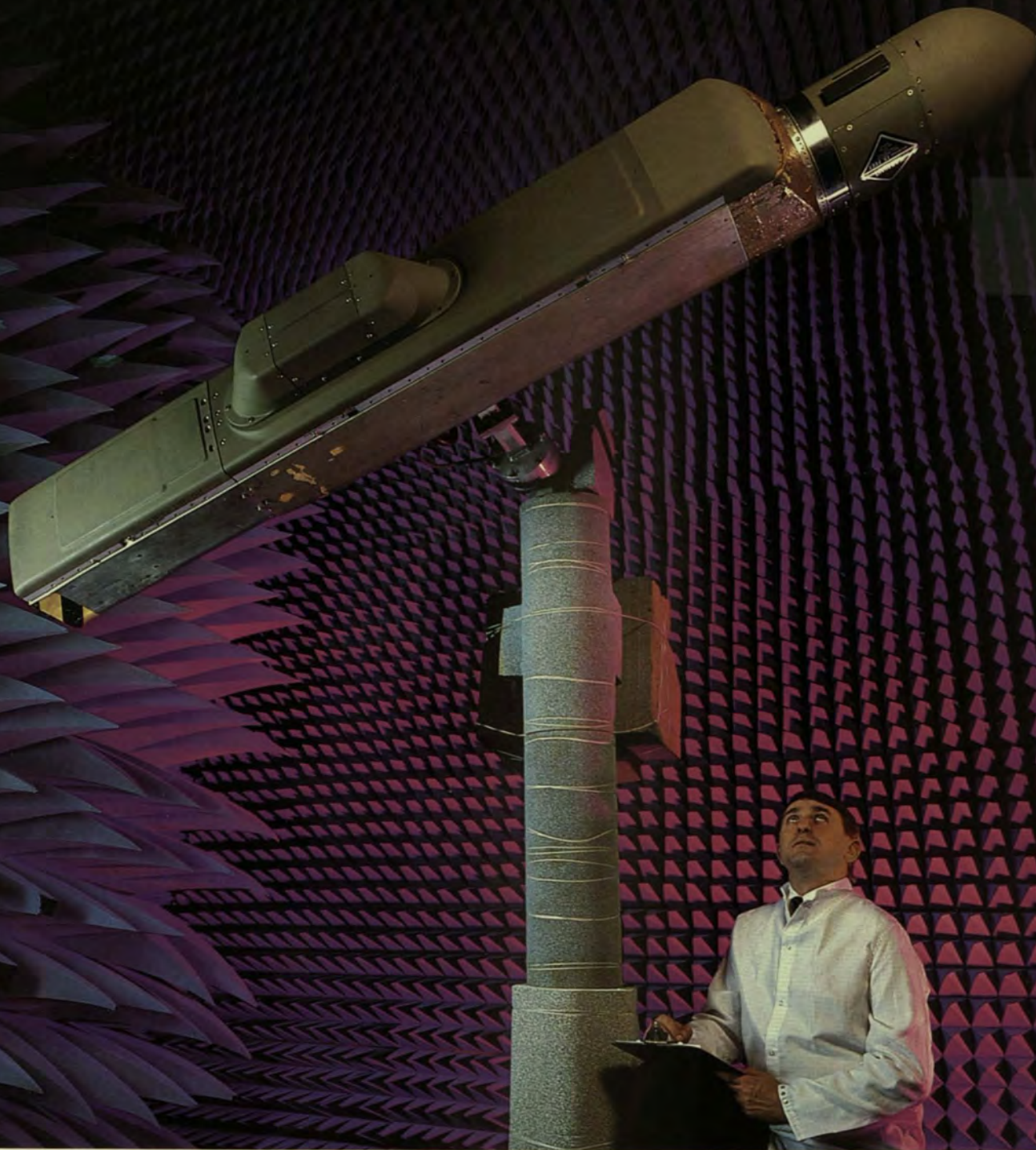
preparation for the program's inauguration. The inaugural service will act as a proving ground in advance of roll-out of the full national service. Many of the banks have begun independent EFT/POS services, which will later link to the national service. These independent services are already supporting approximately 15,000 EFT/POS terminals.

Some of these institutions are converting their automated

teller machines to run on Tandem systems as well.

In the U.K., most retail purchases are made by cash or check. Major financial institutions have joined EftPos U.K. Ltd, whose board includes a representative of The Bank of England, in a concerted effort to reduce check-clearing paperwork by creating paperless customer transactions.





WESTINGHOUSE ELECTRONIC SYSTEMS GROUP IS EXPANDING ITS NETWORK OF TANDEM SYSTEMS.



Westinghouse Electronic Systems Group (ESG), which produces commercial and military radar systems, uses a network of Tandem systems for shop-floor control, factory data collection, and quality assurance. The network provides access

to distributed applications and data for more than 4,000 users at ESG's 1.6-million-square-foot facility near Baltimore, Maryland.

ESG plans to expand the network of NonStop VLX and TXP systems in 1989 to link others of its 26 locations worldwide and to implement an application under devel-

opment called Westinghouse Integrated Systems for Engineering (WISE).

Using the Tandem NonStop SQL relational database management system, WISE will enhance productivity by linking engineering and shop-floor data and automating engineering functions for the complete life cycles of products.





application solutions are key reasons for continued leadership as the Company grows to support the on-line enterprise.



### **SERVING LEADING ORGANIZATIONS WITH OLTP SYSTEMS**

Today, Tandem systems are helping customers maintain leadership in their respective markets.

Tandem systems enable corporations, consumers, and financial institutions to transfer vast amounts of money electronically—and safely. Many banks connect ATMs and point-of-sale terminals to Tandem systems, providing customer services 24 hours each day, every day.

Tandem systems help run 33 stock exchanges around the world and prepare trade orders in 70 brokerage firms. Large retailers use Tandem systems to approve credit requests, ensure adequate merchandise distribution, and retrieve store sales data electronically.

More than 300 manufacturers in the automotive, aerospace, electronics, pharmaceutical, and chemical industries, for example, use Tandem systems for applications that include shop-floor control, work-in-process tracking, collection and analysis of quality-control data, and inventory management.

Telecommunications providers worldwide use Tandem systems for applications such as service order entry and customer billing, and for value-added services such as electronic mail, information gateways, and videotex.

As more organizations realize the competitive advantages OLTP systems offer, opportunities to apply this technology multiply. Customers find new applications, new services, and new ways to streamline the computer-based functions that support the enterprise.

To maintain a market leadership position, Tandem strives to anticipate such changes in the market and to lead the way with solutions.



### **NEW ON-LINE SERVICES**

Important changes in the telecommunications industry make it an exciting market for OLTP systems. Regulatory changes around the world are providing telecommunications companies with opportunities to offer new, revenue-generating services.

Many emerging telecommunications services are transaction-oriented. These services require continuous system availability and high performance—strong features of Tandem NonStop systems. Another Tandem system advantage is the ability to start an on-line system small, then expand it in steps as the service grows.



### **ELECTRONIC DELIVERY SYSTEMS**

OLTP users are discovering that there are many significant advantages to the electronic delivery of consumer services.

Retailers, for example, can implement electronic systems for debit cards, check authorization, and check clearing. The tedious job of sorting paper credit-card slips



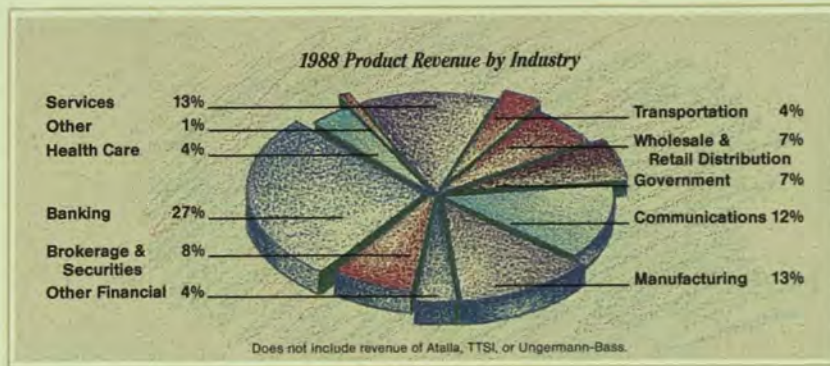
*Under a strategy of joining with partners to address emerging market needs, Tandem agreed with AT&T in 1988 to develop interfaces between Tandem systems and AT&T's 5ESS® central office switch for Integrated Services Digital Network (ISDN) applications.*

*ISDN, an international networking standard for combining transmission of voice, data, and other information over a single phone line, is key to providing many new services.*

*Making Tandem equipment compatible with AT&T equipment through the use of ISDN will help telephone companies and others offer new OLTP services to the marketplace.*







Tandem customers who have developed application software for their own use may also join the Alliance program to license their solutions to others.

In addition, this program supports system integrators who provide numerous essential services—from initial planning to final installation—including integrating Tandem systems with custom software and hardware from other vendors.

In fiscal 1988, NYNEX Information Solutions Group, Inc., a subsidiary of NYNEX Corporation, joined the Tandem Alliance. NYNEX Information Solutions Group will assist Tandem users with large-scale integration projects in the telecommunications and financial services industries.

The Tandem Alliance program contributes to Tandem's market leadership by providing key business solutions in a wide range of major industries.

Tandem's market understanding and innovative solutions have helped make the Company a leader in OLTP. We believe that these strengths, plus Tandem's powerful systems, database products, and networks to connect the enterprise, will help the Company maintain a leadership position as it serves the evolving on-line enterprise.

can be eliminated, and the entire process handled electronically. These applications improve check-out service and save labor, while providing immediate on-line access to current sales and inventory data.



### INTEGRATING APPLICATIONS

A variety of organizations want to link existing automated functions into enterprise-wide, on-line networks. The goal is to create a single, cohesive application environment for greater efficiency, improved decision making, and better customer service.

An example is found in the manufacturing industry, where users want to integrate islands of automation in engineering, business management, and factory-floor operation.

To address these needs, Tandem developed T.I.M.E., the Tandem Integrated Manufacturing Environment, in cooperation with major development partners Electronic Data Systems Corporation, MSA Advanced Manufacturing, Inc., and Boeing Computer Services.

T.I.M.E. helps protect customers' investments in systems by providing open specifications that allow software developers to create compatible products and to incorporate future applications as they are developed.

Tandem is working to develop application architectures similar to T.I.M.E. for other industries.



### THE TANDEM ALLIANCE PROGRAM

As business and government organizations seek to implement new services and streamline operations, they require comprehensive solutions involving computer hardware and application software.

Tandem has addressed this need with the Tandem Alliance, a program that encourages the development of application software for Tandem systems. The program includes more than 260 software providers, value-added resellers, and other third parties.

Most Tandem Alliance members are independent software houses providing off-the-shelf or custom software programs. Among the Alliance members are some of the world's largest and most respected software houses.





ONE OF DAIEI GROUP'S 3,000 CONVENIENCE STORES IN JAPAN.



Daiei Group, Japan's largest retailer, is undertaking a massive program to replace existing computer systems with an on-line, distributed data network that the firm believes will be the biggest in Japan's dynamic and competitive retail industry.

The network began operations during 1988 with two NonStop VLX systems, with a total of 24 processors divided between Tokyo and Osaka. Today, it links 3,000 Daiei-

affiliated convenience stores for processing orders and collecting point-of-sale (POS) data.

In addition, the Tandem network connects more than 10,000 POS terminals at several hundred general merchandise stores, discount and department stores, offices, and distribution centers. More than 3,500 vendors are tied into the network.

Daiei chose Tandem systems because the firm needed



the flexibility to grow its network and distribute data as its business needs require. The rapidly growing company

expects to have 7,000 outlets within five years. To support this expansion, NonStop VLX nodes are planned for five other major cities over the next few years.

The company also wanted an integrated networking capability that could reduce its dependence on centralized host computers while protecting its investment in current systems.

Daiei had sales in its most recent year of over \$11 billion.



# DEDICATED TO CUSTOMER SATISFACTION

## CUSTOMER SATISFACTION IS OUR ULTIMATE GOAL.



**S**ystems and databases, enterprise networks, and application solutions are essential to the on-line enterprise. We believe that Tandem is meeting these requirements through superior products and strategic relationships that complement our strengths.

Our ultimate goal is customer satisfaction. Tandem customers must know that our products will meet expectations from the time they are installed. Two ways in which we ensure customer satisfaction are through performance measurement and through customer support and service.



*Tandem offers systems with an impressive combination of proven OLTP fundamentals: fault tolerance, data integrity, linear expandability, distributed data, networking, superior price/performance, and security.*

*The Company is building on these fundamentals—plus its 12 years of experience serving OLTP customers—to meet the developing needs of the on-line enterprise.*





## ENSURING SUPERIOR PERFORMANCE

Critical on-line applications demand superior system performance to keep customers ahead of their competition. That performance must also increase as the business grows.

We believe that Tandem systems offer the best combination of performance and OLTP functionality in the industry. Our development efforts and strategic partnerships are aimed at maintaining this competitive advantage.

To maximize their investments in OLTP systems, customers need effective tools for comparing the performance of different vendors' systems. As a result, Tandem supports efforts to develop useful performance benchmarks.

An example is the so-called DebitCredit benchmark. This benchmark is embraced by many consulting, research, and auditing firms as a measure of transaction-processing performance.

Key to the value of the DebitCredit benchmark is that it not only measures performance, but also specifies that vendors incorporate many functions critical to on-line transaction-processing applications.

The DebitCredit benchmark is useful, but, like most benchmark specifications, it leaves many implementation details up to the vendor, which can greatly influence the outcome of testing.

Tandem is looking at ways in which the value of benchmarks as



measures of transaction-processing performance may be enhanced for the benefit of customers.



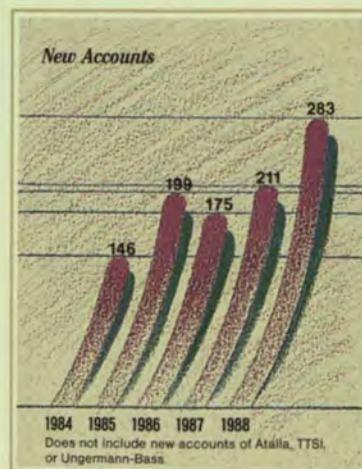
### CUSTOMER BENCHMARKS

A tool such as the DebitCredit benchmark provides one measure of transaction-processing performance. Tandem customers also want to know what kind of performance they will achieve running their own applications.

So that customers can test actual applications on Tandem systems, the Company maintains state-of-the-art benchmark centers in

*The most reliable benchmarks are those performed for specific customer applications. In Cupertino, California, Tandem's Benchmark Center (pictured above) gives customers and Tandem Alliance partners a state-of-the-art environment for testing software applications.*

*The center uses Tandem systems with a total of 64 processors, ranging from the powerful NonStop VLX system to the NonStop CLX system.*





Cupertino, California, and Frankfurt, West Germany. Here, customer applications can be run on large Tandem systems updating massive on-line databases.



### **EXPERIENCED SERVICE AND SUPPORT TEAMS**

The most important key to customer satisfaction is high-quality service and support. Tandem is dedicated to excellence in comprehensive, state-of-the-art service and support.

Tandem's large internal computer network, in addition to helping run the Company's business, links thousands of experienced Tandem support specialists all over the world—ready to help customers with installation, hardware maintenance, and software support.

In this on-line environment, Tandem customer engineers and systems analysts exchange ideas on how best to serve customers. They maintain a knowledge base on the network of service-related problems and solutions from around the world.

Flexible support plans give Tandem customers a range of options. Customers can select that all services be delivered by Tandem or can choose to assume responsibility for part of the maintenance themselves.

When a customer has a support problem, a call may be placed to the local or regional Tandem office or directly to one of the Tandem National Support Centers in Canada, Denmark, France, Japan, Sweden, the United Kingdom, the United States, and West Germany.

We continue to search for new ways to enhance communication between Tandem and our customers. For example, shortly after the close of fiscal 1988, Tandem and the International Tandem Users' Group jointly announced the creation of a worldwide information network for sharing technical information among the Company and its customers.

Through these support offerings and others, Tandem customers receive reliable service for all the components of their Tandem systems—whether mainframes, distributed systems, database software, workstations, or entire enterprise networks.



### **POISED TO WIN**

Tandem is moving forward to serve the evolving needs of the OLTP market. We believe the strong foundation built while successfully serving OLTP customers since 1976 strengthens our position and provides momentum.

Tandem products offer fundamental advantages that many other vendors are just beginning to address. In fiscal 1988, the delivery of important new products, the establishment of strategic relationships, and the addition of a record number of new customers served to maintain Tandem's leadership.


We believe these advances mean that Tandem is now—more than ever—poised to win and grow by meeting the needs of the on-line enterprise.





# TELEKURS AG

TELEKURS AG IN ZÜRICH IS A UNIQUE FINANCIAL SERVICES ORGANIZATION THAT SELLS ITS PRODUCTS INTERNATIONALLY USING A LARGE TANDEM NETWORK.

 Telekurs AG, jointly owned by Switzerland's 350 banks, is a unique and rapidly growing financial services organization with worldwide activities. A Tandem customer since 1983, Telekurs operates a distributed data network of 24 NonStop systems (at the close of 1988) with over 130 processors.

Telekurs' Tandem network gathers, processes, and distributes information on interna-

tional securities, commodities, and foreign exchange for the Swiss banks and other financial organizations globally. Its on-line database, with details on more than 230,000 securities from some 100 exchanges, is claimed to be the most comprehensive of its kind in the world.

In addition, the high-volume network processes and updates all transactions on the five Swiss stock exchanges.

Furthermore, it handles all funds transfers for the Swiss banks, including those related to check clearing, the nationwide ATM network, EFT/POS system (electronic funds transfer at point of sale), and EUROCARD/MasterCard.

During 1988, Telekurs began expanding its domestic four-node Tandem network internationally with new locations in London, Frankfurt, and the New York area. The company,

which is growing 30 percent annually, intends to extend the network to additional locations in Europe, Asia, and the United States.





# Management's Discussion and Analysis of Financial Condition and Results of Operations

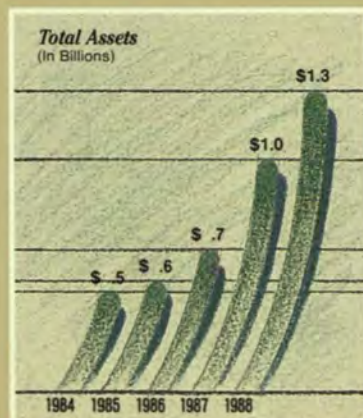
## Overview

In fiscal 1988, Tandem Computers Incorporated took major steps to enhance its leadership position in providing systems and networks for on-line transaction processing (OLTP) and to meet the needs of the developing on-line enterprise. During the year, Tandem merged with Atalla Corporation, a leading vendor of secure transaction systems; acquired Ungermann-Bass, Inc. (Ungermann-Bass), a leader in open enterprise networks for multivendor environments; and acquired Tandem Telecommunications Systems, Inc. (TTSI), formerly Integrated Technology, Inc., a developer of computer products and services for the telecommunications industry. The Company believes the new business combination will lead to increased market opportunities and enable it to bring important competitive products to market in a shorter time than previously possible.

During the year, Tandem experienced some of the benefits of those increased opportunities as Ungermann-Bass contributed to the Company's revenue growth. However, despite tight operating management practices, operating income declined because of a product mix shift, increased research and development spending partially as a result of the acquisitions, and the amortization of cost in excess of net assets acquired. The acquired companies (Ungermann-Bass and TTSI) are not included in results of operations from prior years, so these and other growth rates and ratios are affected as discussed below.

The Company believes achieving its goal of market leadership involves many factors, including strategic positioning, a commitment to product development, partnerships with companies that have complementary strengths, customer satisfaction, and an organizational structure and philosophy that foster employee productivity and creativity. Additionally, Tandem believes it is important to maintain a strong financial position to compete effectively in the rapidly growing OLTP marketplace. The bold moves and financial choices the Company made throughout the year reflect these priorities.

All references to the years 1988, 1987, and 1986 throughout this section represent the Company's fiscal year ended September 30.



## Results of Operations

The following table summarizes the changes in selected operating indicators. The percentages on the left show the relationships of income and expense items to total revenue. The percentages on the right measure the year-to-year changes.

Percent of Revenue			Percent Increase (Decrease)	
1988	1987	1986	1988	1987
82.1	83.2	82.4	24	36
17.9	16.8	17.6	34	28
100.0	100.0	100.0	26	35
23.6	22.1	22.9	34	30
13.5	12.6	13.5	35	26
37.1	34.7	36.4	34	28
12.9	10.4	11.3	55	24
38.8	38.6	38.5	26	35
11.2	16.3	13.8	(14)	59
(.1)	1.3	1.1	NM	69
11.1	17.6	14.9	(21)	60
3.9	7.6	6.6	(36)	55
7.2	10.0	8.3	(10)	64
Earnings per share			(10)	49

Prior period amounts have been restated to reflect the merger with Atalla Corporation, which occurred during 1988, and was accounted for as a pooling of interests.

Current period amounts include the consolidation of results of TTSI from January 8, 1988, and of Ungermann-Bass from March 18, 1988, the dates Tandem assumed effective control of each company.

## Revenue

Revenue in 1988 was 26 percent higher than in the previous year. Revenue reached \$1.3 billion in 1988, compared with \$1.0 billion posted in 1987 and \$778 million recorded in 1986. Tandem's revenue gains over the past two years resulted from increased shipments of hardware and software products to new and existing customers and from an increased number of customers using its support and training services. Revenue from Ungermann-Bass is included in the consolidated results since March 18, 1988, the date when Tandem assumed effective control of the company. Its revenue contributed to revenue growth in 1988.

The revenue growth rate was lower in 1988 than in the prior year, primarily because of reduced domestic demand experienced by the Company and in the computer industry as a whole. Domestic revenue growth for 1988, including



the contribution made by Ungermann-Bass, was 11 percent, compared with the strong domestic performance of 27 percent growth a year earlier.

As in the prior year, international revenue grew faster than domestic revenue in 1988. European operations maintained the 46 percent growth rate achieved in the prior year. Revenue growth in non-European countries remained high at 43 percent, although less than the very strong 50 percent growth posted in 1987. Ungermann-Bass contributed to the growth in international revenue, though less significantly than to domestic revenue.

Strong international performance, coupled with the less robust domestic environment, brought the contribution from international business to 50 percent of the Company's 1988 revenue, compared with 43 percent in 1987 and 39 percent in 1986. Europe contributed 34 percent of 1988 revenue, compared with 29 percent in 1987 and 27 percent in 1986. Other international business grew to 16 percent of 1988 revenue, compared with 14 percent in 1987 and 12 percent in 1986.

Over the past three years, the Company has introduced a number of systems, software, storage products, and peripheral products that have contributed to revenue growth. These products include the NonStop VLX computer system, introduced in 1986; NonStop SQL software, introduced in 1987; the NonStop CLX computer system, first sold in 1988; and related products. These products opened new markets for the Company. The addition of Ungermann-Bass's open, enterprise-wide networking products to the Company's product line also contributed to revenue growth in 1988.

Despite continued customer acceptance of the Company's products, product revenue growth slowed to 24 percent in 1988 from the 36 percent recorded in the prior year. This was primarily the result of lower domestic demand.

The growth rate of service and other revenue increased to 34 percent, compared with the 28 percent achieved a year earlier. The Company believes the growth in service and other revenue in 1988 reflects the increase in the size of its customer base resulting from the strong product growth achieved in the prior year.

### ***Operating Income***

Operating income in 1988 was \$147 million, or 11 percent of revenue; compared with \$170 million, or 16 percent of revenue, reached in 1987; and \$107 million, or 14 percent of revenue, recorded in 1986. Operating margin decreased as a percentage of revenue in 1988, compared with the prior two years, primarily as the result of higher cost of revenue, additional research and development spending, and the amortization of cost in excess of net assets acquired related

to the acquisitions of Ungermann-Bass and TTSI. The improvement in operating income from 1986 to 1987 was largely attributable to higher gross profit margins resulting from a favorable product mix and the Company's improvements in manufacturing and service operations.

Cost of revenue as a percentage of revenue increased in 1988, compared with a decrease recorded in 1987. The improvement in 1987 was primarily the result of ongoing programs to increase the efficiency of manufacturing and service operations. Cost of product revenue as a percentage of revenue also improved in 1987, in part because the Company sold a favorable mix of products, many of which incorporated new technologies that provided greater performance at lower cost. In 1988, however, the costs of product revenue and service and other revenue each increased as a percentage of revenue, leading to an increase in total cost of revenue as a percentage of revenue. This was primarily the result of the acquisition of Ungermann-Bass, which has lower product and service margins than Tandem's historic business. In addition, product upgrade programs, a product-mix shift toward the Company's PSX workstations and NonStop CLX computer systems, and an increase in discounts granted to customers contributed to the increase in the Company's product costs as a percentage of revenue.

Cost of product revenue grew 34 percent in 1988 over its 1987 level, compared with a 30 percent increase recorded in the prior year. In both cases, this was due primarily to increases in volume; however, in 1988, product cost grew faster than product revenue for the reasons stated above. The growth in the cost of service and other revenue in 1988 and 1987 was attributable primarily to growth in the installed base. The acquired companies contributed to increases in costs of both product and service revenue in 1988.

Research and development expenses increased as a percentage of revenue in 1988 from the prior year level. This compares with the decrease recorded in 1987, which was partially attributable to higher-than-anticipated revenue, as well as capitalization of certain software development costs. In 1988, the increase in research and development expenses as a percentage of revenue was attributable primarily to lower-than-anticipated revenue growth and the acquisition of TTSI. In addition, the Company capitalized less software development cost in 1988 than in the prior year.

Research and development activities focus on meeting the needs of customers who are implementing on-line systems for single sites or for geographically distributed information processing networks. The level of research and development expenses increased over the past three years



to support new product development efforts and programs to enhance existing products. Among the products that resulted from prior years' research and development spending were the XL80 disk subsystem, which began shipping in 1988, and NonStop SQL software, the NonStop CLX computer system, and the V80 disk subsystem, which became generally available during the year.

The acquisitions of Ungermann-Bass and TTSI, a development organization, also contributed to the growth in research and development expenses. The Company expects to support new product development with increased research and development spending, although the Company expects the expenses as a percentage of revenue to decline.

The Company's marketing strategy emphasizes direct sales to organizations that are implementing OLTP applications critical to their businesses. The Company believes that providing a high level of service and support and offering solutions to customers' business problems are essential to meeting the needs of the customer base. Consequently, Tandem has built a direct sales and support organization in the United States and international industrial markets. Relationships established with third-party application software developers, equipment remarketers, and distributors complement direct sales activities.

Although marketing, general, and administrative expenses as a percentage of revenue have remained stable over the past three years, the level of spending has increased as the Company has continued to build its marketing organization, to train new and existing sales, service, and support personnel, and to develop marketing relationships with third parties to support the Company's growth. In addition to the acquisitions of Ungermann-Bass and TTSI, Tandem has invested in joint ventures and taken equity positions in companies whose product, market, or geographic strengths support its strategies. These factors have all contributed to the growth in marketing, general, and administrative expenses. Although the 1988 marketing, general, and administrative expenses include the amortization of cost in excess of net assets acquired from the acquisitions, the Company's continued tight management of spending levels has enabled it to match the growth in marketing, general, and administrative expenses with revenue growth in both 1987 and 1988.

### ***Net Income and Earnings Per Share***

Net income in 1988 was \$94.5 million, compared with \$105.2 million in 1987 and \$64.3 million in 1986. In addition to factors discussed above, changes in net income over the past three years were the result of changes in the Company's net other income or expense and its effective tax rate.

In 1987, net interest income was approximately

\$6 million higher than in 1986. Interest income in 1987 increased primarily because of significantly higher balances of interest-earning investments. However, in 1988, the Company expended a large portion of its cash balance to purchase tendered shares and the outstanding debt of Ungermann-Bass; the Company also incurred interest expense in connection with borrowings related to the Ungermann-Bass acquisition and the assumption of mortgages on real estate purchased during the year. As a result, net interest income during 1988 was approximately \$7 million lower than in the prior year. In addition, in 1988, the Company settled a class action lawsuit that resulted in a pretax charge of \$9.4 million.

The effective tax rate in 1988 was 35 percent, compared with rates of 43 percent in 1987 and 44 percent in 1986. The effective tax rate in 1988 would have been lower except for the amortization of cost in excess of net assets acquired resulting from the Ungermann-Bass acquisition, which is not tax-deductible. The decline in the effective tax rate was primarily the result of lower federal statutory tax rates brought about by the passage of the Tax Reform Act of 1986. The Company elected not to implement Financial Accounting Standards Board Statement of Financial Accounting Standards No. 96, "Accounting for Income Taxes," in 1988 and believes adoption will not have a material effect on the Company's financial statements.

Earnings per share in 1988 were \$.96 per share, compared with \$1.07 per share earned in 1987 and \$.72 per share in 1986. In 1988, the decline in earnings per share matched the decline in net income. However, in 1987, the growth in earnings per share, compared with the prior year, differed from that of net income because of a higher number of weighted average shares outstanding. Sales of stock to employees under the stock purchase plan, grants under option plans, and changes in stock prices resulted in increases in weighted average shares outstanding of less than one percent in 1988, and of 10 percent in 1987.

### ***Personnel***

During the year, the number of employees increased by 1,547, bringing the total number of employees at year-end to 8,624. More than two-thirds of the increase was the result of the acquisitions of Ungermann-Bass and TTSI. Other hiring occurred in areas the Company believes are critical to its success, with the greatest percentage increases in research and development, marketing, and service.

### ***Impact of Currency and Inflation***

In 1988, the weakness of the U.S. dollar against foreign currencies had a positive influence on revenue; however, the impact on operating income was largely moderated by



price reductions taken to maintain consistent pricing across international boundaries, combined with the negative effect of strengthening currencies on international expenses.

The effect of inflation on the Company's financial results has not been significant.

### **Financial Condition**

The Company's financial position remains strong. Total assets at year-end increased to \$1.3 billion, compared with \$973 million in 1987 and \$710 million in 1986. The 1988 increase was due to the Ungermann-Bass acquisition and favorable operating results during the year. The equity base grew to \$857 million from \$724 million and \$538 million in 1987 and 1986, respectively. Cash and equivalents declined during the year, and the Company's debt and short-term borrowing increased as the Company invested in the acquisitions of Ungermann-Bass and TTSI and acquired more property, plant, and equipment. The balance of cash and equivalents stood at \$125 million at September 30, 1988, compared with \$318 million at September 30, 1987, and \$240 million at September 30, 1986.

Funds to support the Company's operations have historically been generated internally from operations and improvements in asset management. These sources of funds have traditionally been supplemented by employee stock purchases. In 1988, cash flow from operations was \$123 million, compared with \$153 million in 1987 and \$134 million in 1986.

During 1988, Tandem invested \$270 million in cash, net of cash acquired, in the acquisitions of Ungermann-Bass and TTSI, and \$216 million in additional property, plant, and equipment. The cost of these investments includes the acquired debt. There were no significant business acquisitions prior to 1988. Property, plant, and equipment investments were \$143 million in 1987 and \$65 million in 1986. The increased investment primarily supported the Company's growth. Property, plant, and equipment investments in 1988 included the purchase of six buildings in the Company's headquarters area in Cupertino, California, and a building

near London for the Company's headquarters in the United Kingdom. Tandem purchased two buildings in 1987 in Cupertino. Prior to 1987, Tandem did not own the buildings it occupied in its headquarters area. The Company previously leased most of the buildings it has purchased. The additional space will allow for expansion and for relocation of employees housed in other Santa Clara County, California, locations.

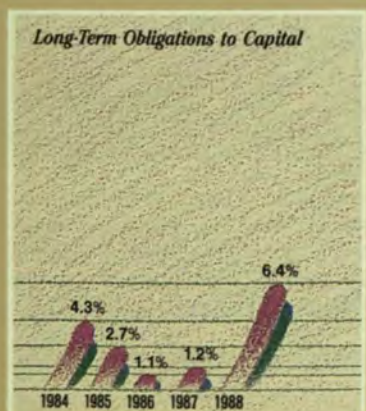
In 1988, the Company borrowed to support its investment activity. In connection with acquisitions and real estate purchases, Tandem's borrowings at year-end were \$148 million, compared with \$11 million at the end of 1987.

Tandem believes it is strategically important to maintain a conservative capital structure and a sound ratio of current assets to current liabilities in order to demonstrate its financial strength and to compete effectively in high-technology markets. As a result of the level of investment activity in 1988, the Company's current ratio decreased and its long-term obligations to capital ratio increased. The current ratio at year-end 1988 was 1.8:1, compared with 3.6:1 and 3.8:1 at the end of 1987 and 1986, respectively. Nineteen percent of the Company's current assets are cash and equivalents; the Company believes the current ratio is sound. The Company plans to repay a portion of the short-term borrowings during fiscal 1989, which would improve the current ratio. Long-term obligations as a percent of capital at the end of 1988 were 6.4 percent, compared with 1.2 percent at the end of 1987 and 1.1 percent at the end of 1986.

The Company has various alternatives to meet future capital needs, including funds generated from future operations, continued stock issuances under employee stock purchase and option plans, and a new \$200 million multiple-option financing facility. The new facility replaces a former \$65 million credit line and was unused at year-end.

Inventory management improved over the prior year, as inventory days declined to 78 days at the end of fiscal 1988, compared with 87 days recorded in 1987 and 76 days in 1986. Accounts receivable days at year-end were 85, compared with 80 and 82 at the end of 1987 and 1986, respectively. The increase in receivable days was partially attributable to the acquisition of Ungermann-Bass. Ungermann-Bass has historically had higher average receivable days than Tandem.

The Company believes that attracting and retaining high-quality employees are keys to success. Methods to achieve these objectives include employee stock option and stock purchase programs, which also provide funds for the Company. As a result of these programs, the Company received \$33 million in 1988, \$81 million in 1987, and \$51 million in 1986 from employee stock purchases and related tax benefits.





## Selected Financial Data

For the years ended September 30

(In thousands except per share amounts)	1988	1987	1986	1985	1984
<b>Revenue</b>	\$1,314,721	\$1,047,532	\$778,014	\$635,983	\$540,514
Cost of revenue	487,791	363,730	283,227	273,516	236,416
Research and development	169,356	109,504	88,202	75,357	54,144
Marketing, general, and administrative	510,313	403,859	299,572	238,152	199,709
<b>Operating income</b>	147,261	170,439	107,013	48,958	50,245
Net interest income	7,477	14,207	8,399	6,178	5,289
Settlement of litigation	(9,375)	—	—	—	—
Provision for income taxes					
Current year	(50,878)	(79,417)	(51,154)	(21,554)	(22,876)
DISC tax reversal	—	—	—	—	9,700
<b>Net income</b>	\$ 94,485	\$ 105,229	\$ 64,258	\$ 33,582	\$ 42,358
<b>Earnings per share</b>	\$ .96	\$ 1.07	\$ .72	\$ .40	\$ .51
Total assets	\$1,318,377	\$ 973,040	\$710,024	\$559,244	\$507,935
Long-term obligations	\$ 58,197	\$ 9,055	\$ 5,795	\$ 11,884	\$ 17,072
Stockholders' investment	\$ 856,861	\$ 723,855	\$537,978	\$423,214	\$378,715

See the Business Combinations note to the consolidated financial statements for a description of significant transactions affecting the 1988 data.



Members of Tandem's Executive Committee, reporting to James G. Treybig, president and chief executive officer, are, from left to right: Ralph K. Ungermann, senior vice president, Ungermann-Bass Group; Donald E. Fowler, senior vice president, Tandem Companies Group; Gerald L. Peterson, senior vice president, Tandem Sales and Marketing Group; Robert C. Marshall, senior vice president and chief operating officer; Stephen C. Schmidt, senior vice president, Tandem Systems Group; and Thomas J. Klitgaard, senior vice president, general counsel and secretary. Not pictured: Gerald D. Held, vice president, strategy and corporate development; and David J. Rynne, senior vice president and chief financial officer.



## Consolidated Statements of Income

For the years ended September 30

(In thousands except per share amounts)	1988	1987	1986
<b>Revenue</b>			
Product revenue	\$1,079,563	\$ 872,003	\$640,993
Service and other revenue	235,158	175,529	137,021
Total revenue	1,314,721	1,047,532	778,014
<b>Costs and expenses</b>			
Cost of product revenue	309,896	231,659	178,300
Cost of service and other revenue	177,895	132,071	104,927
Research and development	169,356	109,504	88,202
Marketing, general, and administrative	510,313	403,859	299,572
Total costs and expenses	1,167,460	877,093	671,001
<b>Operating income</b>	147,261	170,439	107,013
Interest income	15,560	15,811	10,483
Interest expense	(8,083)	(1,604)	(2,084)
Settlement of litigation	(9,375)	—	—
<b>Income before income taxes</b>	145,363	184,646	115,412
<b>Provision for income taxes</b>	50,878	79,417	51,154
<b>Net income</b>	\$ 94,485	\$ 105,229	\$ 64,258
<b>Earnings per share</b>	\$ .96	\$ 1.07	\$ .72
Weighted average shares outstanding	98,683	98,424	89,096

The accompanying notes are an integral part of these statements.



## Consolidated Balance Sheets

September 30, 1988 and 1987

(In thousands except share amounts)	1988	1987
<b>Assets</b>		
<b>Current assets</b>		
Cash and equivalents	\$ 124,599	\$318,271
Accounts receivable, net of allowances of \$9,491 in 1988 and \$8,394 in 1987	355,635	256,296
Inventories	129,426	94,846
Prepaid expenses and other	34,103	22,891
Total current assets	643,763	692,304
<b>Property, plant, and equipment, at cost</b>		
Accumulated depreciation and amortization	(214,638)	(146,118)
Net property, plant, and equipment	418,521	253,232
<b>Cost in excess of net assets acquired</b> , net of amortization of \$6,248	205,128	—
<b>Other assets</b>	50,965	27,504
<b>Total assets</b>	<b>\$1,318,377</b>	<b>\$973,040</b>
<b>Liabilities and stockholders' investment</b>		
<b>Current liabilities</b>		
Notes payable	\$ 80,971	\$ —
Accounts payable	91,935	79,489
Accrued liabilities		
Accrued payroll	35,136	28,140
Accrued vacation	17,450	15,847
Accrued commissions	14,757	13,793
Deferred income	29,479	13,928
Income taxes	25,412	10,728
Other	60,836	31,129
Current maturities of long-term obligations	9,322	1,537
Total current liabilities	365,298	194,591
<b>Long-term obligations</b>	58,197	9,055
<b>Deferred income taxes</b>	38,021	45,539
<b>Stockholders' investment</b>		
Common stock \$.025 par value, authorized 200,000,000 shares, outstanding 96,108,000 in 1988 and 93,849,000 in 1987	2,403	2,346
Additional paid-in capital	403,241	370,142
Retained earnings	445,852	351,367
Accumulated translation adjustments	5,365	—
Total stockholders' investment	856,861	723,855
<b>Total liabilities and stockholders' investment</b>	<b>\$1,318,377</b>	<b>\$973,040</b>

The accompanying notes are an integral part of these statements.



## Consolidated Statements of Stockholders' Investment

For the years ended September 30

(In thousands)	Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Translation Adjustments	Total Stockholders' Investment
	Shares	Amount				
<b>Balances, September 30, 1985</b>	83,451	\$2,086	\$239,248	\$181,880	\$ —	\$423,214
Sale of Common Stock under stock plans, including tax benefits	5,064	127	50,379	—	—	50,506
Net income	—	—	—	64,258	—	64,258
<b>Balances, September 30, 1986</b>	88,515	2,213	289,627	246,138	—	537,978
Sale of Common Stock under stock plans, including tax benefits	5,334	133	80,515	—	—	80,648
Net income	—	—	—	105,229	—	105,229
<b>Balances, September 30, 1987</b>	93,849	2,346	370,142	351,367	—	723,855
Effect of redesignating functional currency	—	—	—	—	10,191	10,191
Balances, October 1, 1987	93,849	2,346	370,142	351,367	10,191	734,046
Sale of Common Stock under stock plans, including tax benefits	2,259	57	33,099	—	—	33,156
Translation adjustments	—	—	—	—	(4,826)	(4,826)
Net income	—	—	—	94,485	—	94,485
<b>Balances, September 30, 1988</b>	96,108	\$2,403	\$403,241	\$445,852	\$ 5,365	\$856,861

The accompanying notes are an integral part of these statements.



## Consolidated Statements of Cash Flows

For the years ended September 30

(In thousands)	1988	1987	1986
<b>Cash flows from operating activities</b>			
Net income	\$ 94,485	\$105,229	\$ 64,258
Adjustments to reconcile net income to net cash from operating activities:			
Depreciation and amortization	85,971	52,501	43,366
Deferred income taxes	(11,831)	8,582	(4,003)
Loss on property, plant, and equipment sales	1,820	1,068	246
Foreign currency hedging losses	3,172	11,064	4,108
Translation adjustments	—	3,775	2,767
Changes in:			
Accounts receivable	(60,993)	(48,591)	(26,966)
Inventories	(12,728)	(29,084)	15,296
Lease receivables	(13,337)	(2,252)	—
Prepaid expenses and non-debt current liabilities	36,292	50,435	34,814
Net cash from operating activities	122,851	152,727	133,886
<b>Cash flows used in investing activities</b>			
Payments for UB and ITI, net of cash acquired	(240,503)	—	—
Investment in property, plant, and equipment	(185,108)	(142,552)	(65,169)
Proceeds from property, plant, and equipment sales	12,046	13,800	7,144
Increase in other assets	(6,093)	(16,550)	(4,681)
Foreign currency hedging activity	(6,447)	(13,227)	(4,085)
Net cash used in investing activities	(426,105)	(158,529)	(66,791)
<b>Cash flows from financing activities</b>			
Borrowings	88,518	2,701	3,420
Repayments	(11,061)	(4,147)	(13,094)
Issuance of Common Stock under stock plans, including tax benefits	33,156	80,648	50,506
Net cash provided by financing activities	110,613	79,202	40,832
Effect of exchange rate fluctuations on cash and equivalents	(1,031)	4,562	3,343
<b>Net increase (decrease) in cash and equivalents</b>	<b>\$(193,672)</b>	<b>\$ 77,962</b>	<b>\$111,270</b>
Supplementary cash flow information—cash paid during the year for:			
Income taxes	\$ 39,077	\$ 54,291	\$ 23,017
Interest	\$ 7,328	\$ 2,746	\$ 2,561

The accompanying notes are an integral part of these statements.



# Notes to Consolidated Financial Statements

## Summary of Significant Accounting Policies

### Consolidation

The consolidated financial statements include the accounts of Tandem Computers Incorporated and its subsidiaries after the elimination of intercompany accounts and transactions.

### Revenue recognition

The Company generally recognizes revenue from equipment sales at the time of shipment. Service and other revenue are recognized ratably over the contractual period or as the services are provided.

### Translation of non-U.S. currency amounts

As a result of growth and other changes relating to business conducted internationally, on October 1, 1987, the Company redesignated the functional currency of its foreign subsidiaries to the local currencies of the countries in which they operate. The most significant impact is that inventory and long-term assets, for periods after October 1, 1987, have been translated at year-end rather than historical exchange rates. Using the prior method, cost of revenue and depreciation expense were translated using historical rates in effect when the related assets were acquired. All revenues and expenses are now translated at average rates of exchange during the year. The effect of this change on 1988 income was insignificant. In addition, all ongoing adjustments resulting from the process of translating each subsidiary's financial statements into U.S. dollars have been accumulated and recorded within a separate component of stockholders' investment. For years prior to 1988, such adjustments were included in net income.

The Company enters into forward exchange and option contracts to reduce the impact of foreign currency fluctuations on monetary asset and liability positions of foreign subsidiaries.

### Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market. The components of inventories at September 30 were:

(In thousands)	1988	1987
Purchased parts and subassemblies	\$ 68,718	\$54,521
Work-in-process	25,894	16,567
Finished goods	34,814	23,758
Total	\$129,426	\$94,846

### Income taxes

The Company accounts for research and development and investment tax credits as a reduction of the provision for income taxes in the year in which the credits are generated. In general, the Company's practice is to provide U.S. federal taxes on undistributed international earnings.

### Cash and equivalents

In November 1987, the Financial Accounting Standards Board issued Statement No. 95, "Statement of Cash Flows." The Company adopted the provisions of the Statement in its fiscal 1988 financial statements and restated previously reported statements of changes in financial position for fiscal 1987 and 1986. Short-term cash investments are valued at cost, which approximates market; have maturity dates not exceeding ninety days; and generally consist of certificates of deposit, time deposits, treasury notes, money market preferred stocks, municipal notes, and commercial paper.

### Property, plant, and equipment

Property, plant, and equipment is stated at cost. Depreciation and amortization are computed using the straight-line method over estimated useful lives, as follows: buildings, 30 years; computer equipment, 3-7 years; leasehold improvements, 1-7 years (the lease term). System spares are depreciated using the double-declining balance method over five years. Property, plant, and equipment balances at September 30 were as follows:

(In thousands)	1988	1987
Land and buildings	\$193,940	\$ 54,336
Machinery and equipment	113,133	81,866
Computer equipment	206,076	144,938
System spares	65,022	54,963
Leasehold improvements	39,939	41,426
Construction in progress	15,049	21,821
Total	\$633,159	\$399,350

Included in the land and buildings and the construction in progress balances at September 30, 1988 and 1987, were approximately \$27 million of costs relating to land and land improvements on a parcel located in San Jose, California, held for future development.

During fiscal 1988, the Company purchased land and six buildings for its headquarters in Cupertino, California, for \$85.5 million. The purchases were financed using \$54.8 million in cash and the assumption of mortgages totaling \$30.7 million. The Company also purchased land and a building for \$16.7 million near London for its U.K. headquarters.



### **Cost in excess of net assets acquired**

The excess acquisition cost over the fair value of net assets of businesses acquired is being amortized using the straight-line method over estimated lives ranging from 10 to 20 years.

### **Software development costs**

The Company capitalizes software development costs as the resulting products become "technologically feasible" and amortizes those costs when, and as, the products are shipped. At a minimum, the amortization must be that which would result using a three-year straight-line method from the date of product release. The amounts of un-amortized software development costs included in other assets at September 30, 1988 and 1987, were \$12.2 million and \$8.7 million, respectively. The amortization expense for 1988 and 1987 was \$5.2 million and \$1.3 million, respectively.

### **Earnings per share**

Earnings per share have been computed based upon the weighted average number of common and common equivalent shares outstanding. Common equivalent shares result from the assumed exercise of outstanding stock options and a convertible debenture, which have a dilutive effect when applying the treasury stock method. Fully diluted earnings per share are substantially the same as reported earnings per share.

### **Leasing Program**

The Company has a vendor leasing program whereby trade lease receivables may be financed by a financial institution either through limited recourse sales of the receivables or through direct borrowings. In the event of a default by a lessee, recourse by the financial institution is limited to the collateralized computer equipment and a recourse amount, if any, from either a limited recourse pool established as a percentage of each associated group of financed lease transactions or limited recourse specified in the individual transaction agreement. The Company may also be required to remarket the computer equipment on a "best efforts" basis on behalf of the financial institution. Collection of the lease receivables is performed by the financial institution. In fiscal 1988 and 1987,

the following amounts were received under the leasing program:

(In thousands)	1988	1987
Sales of lease receivables	\$25,915	\$4,912
Borrowings	14,147	2,550
Total financing	\$40,062	\$7,462

At September 30, 1988 and 1987, reserves for recourse liabilities on sales of lease receivables were approximately \$1.7 million and \$.4 million, respectively.

### **Business Combinations**

#### **Atalla Corporation (Atalla) merger**

Atalla provides secure system solutions in the areas of network interchange, electronic payment, and computer security. On November 24, 1987, Atalla became a wholly owned subsidiary of the Company. The merger involved the exchange of 689,363 of the Company's shares for all of the outstanding shares of Atalla. The transaction has been accounted for as a pooling of interests and the consolidated financial statements have been restated for periods prior to the combination. The effects of the restatement were insignificant.

#### **Integrated Technology, Inc. (ITI) acquisition**

ITI is a telecommunications company that specializes in software development for intelligent telephone networks. In a series of transactions during the year, the Company acquired ITI. In May 1988, ITI became Tandem Telecommunications Systems, Inc. (TTSI).

The Company has paid approximately \$5.9 million in cash, issued a five-year note for \$6.1 million, and assumed ITI's obligations, resulting in cost in excess of net assets acquired of \$16.2 million, which is being amortized on a straight-line basis over ten years.

#### **Ungermann-Bass, Inc. (UB) acquisition**

UB designs, manufactures, markets, and services open enterprise-wide data communications systems for large organizations worldwide. The Company acquired UB for an estimated \$271.4 million, which includes \$21 million of UB debentures. Subsequent to the acquisition, an additional \$6.2 million of debentures were acquired. For accounting purposes, March 18, 1988, was established as the effective date of the acquisition. Accordingly, the Company's consolidated financial statements include the results of UB's operations from that date forward.



The acquisition was accounted for as a purchase and, accordingly, the net assets acquired have been recorded at their estimated fair values at the date of acquisition. A summary of what was acquired, including the excess of the purchase price over the fair value of net assets acquired, follows:

(In thousands)	
Current assets	\$103,432
Cost in excess of net assets acquired	194,722
Other assets	35,190
Total assets	333,344
Current liabilities	44,500
Other liabilities	17,451
Total liabilities	61,951
Total acquisition cost	\$271,393

The cost in excess of net assets acquired is being amortized on a straight-line basis over 20 years.

The following unaudited pro forma financial information shows the results of operations as if the UB acquisition had occurred at the beginning of fiscal 1987 at the purchase price established in March 1988. The information does not include the effects of TTSI because its impact on the pro forma results is immaterial.

The results are not necessarily indicative of what would have occurred during the periods presented had the acquisition actually been made on October 1, 1986, or of future operations of the combined companies. The pro forma results include a reduction of interest income, and where necessary, an increase in interest expense for the cost of funds that would have been used in the assumed purchase at the beginning of each respective period. The pro forma information includes the straight-line amortization of the cost in excess of net assets acquired. Net income and earnings in fiscal 1988 include an after-tax charge of \$6.1 million, or approximately \$.06 per share related to the settlement of litigation.

(In thousands except per share amounts)	Pro Forma (Unaudited)	
	For the year ended September 30	
	1988	1987
Revenues	\$1,372,000	\$1,185,000
Net income	\$ 94,900	\$ 90,100
Earnings per share	\$ .96	\$ .92

### Settlement of Litigation

On May 12, 1988, the U.S. District Court for the Northern District of California entered the final order of judgment providing for the settlement of a 1984 securities class action lawsuit arising from the Company's December 1982 restatement of revenue and earnings for fiscal 1982. In light of the ongoing costs of providing the Company's defense, and without any admission or presumption of liability, the Company elected to contribute \$9.4 million to a settlement fund of \$16.5 million. The Company's insurance carrier contributed \$7.1 million.

### Income Taxes

The provision for income taxes included the following deferred (prepaid) items:

(In thousands)	1988	1987	1986
Federal:			
Current	\$ 21,220	\$40,669	\$26,492
Deferred (prepaid)	(8,253)	4,402	(4,039)
	12,967	45,071	22,453
State:			
Current	10,195	9,362	6,979
Deferred (prepaid)	(917)	3,094	89
	9,278	12,456	7,068
Foreign:			
Current	31,294	20,804	21,686
Deferred (prepaid)	(2,661)	1,086	(53)
	28,633	21,890	21,633
Total provision	\$ 50,878	\$79,417	\$51,154

Sources of deferred (prepaid) taxes were as follows:

(In thousands)	1988	1987	1986
Inventory reserves	\$(3,668)	\$(2,574)	\$ (205)
Installment sale method for income tax reporting	(1,700)	10,300	(8,043)
Accelerated depreciation	440	1,606	447
Effect of intercompany profit eliminations	(2,681)	(10,227)	2,048
Other (including expenses recognized for financial statements, but not for income tax reporting)	(4,222)	9,477	1,750
Total deferred (prepaid)	\$(11,831)	\$ 8,582	\$(4,003)



The provision for income taxes differs from the amount obtained by applying the federal statutory income tax rate to income before income taxes, as follows:

	1988	1987	1986
Federal statutory tax rate	34.0%	43.0%	46.0%
State taxes, net of federal income tax benefit	4.2	3.8	3.2
Investment tax credits	—	—	(2.1)
Research and development tax credits	(3.8)	(2.1)	(.8)
Tax exempt DISC and FSC income	(2.9)	(2.5)	(2.0)
Amortization of cost in excess of net assets acquired	1.5	—	—
Other	2.0	.8	—
Effective tax rate	35.0%	43.0%	44.3%

Largely as a result of the reduction in the federal tax rate by the Tax Reform Act of 1986, the effective tax rate decreased from 44.3 percent in 1986 to 43 percent in 1987, and to 35 percent in 1988. The 3 percent reduction in the federal rate between 1986 and 1987 was partially offset by the elimination of the investment tax credit.

In December 1987, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 96, "Accounting for Income Taxes," which, under a current proposal, the Company would not be required to adopt until fiscal 1991. Earlier adoption has not been elected by Management, pending resolution of certain implementation issues. However, the adoption of SFAS No. 96 is not expected to have a material impact on the Company's financial statements.

### Notes Payable

Short-term notes payable at September 30, 1988, consist of notes and bankers' acceptances of approximately \$74.5 million at a weighted average interest rate of 8.5 percent, and borrowings under uncommitted foreign credit lines of approximately \$6.5 million at a weighted average rate of 8.2 percent.

### Long-term Obligations

Long-term obligations at September 30 consist of the following:

(In thousands)	1988	1987
Mortgages (9.3-14.5%) <sup>(1)</sup>	\$29,998	\$ —
Installment notes due through 1993, collateralized by lease receivables (10.6%) <sup>(2)</sup>	14,524	2,441
Industrial revenue and development bonds due 1991 to 1996 (7.5-12.4%) <sup>(3)</sup>	7,863	2,000
Term note, variable interest, due May 1993 <sup>(4)</sup>	6,085	—
Notes payable in Japanese yen, payable 1989 through 1993 (5.7%) <sup>(2)</sup>	4,606	3,552
Convertible subordinated debenture, payable to an officer in September 1989 (9.5%) <sup>(5)</sup>	1,667	1,667
6.875% convertible subordinated debentures, due March 2011 <sup>(6)</sup>	1,564	—
Capital lease obligations due 1989-1992 (5-15%)	1,212	932
Total obligations	67,519	10,592
Less current portion	(9,322)	(1,537)
Long-term obligations	\$58,197	\$ 9,055

<sup>(1)</sup> Payable monthly; maturing 1990 to 2001; weighted average interest rate at September 30, 1988, was 11.9%. The mortgages are secured by certain land and buildings with a cost of \$68.3 million.

<sup>(2)</sup> Weighted average interest rate at September 30, 1988.

<sup>(3)</sup> Weighted average interest rate at September 30, 1988, was 8.7%.

<sup>(4)</sup> Interest rate at September 30, 1988, was 6.3%.

<sup>(5)</sup> The debenture may be converted into a total of 200,000 shares of Common Stock (50,000 shares per year, beginning September 30, 1986) at a price of \$8.3375, subject to acceleration in certain events.

<sup>(6)</sup> Convertible into \$833.34 per \$1,000 of principal amount.

Principal repayments required in the next five fiscal years are as follows (in millions): \$9.3 (1989), \$23.2 (1990), \$5.2 (1991), \$6.0 (1992) and \$9.2 (1993).

Interest costs related to construction in progress of \$1.6 million and \$.2 million were capitalized in 1988 and 1987. No interest was capitalized in 1986.

In September, 1988, the Company entered into a five-year multiple-option financing facility with 12 banks. The facility agreement provides for U.S. dollar and multicurrency advances. Borrowings under the agreement carry interest based on one of the following: the agent bank's prime rate, an average of the banks' certificate of deposit rates, or the London Interbank Offered Rate (LIBOR). The facility agreement also provides for the establishment of an uncommitted note placement facility, whereby the Company may request the banks to bid for the subscription of notes. Borrowings under the various options are allowed up to an aggregate amount of \$200 million.



The Company pays an annual facility fee of \$.4 million for the commitment, and there are no compensating balance requirements. The agreement also contains certain financial covenants and restrictions with which the Company was in compliance at September 30, 1988.

The Company has guaranteed payment of loans made to officers totaling \$1.9 million at September 30, 1988, under a \$5 million bank line of credit. In addition, the Company has a \$1.7 million note receivable from an officer, bearing interest at 10 percent, and maturing in September 1989 included in other assets.

The Company leases its field offices, certain equipment, automobiles, and some of its operating facilities under operating lease agreements. The Company also has capital leases for certain equipment. Future minimum lease payments, as of September 30, 1988, are as follows:

Fiscal Year	Lease Obligations	
	Capital	Operating
1989	\$ 659	\$ 52,518
1990	475	45,048
1991	66	36,401
1992	28	28,746
1993	2	15,863
Thereafter	—	71,741
<b>Total minimum lease payments</b>	<b>\$1,230</b>	<b>\$250,317</b>

The cost of assets held under capitalized leases totaled \$6.5 million and \$3.7 million at September 30, 1988 and 1987, respectively. The accumulated depreciation associated with these assets totaled \$5.4 million and \$3.3 million at September 30, 1988 and 1987, respectively.

Rent expenses were \$53.4 million in 1988, \$51.1 million in 1987, and \$43.2 million in 1986.

### **Capital Stock**

The Company's authorized capital stock consists of 2.4 million shares of preferred stock, of which 800,000 shares are designated as Series A Participating Preferred Stock; 4 million shares of Junior Common Stock; and 196 million shares of Common Stock. At September 30, 1988, 29.1 million shares of Common Stock were reserved for future issuance under stock option plans, the employee stock purchase plan, and a convertible subordinated debenture. There were no shares of preferred stock or Junior Common Stock outstanding at September 30, 1988.

### **Stock rights**

On June 17, 1988, the Company amended and restated its rights plan (Plan), originally adopted in 1985. The Plan is

intended to protect stockholders from unfair takeover practices. Under the Plan, each share of Common Stock carries one right to obtain additional stock or other property with equivalent value on terms provided in the Plan. The rights will not be exercisable, or transferable apart from the Common Stock, until another person or group of persons (subject to certain exceptions) acquires at least 20 percent of the Common Stock or commences, or announces its intention to commence, a tender offer for at least 30 percent of the Common Stock.

The rights are redeemable by the Board of Directors or upon vote of the stockholders for \$.05, or property with an equivalent value, per right and expire on June 17, 1998.

### **Employee Benefits**

#### **Stock option plans**

The Company has employee stock option plans under which employees and nonemployee directors may be granted options to purchase shares of Common Stock generally at fair market value at the time of the grant. In general, options become exercisable six months after the effective date, vest over four years, and expire no more than ten years after the effective date. At the discretion of the Board of Directors, options granted under the stock option plans may qualify for incentive stock option treatment under the Economic Recovery Tax Act of 1981. At September 30, 1988, options for 1.2 million shares were available for future grant.

#### **Employee stock purchase plan**

Under the plan, the Company may offer shares to employees in two ways. Under one method, eligible employees may elect to purchase shares of Common Stock at 85 percent of fair market value as of the last trading day before, or the last trading day of the quarter. Under this method, in 1988, 1987, and 1986, employees purchased 610,000 shares for aggregate proceeds of \$11.2 million, 463,000 shares for aggregate proceeds of \$7.6 million, and 778,000 shares for aggregate proceeds of \$5.9 million, respectively. Under a second method, the Company may grant to all employees the option to purchase the same number of shares of Common Stock at not less than 85 percent of fair market value at the grant date. As of September 30, 1988, the Company has reserved 10.7 million shares of Common Stock for future issuance under its employee stock purchase plan.



Information concerning the combined option activity during the fiscal years ended September 30, under the stock option and the option portion of the employee stock purchase plan, follows:

	1988		1987		1986	
	Aggregate Shares	Aggregate Price	Aggregate Shares	Aggregate Price	Aggregate Shares	Aggregate Price
(In millions except per share amounts)						
Beginning of year	13.2	\$208.9	13.8	\$154.8	13.9	\$147.2
Options granted	6.1	100.4	4.6	110.3	5.4	60.0
Options exercised (\$2.62 to \$37.00 per share)	(1.6)	(18.5)	(4.9)	(52.0)	(4.3)	(39.3)
Options cancelled	(.7)	(12.9)	(.3)	(4.2)	(1.2)	(13.1)
End of year	17.0	\$277.9	13.2	\$208.9	13.8	\$154.8
Options vested at year-end	7.3		7.1		7.6	

Although all outstanding dilutive stock options and a convertible debenture are considered common stock equivalents in presenting earnings per share under the treasury stock method, the following table shows the maximum share dilution that would occur from assumed option exercises under existing options, based upon vesting in future years within specified price ranges. The Company has a long-standing policy of encouraging all levels of employees to become stockholders through various stock option and purchase programs. This policy is based on a belief that all stockholders benefit from higher productivity, lower turnover, and improved customer satisfaction realized by providing employees with a personal stake in the Company's success.

Maximum number of existing options vested each fiscal year							
Exercise Price Range	1988 and prior	1989	1990	1991	1992	Total Shares	Aggregate Price
(In thousands except price range amounts)							
\$0-\$10	2,844	688	47	—	—	3,579	\$ 31,486
\$10-\$20	3,702	3,501	1,734	1,115	683	10,735	166,890
\$20-\$30	325	351	350	259	27	1,312	36,161
\$30-\$40	384	371	363	234	—	1,352	43,398
	7,255	4,911	2,494	1,608	710	16,978	\$277,935

Common and common equivalent shares			
	Outstanding Shares	Outstanding Equivalents	Total
Fiscal 1988 weighted average	94,976	3,707	98,683
At September 30, 1988	96,108	2,070	98,178

## Commitments and Contingencies

In fiscal 1988, the Company entered into a partnership for the development of an office building in Cupertino, California, and is committed to fund 50 percent of the project's estimated cost of approximately \$14 million over the next two years.

Various actions and claims have been brought or asserted against the Company. Management does not consider them to be material to the Company's financial position.

## Geographic Segment Information

The following table sets forth information about the Company's operations in different geographic regions for the fiscal years ended September 30.

(In thousands)	1988	1987	1986
<b>Revenues</b>			
United States—customers	\$ 664,458	\$ 599,671	\$473,926
United States—interarea	302,601	249,034	118,989
Europe—customers	442,735	302,966	207,670
Europe—interarea	16,823	22,383	57,032
Americas/Pacific—customers	207,528	144,895	96,418
Americas/Pacific—interarea	7,308	10,813	—
	1,641,453	1,329,762	954,035
Eliminations	(326,732)	(282,230)	(176,021)
<b>Total revenue</b>	<b>\$1,314,721</b>	<b>\$1,047,532</b>	<b>\$778,014</b>
<b>Pretax income</b>			
United States	\$ 79,521	\$ 146,238	\$ 74,646
Europe	64,310	37,229	39,821
Americas/Pacific	10,575	7,726	1,007
	154,406	191,193	115,474
Eliminations	(9,043)	(6,547)	(62)
<b>Total pretax income</b>	<b>\$ 145,363</b>	<b>\$ 184,646</b>	<b>\$115,412</b>
<b>Identifiable assets</b>			
United States	\$ 895,062	\$ 713,253	\$546,380
Europe	319,413	213,688	131,853
Americas/Pacific	164,782	105,791	63,701
	1,379,257	1,032,732	741,934
Eliminations	(60,880)	(59,692)	(31,910)
<b>Total identifiable assets</b>	<b>\$1,318,377</b>	<b>\$ 973,040</b>	<b>\$710,024</b>



Intercompany transfers are made at arm's-length prices. Identifiable assets are those assets of the Company that are identified with the operations of the corresponding geographic area. United States customer revenue includes export sales of \$20.3 million in 1988, \$12.4 million in 1987, and \$10 million in 1986. The Company operates primarily in one industry segment, which includes the manufacturing, servicing, and marketing of computer systems and networks.

### Quarterly Financial Data (Unaudited)

(In thousands except per share amounts)

Fiscal 1988				
Quarters Ended	Dec. 31	March 31	June 30	Sept. 30
Total revenue	\$282,282	\$309,449	\$338,993	\$383,997
Gross margin	\$180,026	\$199,547	\$214,248	\$233,109
Income before				
income taxes	\$ 37,019	\$ 36,452	\$ 26,232	\$ 45,660
Net income	\$ 23,693	\$ 23,330	\$ 17,286	\$ 30,176
Earnings per share	\$ .24	\$ .24	\$ .18	\$ .31

Fiscal 1987				
Quarters Ended	Dec. 31	March 31	June 30	Sept. 30
Total revenue	\$240,240	\$245,695	\$267,824	\$293,773
Gross margin	\$157,868	\$159,134	\$172,885	\$193,915
Income before				
income taxes	\$ 48,343	\$ 38,649	\$ 45,490	\$ 52,164
Net income	\$ 27,074	\$ 22,465	\$ 25,884	\$ 29,806
Earnings per share	\$ .29	\$ .23	\$ .26	\$ .30

### Tandem Stock Price

Fiscal Quarter		High	Low
1988	4th Quarter	20 <sup>7</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>2</sub>
	3rd Quarter	20 <sup>5</sup> / <sub>8</sub>	16 <sup>1</sup> / <sub>2</sub>
	2nd Quarter	28 <sup>1</sup> / <sub>4</sub>	17 <sup>1</sup> / <sub>2</sub>
	1st Quarter	36 <sup>3</sup> / <sub>8</sub>	19 <sup>7</sup> / <sub>8</sub>
1987	4th Quarter	33 <sup>1</sup> / <sub>4</sub>	26 <sup>1</sup> / <sub>2</sub>
	3rd Quarter	36 <sup>7</sup> / <sub>8</sub>	30 <sup>7</sup> / <sub>8</sub>
	2nd Quarter	37 <sup>1</sup> / <sub>4</sub>	17 <sup>1</sup> / <sub>2</sub>
	1st Quarter	19 <sup>3</sup> / <sub>8</sub>	16 <sup>3</sup> / <sub>4</sub>

Tandem Computers Incorporated is traded on the New York, Midwest, and Pacific Stock Exchanges under the trading symbol TDM. All quotations shown represent the high and low closing sale prices. The Company has not declared or paid any cash dividends on its Common Stock and has no plans to do so in the foreseeable future.

### Auditors' Report

To Tandem Computers Incorporated:

We have audited the consolidated balance sheets of Tandem Computers Incorporated (a Delaware corporation) and subsidiaries as of September 30, 1988 and 1987, and the related consolidated statements of income, stockholders' investment, and cash flows for each of the three years in the period ended September 30, 1988. 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 in accordance with generally accepted auditing standards. Those standards 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Tandem Computers Incorporated and subsidiaries as of September 30, 1988 and 1987, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 1988, in conformity with generally accepted accounting principles.

San Jose, California  
October 24, 1988

Arthur Andersen & Co.



### Board of Directors

Thomas J. Perkins,  
Chairman of the Board;  
General Partner,  
Kleiner, Perkins, Caufield & Byers

Jack F. Bennett,  
Senior Vice President & Director,  
Exxon Corporation

Morton Collins,  
General Partner, DSV Partners

Thomas J. Davis, Jr.,  
General Partner, Mayfield Fund

Franklin P. Johnson, Jr.,  
General Partner,  
Asset Management Partners

Andrew Knight,  
Chief Executive,  
*The Daily Telegraph*

Robert C. Marshall,  
Senior Vice President and  
Chief Operating Officer,  
Tandem Computers Incorporated

Robert G. Stone, Jr.,  
Chairman of the Board,  
Kirby Exploration Company, Inc.

James G. Treybig,  
President and  
Chief Executive Officer,  
Tandem Computers Incorporated

Ralph K. Ungermann,  
President and  
Chief Executive Officer,  
Ungermann-Bass, Inc.

Thomas I. Unterberg,  
Managing Director,  
Shearson Lehman Hutton Inc.

Walter B. Wriston,  
Chairman, President's Economic  
Policy Advisory Board

### Advisors to the Board of Directors

Martin M. Atalla,  
Vice President,  
Tandem Computers Incorporated  
Washington SyCip,  
Chairman, The SGV Group

### International Advisory Board

Eduardo Santos Andres,  
Spain

Dr. Yaichi Ayukawa,  
Japan

Sir Campbell Fraser,  
United Kingdom

Sir Leslie Froggatt,  
Australia

### Auditors

Arthur Andersen & Co.  
San Jose, California

### Registrar and Transfer Agent

Bank of America N.T. & S.A.  
San Francisco, California

### Form 10-K

A copy of the Company's Report on Form 10-K for the 1988 fiscal year, as filed with the Securities and Exchange Commission, is available on written request. Please direct your request to:

Manager of Investor Relations  
Tandem Computers Incorporated  
19333 Vallco Parkway  
Cupertino, California 95014-2599

### Annual Meeting

The annual meeting of stockholders will be held at 10:00 a.m. on Monday, February 13, 1989, at 10435 North Tantau Avenue, Cupertino, California.

### Corporate Headquarters

19333 Vallco Parkway  
Cupertino, California 95014-2599  
(408) 725-6000

### Corporate Officers

James G. Treybig,  
President and  
Chief Executive Officer

Robert C. Marshall,  
Senior Vice President and  
Chief Operating Officer

Martin M. Atalla,  
Vice President

Jack W. Chapman,  
Vice President—Sales

Donald E. Fowler,  
Senior Vice President and  
General Manager—  
Tandem Companies Group

Robert G. Gargus,  
Corporate Controller

Gerald D. Held,  
Vice President—Strategy and  
Corporate Development

Thomas J. Klitgaard,  
Senior Vice President, General  
Counsel and Secretary

Lawrence A. Laurich,  
Vice President—Systems  
Development and Manufacturing

Gerald L. Peterson,  
Senior Vice President and General  
Manager—Tandem Sales and  
Marketing Group

David J. Rynne,  
Senior Vice President and  
Chief Financial Officer

Stephen C. Schmidt,  
Senior Vice President and General  
Manager—Tandem Systems  
Group

Gerd Stoecker,  
Treasurer

Ralph K. Ungermann,  
Senior Vice President—  
Ungermann-Bass Group

Tandem, NonStop, CLX,  
MULTILAN, PSX, T.I.M.E., TXP,  
VLX, VLX Large Memory, and  
XL80 are trademarks of Tandem  
Computers Incorporated.

CAPS is a trademark of Atalla  
Corporation.

Net/One is a trademark of  
Ungermann-Bass, Inc.

Apple and Macintosh IIx are  
registered trademarks of Apple  
Computer, Inc.

IBM is a registered trademark of  
International Business Machines  
Corporation.

Microsoft and OS/2 are registered  
trademarks of Microsoft  
Corporation.

MIPS is a trademark of MIPS  
Computer Systems, Inc.

SNA\_Hub is a trademark of  
Netlink, Inc.

UNIX and 5ESS are registered  
trademarks of AT&T.



**TANDEM COMPUTERS  
INCORPORATED****Domestic  
Sales Offices****ARIZONA**Phoenix  
Tucson**CALIFORNIA**Culver City  
Los Angeles  
Oakland  
Sacramento  
San Diego  
San Francisco  
Santa Ana  
Santa Clara**COLORADO**

Englewood (Denver)

**CONNECTICUT**Farmington (Hartford)  
Norwalk**FLORIDA**Jacksonville  
Miami  
Tampa**GEORGIA**

Atlanta

**HAWAII**

Honolulu

**ILLINOIS**Chicago  
Itasca**INDIANA**

Indianapolis

**IOWA**Cedar Rapids  
Des Moines**KANSAS**Overland Park  
(Kansas City)**KENTUCKY**

Louisville

**MARYLAND**

Linthicum (Baltimore)

**MASSACHUSETTS**

Newton (Boston)

**MICHIGAN**Flint  
Northville (Detroit)**MINNESOTA**

Minneapolis

**MISSOURI**

Creve Coeur (St. Louis)

**NEBRASKA**

Omaha

**NEVADA**

Las Vegas

**NEW JERSEY**Cherry Hill  
Hasbrouck Heights**NEW MEXICO**

Albuquerque

**NEW YORK**Albany  
Fairport (Rochester)  
Jericho  
New York City**NORTH CAROLINA**Charlotte  
Raleigh**OHIO**Cincinnati  
Cleveland  
Columbus  
Miamisburg (Dayton)**OKLAHOMA**Oklahoma City  
Tulsa**OREGON**Lake Oswego (Portland)  
Salem**PENNSYLVANIA**Allentown  
Cherry Hill  
(Philadelphia)  
King of Prussia  
Pittsburgh**TENNESSEE**

Memphis

**TEXAS**Austin  
Dallas/Fort Worth  
Houston**UTAH**

Salt Lake City

**VIRGINIA**Reston  
Richmond**WASHINGTON**Kirkland (Seattle)  
Olympia**WISCONSIN**

Brookfield (Milwaukee)

**International  
Distributors**Argentina  
Chile  
Colombia  
Finland  
Greece  
Israel  
Middle East  
Malaysia  
Mexico  
Peru  
Philippines  
South Korea  
Taiwan  
Thailand  
Venezuela**International  
Subsidiaries****AUSTRALIA**

Tandem NonStop Pty. Ltd.

Adelaide

Canberra

Melbourne

Perth

Queensland (Brisbane)

Sydney

Tasmania

**AUSTRIA**Tandem Computers  
Ges.m.b.H.

Vienna

**BELGIUM**Tandem Computers  
S.A./N.V.

Zaventem (Brussels)

**CANADA**Tandem Computers  
Canada Limited

Edmonton

Markham

Milton

Montreal

Ottawa

Scarborough

Toronto

Vancouver

**DENMARK**

Tandem Computers A/S

Glostrup (Copenhagen)

**FRANCE**

Tandem Computers S.A.

Paris

Strasbourg

**HONG KONG**Tandem Computers  
(Hong Kong) Limited

Hong Kong

**ITALY**Tandem Computers  
Italia S.p.A.

Milan

Rome

**JAPAN**Tandem Computers  
Japan, Limited  
Nagoya  
Osaka  
Tokyo**THE NETHERLANDS**Tandem Computers  
Europe, Inc.Amstelveen  
(European Headquarters)

Tandem Computers B.V.

Hoofddorp (Amsterdam)

**NEW ZEALAND**

Tandem NonStop Pty. Ltd.

Auckland

Wellington

**NORWAY**Tandem Computers  
(Norway) A/S

Hovik (Oslo)

**SINGAPORE**Tandem Computers  
International Incorporated

Singapore

**SPAIN**Tandem Computers  
Iberica, S.A.

Madrid

**SWEDEN**Tandem Computers AB  
Kista (Stockholm)**SWITZERLAND**Tandem Computers AG  
Schlieren (Zurich)**UNITED KINGDOM**Tandem Computers  
Limited

Birmingham

Glasgow

High Wycombe

Leeds

London

Rochdale

Uxbridge

(U.K. Headquarters)

**WEST GERMANY**

Tandem Computers GmbH

Bonn

Dortmund

Frankfurt

Hamburg

Hilden (Duesseldorf)

Mannheim

Neufahrn (Munich)

Stuttgart

**UNGERMANN-BASS, INC.****Domestic Sales Offices**Atlanta, Georgia  
Boston, Massachusetts  
Chicago, Illinois  
Dallas, Texas  
Denver, Colorado  
Detroit, Michigan  
Hartford, Connecticut  
Houston, Texas  
Los Angeles, California  
Madison, Connecticut  
New York, New York  
Newport Beach, California  
Orlando, Florida  
Philadelphia, Pennsylvania  
San Diego, California  
San Jose, California  
Seattle, Washington  
St. Louis, Missouri  
Washington, D.C.**International  
Subsidiaries**Ungermann-Bass  
(Europe) S.A.

Brussels, Belgium

Ungermann-Bass  
Deutschland GmbH

Frankfurt, West Germany

Ungermann-Bass  
(France) S.A.

Paris, France

Ungermann-Bass K.K.

Tokyo, Japan

Osaka, Japan

Ungermann-Bass Limited

Altrincham, England

Maidenhead, England

LANTEC/Ungermann-Bass  
A.S.

Kongsberg, Norway

Ungermann-Bass A.B.

Solna, Sweden

Ungermann-Bass, Ltd.

Montreal, Canada

Toronto, Canada

**International  
Distributors**Australia  
Belgium  
Denmark  
Finland  
Italy  
Israel  
The Netherlands  
Spain  
Switzerland**ATALLA CORPORATION**

San Jose, California

**TANDEM  
TELECOMMUNICATIONS  
SYSTEMS, INC.**

Plano, Texas



Compaq Computer Corporation  
SiliconValley.Library, CAC05-07  
10300 N. Tantau Ave.  
Cupertino, CA 95014

200133

10269457



It was a landmark year for Tandem.

While our industry faced challenges,

Tandem prospered.

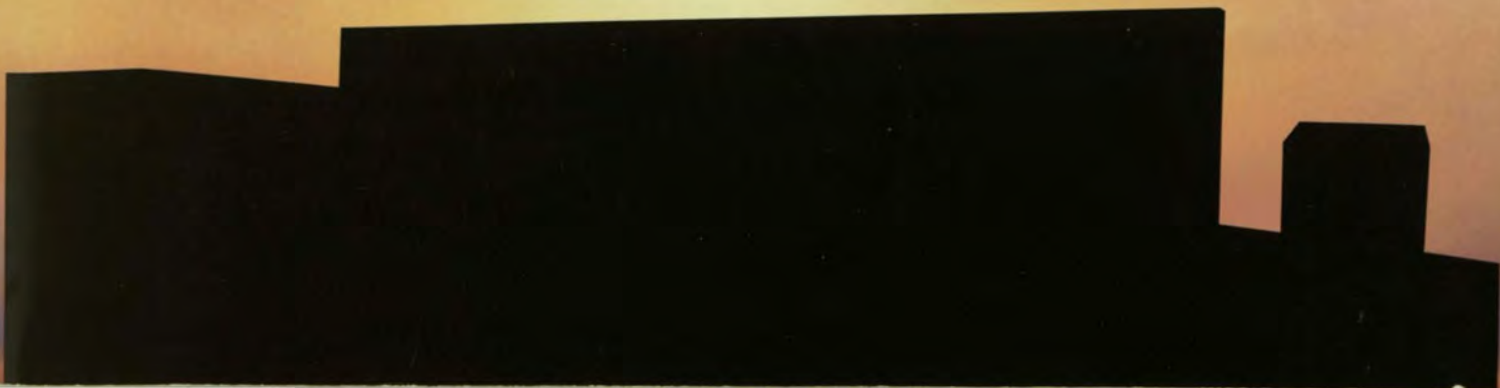
With solid financial performance.

With innovative new products that deliver distinct  
competitive advantages.

With new customer relationships in strategic markets.

With continuing investments in growth markets and  
cutting-edge technologies.

All driven by a powerful vision for winning in  
the 1990s.









"Tandem stands out among  
computer systems companies,  
having demonstrated its ability  
to be a leader in areas in which  
technology and customer  
needs combine...."

Carol E. Muratore  
*Morgan Stanley & Co. Incorporated*  
—August 24, 1989

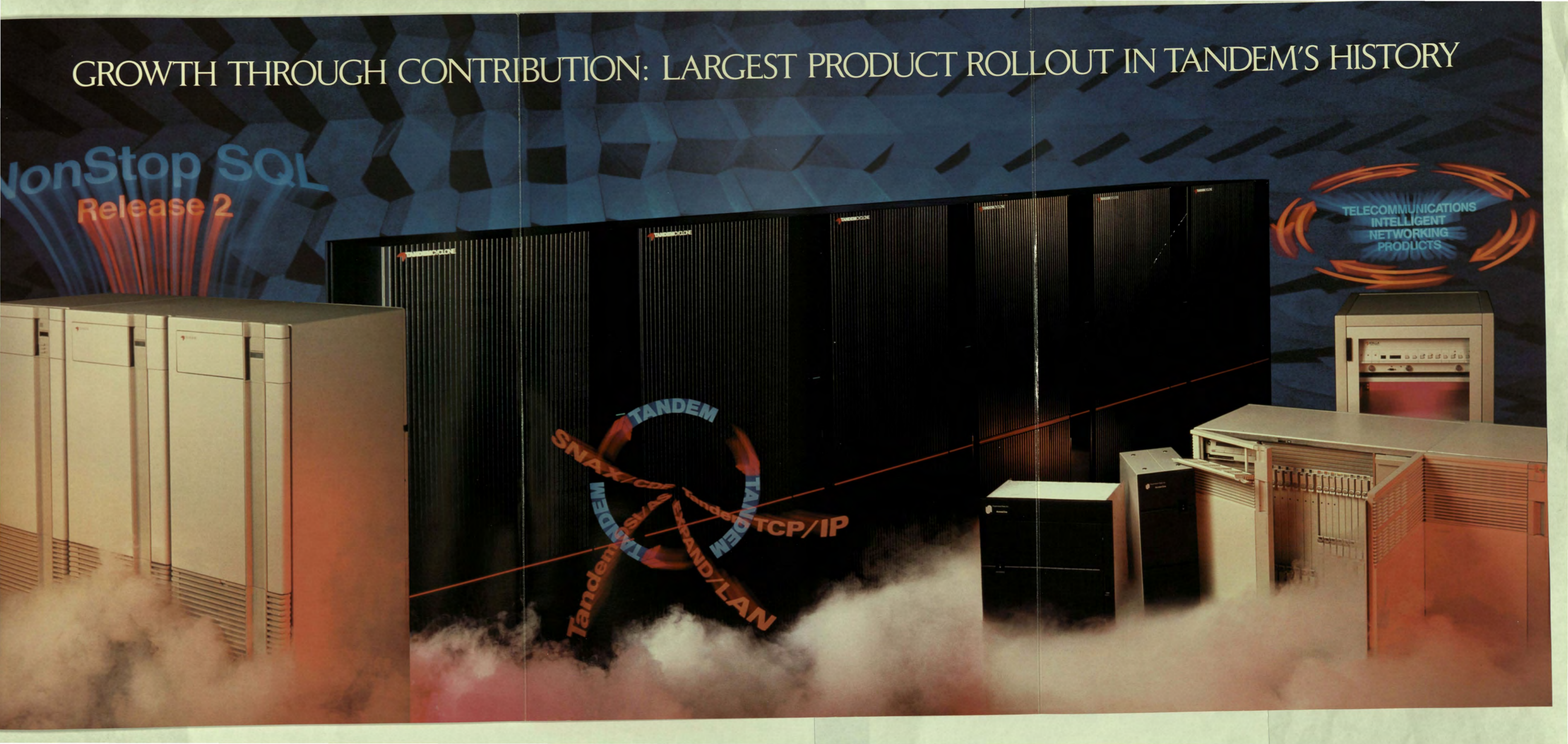


# GROWTH THROUGH CONTRIBUTION: LARGEST PRODUCT ROLLOUT IN TANDEM'S HISTORY

NonStop SQL  
Release 2

TELECOMMUNICATIONS  
INTELLIGENT  
NETWORKING  
PRODUCTS

TANDEM  
SNAX/CO  
TANDEM  
TANDEM  
TANDEM  
TANDEM  
TCP/IP  
TANDEM  
TANDEM/LAN





"Tandem management, in our opinion, has crafted the best product strategy for the early 1990s of any of the key competitors within the commercial computer systems industry."

Joseph Payne  
*Alex. Brown & Sons Incorporated*  
—July 25, 1989



"Tandem is in a stronger  
technological position than  
ever."

Laura Conigliaro  
*Prudential-Bache Securities Inc.*  
—August 4, 1989



## Highlights

For the years ended September 30

(Dollars in thousands except per share amounts)	1989	1988	1987
Revenues	\$1,632,522	\$1,314,721	\$1,047,532
Operating income	\$ 184,327	\$ 147,261	\$ 170,439
Operating margin	11.3%	11.2%	16.3%
Net income	\$ 118,316	\$ 94,485	\$ 105,229
Earnings per share	\$ 1.17	\$ .96	\$ 1.07
Working capital	\$ 421,746	\$ 278,465	\$ 497,713
Total assets	\$1,618,788	\$1,318,377	\$ 973,040
Stockholders' investment	\$ 989,118	\$ 856,861	\$ 723,855
Number of employees	9,548	8,624	7,077

Tandem Computers Incorporated, a FORTUNE 500 company, is a leading supplier of online computer systems and enterprise networks.

Around the world, banks, manufacturers, telecommunications companies, retailers, and other enterprises use Tandem systems in applications where a high volume of business transactions must be processed each second and recorded instantly.

The Tandem NonStop system family spans the range

of performance requirements for online processing. NonStop systems can be connected in networks with each other and with equipment from other vendors to provide a single computing resource for an organization. Tandem also offers a system based on the industry-standard UNIX® operating system.

Through its wholly owned subsidiaries Ungermann-Bass, Inc., and Atalla Corporation, Tandem provides additional products for open, enterprise

networking and security applications, respectively. Tandem's wholly owned subsidiary Tandem Telecommunications Systems, Inc. (TTSI), is developing intelligent networking products for the telecommunications industry.

Founded in 1974, Tandem employs more than 9,500 people. The Company and its subsidiaries manufacture products in the United States, West Germany, and Mexico, and support customers from more than 150 locations worldwide.



## To Our Stockholders:

**T**andem performed well in 1989, finishing the year in a strong position to win and grow in the 1990s. Our success was based on the strength of our products, our organization, and key competitive wins. With a view to the future, we invested in strategically important technologies and markets.

In addition, we initiated a series of exciting product introductions, which will continue into 1990. The most significant set of new offerings in our history, these products are based on our vision of enterprises using online systems and open networks throughout every facet of operation.

At the heart of Tandem's strategy for success are commitments to pursue high-growth markets, to offer products that make fundamental contributions to these markets, and to establish partnerships that help us offer complete solutions to business problems.

### **Marketing and sales success**

Our marketing and sales people worldwide did an excellent job in 1989, helping to bring revenues to \$1.6 billion, a 24 percent gain over our 1988 revenues. Net income grew 25 percent to \$118.3 million. Earnings per share were \$1.17, compared with \$.96 per share in 1988. Revenue and profit growth were especially favorable when compared with the industry as a whole.

*"At the heart of Tandem's strategy for success are commitments to pursue high-growth markets, to offer products that make fundamental contributions to these markets, and to establish partnerships that help us offer complete solutions to business problems."*



Sales in the United States strengthened, especially during the second half of the year. International business was strong, particularly in the Pacific Rim countries. Investment in the development of Japanese markets showed results—our subsidiary exceeded \$100 million in yearly revenue, capping three years of growth averaging 87 percent per year.

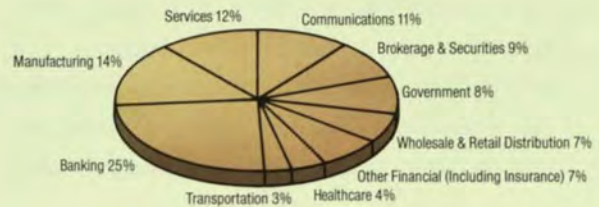
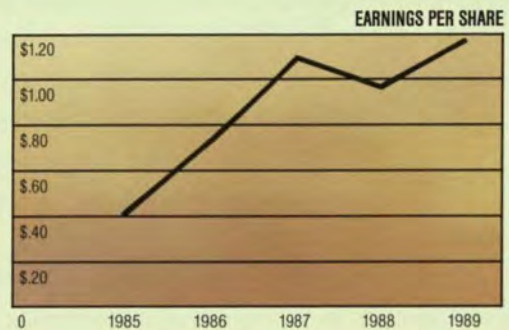
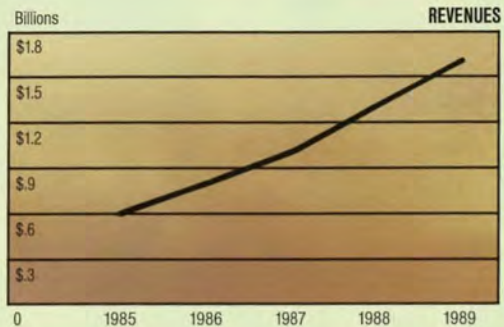
Our 1989 performance reflects a highly successful merger with Ungermann-Bass, Inc. Ungermann-Bass achieved solid revenue growth and margin improvement, with continued strong demand for the innovative Access/One network delivery system. In addition, Tandem and Ungermann-Bass won a number of accounts together, demonstrating the strength of this partnership.

Sales of Tandem's midrange NonStop CLX systems were strong. CLX systems were primarily responsible for our large number of new customers in 1989, and for several large orders for distributed systems. Sales of our NonStop VLX entry-level mainframe reached record levels, even as we prepared to announce the powerful NonStop Cyclone mainframe system.

### Strengthening database position

One of the most exciting successes in 1989 was the increased strength of our competitive database position, as reflected in many strategic orders. After a rigorous competitive test, or benchmark, the California Department of Motor Vehicles (DMV) selected Tandem systems over IBM systems to manage one of the largest online databases in the world. The DMV will use Tandem's NonStop SQL database management software to handle its driver licensing, vehicle registration, and occupational licensing database. Other large database orders were placed by McKesson Corporation and the Southern California region of the Kaiser Permanente Medical Care Program.

Tandem was chosen in large part because of our NonStop SQL software, with capabilities unique in the industry. Our Benchmark Center in Cupertino, California,



**1989 PRODUCT REVENUES BY INDUSTRY**  
Does not include revenues of Atalla, TTSI, or Ungermann-Bass.



enabled us to implement competitive benchmarks and provide both customers and third-party software vendors with an environment for testing application programs on Tandem systems.

### Investment in product vision

We invested heavily in our product vision for the next decade, as reflected in product introductions during 1989 and 1990.

During 1989, we announced the second release of our high-performance NonStop SQL software, which now exploits the power of Tandem's parallel architecture to process batch and query workloads, as well as online transaction processing (OLTP) workloads. We also strengthened our NonStop CLX family with shipment of the more powerful and expandable CLX 700 series.

We introduced a number of products that use major networking standards to help link separate computing systems into powerful enterprise resources. For example, we began shipping SNAX/CDF (Cross-Domain Facility) software, which enables Tandem systems to be hosts in IBM SNA (System Network Architecture) networks.

Our subsidiary Tandem Telecommunications Systems, Inc. (TTSI), is planning to introduce new products that provide intelligent networking services in telephone company

networks. We believe these products address exciting opportunities in a dynamic growth market.

In addition, we made major product introductions after the year's close, including the NonStop Cyclone system, the industry's most powerful online mainframe; the Integrity S2

*"We invested heavily in our product vision for the next decade, as reflected in product introductions during 1989 and 1990."*

system, which brings fundamental Tandem strengths to the fast-growing market for UNIX systems; and an array of products from Ungermann-Bass, for open, enterprise networking.

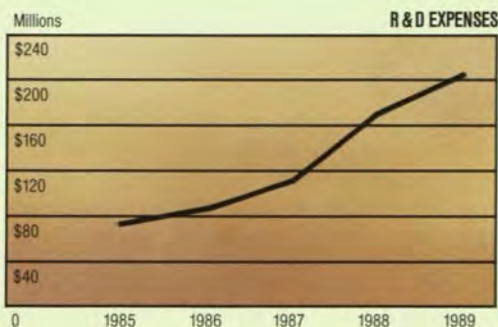
### New strategic partnerships

Because partnerships enable Tandem to offer customers new technologies and total business solutions faster, we established a number of strategic relationships in 1989.

In an important step toward providing easy, open access to information stored in NonStop SQL databases, we established several agreements with leading vendors of industry-standard application development tools. These vendors include Information Builders, Inc.; Ingres Corporation; Micro Decisionware, Inc.; OnLine Solutions, Inc.; Oracle Corporation; and Sybase, Inc.

We entered into an agreement with Logica Data Architects Inc. for the development of a Tandem system software product supporting X.400, an international standard for exchanging information among different computer systems. Another agreement, with Merit Systems, is for the development of MAP 3.0, a communications standard designed for use in factory environments.

We continued to offer industry-specific application architectures in conjunction with third-party software providers. A number of customers, for instance, selected our





T.I.M.E. (Tandem Integrated Manufacturing Environment) architecture. Also, Tandem contracted with DMR Group, Inc., of Canada, to develop software to improve communication between the critical business functions of financial institutions.

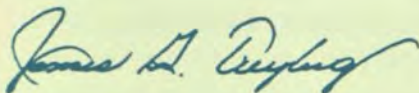
New partnerships with major system integrators were established to help customers implement business solutions. The companies involved include Westinghouse Electric Corporation's Electronic Systems Group, and Volt Delta Resources Incorporated, a veteran provider of solutions for the telecommunications industry.

### Looking forward to the new decade

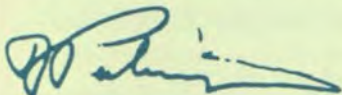
Fiscal 1989 was a good year for Tandem, and we're looking forward to the start of a new decade. We expect 1990 to be an exciting year—one in which we introduce significant new products that will make unique market contributions and offer our customers competitive advantages in their industries.

This annual report is dedicated to the people of Tandem who create these products, and to our customers—current and future—who will benefit from using them.

Sincerely,



James G. Treybig  
President and Chief Executive Officer



Thomas J. Perkins  
Chairman of the Board

December 12, 1989



Thomas J. Perkins

James G. Treybig



## Growth Through Contribution: Systems

◆  
**NEW SYSTEMS DEMONSTRATE  
TANDEM'S ADVANTAGES  
FOR ONLINE PROCESSING IN  
THE 1990s.**  
◆



Far more powerful than any previous Tandem system, the new NonStop Cyclone system is capable of managing the most demanding workload of mixed OLTP, batch, and query processing—allowing customers to put entire enterprises online.

**A** look into the future suggests major changes in computing. Today, many business applications are going online because of the competitive advantage afforded by accurate, timely, and always-available information. Powerful technologies of the 1980s—personal computers, workstations, networks that connect different kinds of systems, and easy-to-use relational database systems—are being combined with online systems to help organizations use information for maximum competitive advantage.

With these changes, new demands are emerging. Centralized systems must be powerful enough to handle the heavier networking and database management loads that result from expanding online applications and a more complex computing environment. They must be able to integrate traditionally separate tasks such as online and batch processing into unified corporate functions to provide more efficient and cost-effective operations.

At the same time, workgroups and branch offices increasingly need distributed systems that can handle local data and services for networks of desktop devices, while accessing and updating corporate data. And, as information resources become online assets, the fundamental Tandem system benefits of high availability, data integrity, price/performance, and expandability are becoming more important.

We believe that new products from Tandem help extend these benefits to the systems, databases, and networks of tomorrow's online enterprises—and thus offer customers advantages no other company's products can.

### **NonStop Cyclone system— a mainframe for the 1990s**

In 1976, Tandem's original NonStop system, with its Guardian operating system software, brought unique contributions to the online transaction processing (OLTP) market. It was the

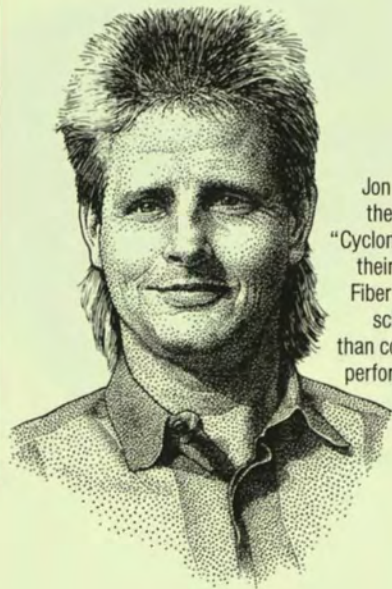




first commercial computer architecture designed to withstand failures (that is, to provide fault tolerance), so critical online business applications and data could be available 24 hours a day. It was also the first to harness the power of parallelism—multiple independent processors that handle separate parts of a task—to provide both excellent price/performance and modular expandability. Its ability to handle growing online applications could be increased just by adding processors, without software changes.

The NonStop system architecture has proved a powerful platform for supporting technological advances that enhance functionality and price/performance. With new

The first customer test site for Tandem's NonStop Cyclone mainframe was the Securities Industry Automation Corporation (SIAC), jointly owned by the New York and American stock exchanges. A Tandem customer since 1976, SIAC has the largest single installation of Tandem systems in the United States. Albert Bocchetti, SIAC vice president: "Within two years, we will have the capacity to handle five times the current average daily volume of the New York Stock Exchange. Strategically, Cyclone can play an important role as our platform of the future."



Jon Sjostedt, a senior member of the Cyclone development team: "Cyclone systems lead the industry with their extensive use of fiber optics. Fiber optics greatly simplify cabling schemes, are much less bulky than copper cables, and give improved performance over greater distances."

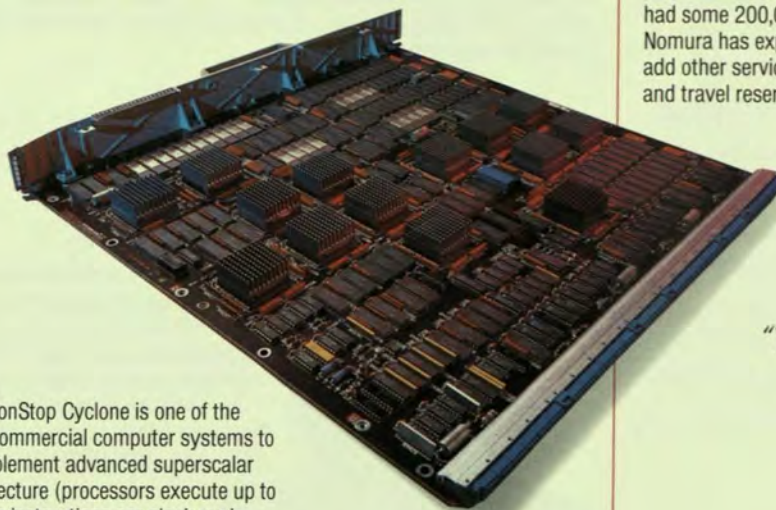


products being introduced, Tandem is further leveraging this architecture to meet the emerging demands of new information processing environments.

In October 1989, Tandem introduced the NonStop Cyclone system. Greatly extending the performance range of NonStop systems, the Cyclone system is optimized for the heavy workloads that result when online systems support increasingly large networks, massive databases, and mixed workloads of OLTP, batch, and query processing. We believe that the NonStop Cyclone system is a new kind of main-frame computer system, uniquely suited to the demands of information processing in the 1990s.

With Tandem's integral NonStop SQL database software, the Cyclone system can process online applications simultaneously with batch and decision-support queries, using a single copy of the database. And it offers these benefits in conjunction with the traditional Tandem system strengths of high availability and expandability.

The Cyclone system is compatible with other NonStop systems, protecting investments in software programs by enabling customers to move applications to Cyclone



NonStop Cyclone is one of the first commercial computer systems to implement advanced superscalar architecture (processors execute up to two instructions per clock cycle, instead of one) for higher performance.



Nomura Securities, the world's largest brokerage firm and a major user of Tandem NonStop VLX systems, introduced a revolutionary system in 1988 for home trading of securities. Based on the Nintendo Famicom game terminal owned by 14 million Japanese households, the easy-to-use system had some 200,000 subscribers by the end of 1989. As usage has grown, Nomura has expanded its network of VLX systems. The company plans to add other services to the network, including home banking, home shopping, and travel reservations.

*"Tandem has established itself as the leader in high-end transaction processing."*

John C. Levinson  
Goldman, Sachs & Co.  
—October 20, 1989



systems without reprogramming. Customer investments in NonStop VLX systems, now the entry-point systems for Tandem's mainframe line, enjoy added protection, because a Cyclone system can actually incorporate VLX processors.

With its power, versatility, and other fundamental strengths, the NonStop Cyclone system helps broaden Tandem's market significantly, beyond OLTP to batch and query processing. Combined with other Tandem products for distributed processing, database management, and enterprise networking, Cyclone systems offer customers a compelling alternative to traditional mainframe systems.

### **NonStop CLX—distributed power for online enterprises**

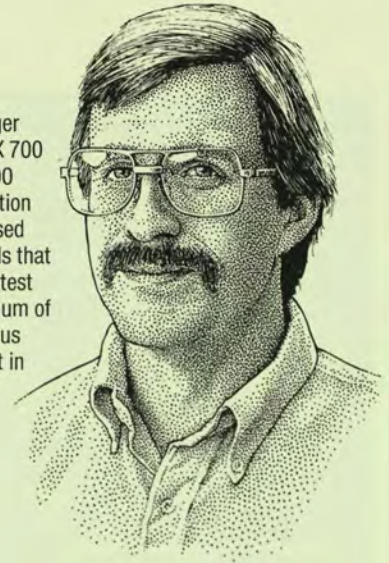
Large mainframes and corporate databases meet an organization's need to manage key data centrally. Branch offices, departments, and workgroups require local control of data for faster response time and lower communications costs.

Tandem's NonStop CLX systems are a family of expandable midrange computers that offer the best price/performance in their class. Based on the same NonStop architecture, they can be linked in networks with any combination of other NonStop systems, to distribute processing power and data anywhere.

Because CLX systems can run the same software as other NonStop systems, customers can distribute applications. This compatibility gives enterprises a graceful, nondisruptive way to move growing online applications from a single CLX system to larger NonStop systems and networks.

In 1989, Tandem added four high-performance systems to the NonStop CLX family, demonstrating the Company's

Bill Stenzel, program manager for the development of the CLX 700 systems: "NonStop CLX 700 systems employ next-generation CMOS technology for increased performance. Using a set of tools that lets us move designs to the latest CMOS processes—with a minimum of development effort—helped us to have an enhanced product in production very quickly."



Tandem's NonStop CLX systems offer wide expandability, excellent price/performance, and software compatibility with other NonStop systems.

*"Tandem had the foresight in the 1970s to design computers employing technology of the 1990s."*

Steven Milunovich  
The First Boston Corporation  
—August 29, 1989





commitment to this strategic product. The new CLX 700 series, which was well received by customers, extends system performance through design innovations that use advanced semiconductor technologies. The NonStop CLX family now offers broad expandability: A customer can start with a single-processor CLX 610 system and grow economically to a powerful eight-processor CLX 780 system.

We believe that NonStop CLX, VLX, and Cyclone systems give customers the performance range, online functionality, and distributed capabilities required to meet the demands of information processing in the coming decade.

Because of the advantages they offer for distributed processing, NonStop CLX systems are slated for all major branches of the 720-branch Banco Nacional de Mexico (Banamex), Mexico's largest bank. Mario Quijada, the bank's systems director: "Quality service to Banamex customers requires quality tools. Consequently, Tandem systems have become strategically essential over the past ten years to our technological infrastructure and to the operation of our ATM network, which is the largest in Mexico."



NonStop CLX 700 systems are designed for continuous processing and easy servicing. A customer can replace any major component without tools and without shutting down the system—so critical business applications are not interrupted.



## Growth Through Contribution: Database and Storage

◆  
NEW CAPABILITIES STRENGTHEN  
TANDEM'S OFFERINGS  
IN DATABASE SYSTEMS.  
◆



In 1989, Tandem enhanced its leadership in high-performance relational database management with Release 2 of its NonStop SQL database system software.

*"Tandem has cracked the code on selling into the heartland of large OLTP applications, where database management, transaction processing performance, and other mainframe attributes are the key purchase criteria."*

Christopher W. Mines  
Cowen & Company  
—August 9, 1989

During 1989, Tandem introduced new database features that extend the company's market reach beyond OLTP to include the breadth of processing tasks in large organizations. The Company also established new partnerships to allow some of the industry's most popular tools for application development to run with Tandem's NonStop SQL database systems. Together with continuing investments in new technologies for cost-effective data storage, these steps put Tandem in a strong position to provide database and storage systems for tomorrow's online enterprises.

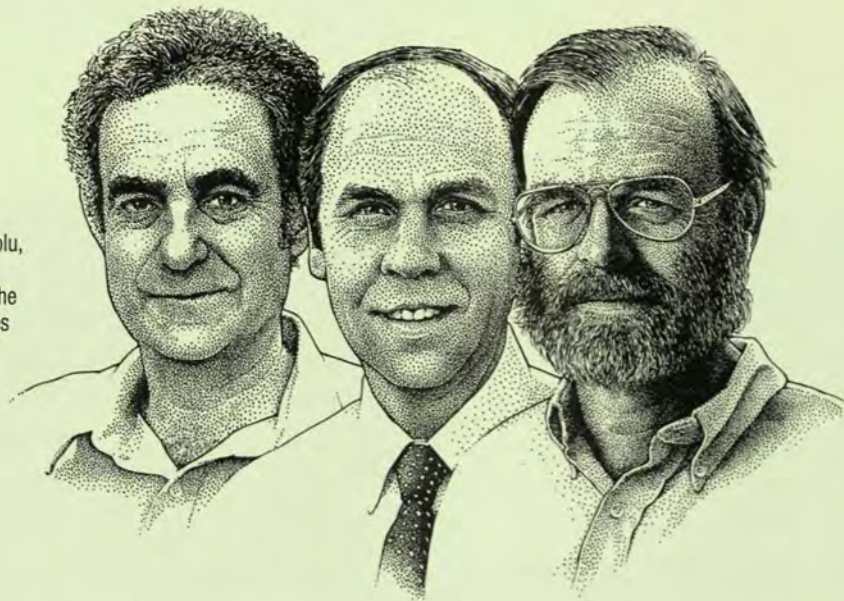
### NonStop SQL, Release 2—extending the power of parallelism

Introduced in 1989, the second generation of Tandem's NonStop SQL database software extends the power of parallelism inherent in Tandem's multiprocessor systems beyond OLTP to include batch and query processing applications. (Batch jobs are regularly scheduled tasks, such as payroll processing or billing, that usually run sequentially until complete. Queries are batch-like jobs that tend to be smaller and unscheduled, such as when a manufacturer wants to generate an up-to-the-minute list of customers who have ordered a certain part.) The result is that customers can consolidate more kinds of processing with their online resources—helping to control costs and streamline operations by eliminating multiple databases—while benefiting from the high performance, availability, and expandability of Tandem systems. Other important features in NonStop SQL software, Release 2, provide online manageability, including the ability to reorganize data files and move or add file partitions while processing continues.

First announced in 1987, Tandem's NonStop SQL software illustrates the Company's strategy to implement the standards that customers want, while adding distinct advantages for OLTP. An implementation of the industry-standard SQL (Structured Query Language) data language



Three contributors to Tandem database development—Franco Putzolu, Jerry Held, and Jim Gray (left to right)—were recognized in 1989 by the Association for Computing Machines for their pioneering roles in relational database technology.



and relational database model, NonStop SQL software was the first SQL product in the industry to provide both the high performance needed for transaction processing and fully transparent data distribution. Users can read, write, and update data anywhere in a network of Tandem NonStop systems without having to know where the data resides. And NonStop SQL software offers features to protect databases against possible damage from failures during transactions that take place within a single system, or that span multiple systems over a network.

We believe that NonStop SQL software, Release 2, offers our customers unmatched capabilities: It provides a single database for OLTP, batch, and query processing, with high performance, productivity, and distributed data—in addition to the fundamental Tandem system strengths of high availability, data integrity, and expandability.

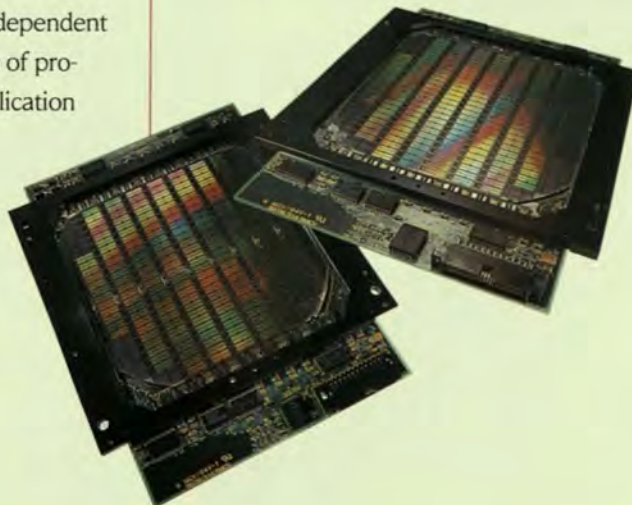
### **Powerful tools for application development**

Tandem established relationships with several independent software providers in 1989 to support its strategy of providing users with a comprehensive choice of application

development tools. Agreements were made with the following companies:

- ◆ Information Builders, Inc.—To develop and market FOCUS, Information Builders' fourth-generation language database tools, for use with NonStop SQL software and Tandem's Enscribe databases.
- ◆ Ingres Corporation—To develop and market Ingres's database tools for use with NonStop SQL software.
- ◆ Micro Decisionware, Inc.—To market jointly Micro Decisionware's PC/SQL-Link as a tool to allow personal computers to use and format information stored in NonStop SQL databases.
- ◆ OnLine Solutions, Inc.—To market jointly OnLine Solutions' Cullinet expert-systems application development tools for NonStop SQL software.
- ◆ Oracle Corporation—To develop and market Oracle's database tools with NonStop SQL software.

Anamartic Ltd., in which Tandem is an investor, recently unveiled a storage device based on whole-wafer integration technology. Tandem plans to use this technology in the future to enhance reliability and performance.





◆ Sybase, Inc.—To license the right to develop an Ashton-Tate/Microsoft SQL Server gateway to NonStop SQL software, providing Tandem customers with a wide choice of SQL Server tools.

These agreements will allow Tandem to offer its customers some of the most popular development tools on the market today. Combined with those already offered by Tandem—and by the independent software vendors in the Tandem Alliance program—these tools will provide powerful ways to build new database applications or move existing applications to Tandem systems.

### Leading-edge storage technologies

As enterprises expand their databases, there will be a need for ever-greater storage capacity at lower cost. Tandem is exploring two promising technological developments to answer this need.

In 1989, Tandem entered into a licensing agreement with Array Technology Corporation to develop disk subsystems based on redundant arrays of inexpensive disks. This exciting technology offers extremely high data availability at low cost for large online databases.

In addition, Tandem's investment in Anamartic Ltd. yielded results in October 1989, when Tandem became the first company to receive Anamartic's new device based on whole-wafer storage technology. Offering data access up to 100 times faster than the access time of disk drives, whole-wafer storage presents new opportunities for increasing reliability and performance, while reducing the size and cost of storage devices.



To achieve higher productivity from its complex database systems, Miele & Cie. GmbH & Co.—a West German company whose name is synonymous throughout Europe with quality home appliances—became the first European user of Tandem's NonStop SQL relational database software. Bernd Respondek (inset), data processing manager, reports on Miele's success at Bielefeld, one of its seven production facilities: "We are developing new applications quicker. And, because we are getting more detailed information more rapidly, we are able to manage a larger number of parts with the same number of people. NonStop SQL software is our standard for the future."



Tandem's data storage devices offer special features for fault tolerance, excellent price/performance, economical growth, and easy maintenance. In 1989, Japan's Ministry of International Trade and Industry (MITI) gave its prestigious Good Design Prize for Foreign Products to Tandem's XL80 disk storage facility.



## Growth Through Contribution: Networking

◆  
**TANDEM AND UNGERMANN-BASS  
ENHANCE CAPABILITIES FOR  
ENTERPRISE NETWORKING.**  
◆



We believe that Ungermann-Bass's Access/One system is the first truly manageable network delivery system for enterprise applications.

Brad Noblet, a main architect of the Access/One system: "The challenge of the Access/One system was to have a wide variety of industry-standard devices communicate over ordinary telephone wire reliably and concurrently with one another. We were excited to be able to achieve this—while maintaining performance and integrating network management at all levels."



Open, standards-based networks are essential to combining varied systems and databases into unified enterprise resources. Such networks let customers choose the technology solutions best suited to specific applications—while helping to protect investments in existing equipment and applications.

To strengthen its position in networking, Tandem merged in 1988 with Ungermann-Bass, Inc., of Santa Clara, California, a leader in enterprise networking for more than a decade. In 1989, Tandem and Ungermann-Bass brought new products to market that support major networking standards, thus enhancing both companies' positions in enterprise networking.

### **Complete, open, and flexible enterprise networks**

Ungermann-Bass is committed to providing customers with complete, open, and flexible networks that can link most major devices—from personal computers to mainframes. Ungermann-Bass's Net/One system, for example, interconnects information processing devices from all leading vendors and permits the addition of devices as they are needed. Its Universal Workstation software lets workstations running either the MS-DOS or the OS/2 operating system communicate with a variety of other systems anywhere in an enterprise.

The Access/One network delivery system, a single unit able to fit into a telephone closet, uses ordinary unshielded twisted-pair telephone wire to connect local users. We believe that the Access/One system is the first truly manageable network delivery system to integrate both local area network (LAN) and wide area network (WAN) applications into a single platform.

Ungermann-Bass offers its customers choices of media, ranging from twisted-pair phone wire to fiber-optic wiring. In 1989, Ungermann-Bass installed the first fully operational Fiber Distributed Data Interface (FDDI) network, at Microsoft Corporation's world headquarters in Redmond, Washington. Microsoft's Ungermann-Bass network received the Enterprise



Network Excellence: Global User Award sponsored by the NetWorld '89 conference and the trade publication *Network World*.

In October 1989, Ungermann-Bass introduced an array of products based on the Access/One system to help customers implement critical business applications more easily. Some of the products make it easier to connect departmental users, including users of Apple Computer's LocalTalk networks. Others provide new tools to integrate LAN and WAN applications, and to manage networks effectively—down to the individual workstation.

### **Leadership in distributed OLTP and multivendor networking**

To give users maximum flexibility in integrating Tandem OLTP solutions into enterprise networks, Tandem is committed to developing and marketing products that adhere to networking standards, making it easy to integrate systems from other vendors with Tandem systems.

Expand networking software is the foundation for Tandem's strengths in distributed processing. Expand software gives users a single view of distributed applications and data anywhere in the network, relieving programmers of the need to know where files and applications are located. In 1989, Tandem introduced its Expand/LAN software, which lets industry-standard Ethernet LANs act as part of Expand networks.

In 1989, Tandem announced additional new products and partnerships to enhance communications between Tandem systems and other systems that use major networking standards. These products support standards including Open Systems Interconnection (OSI), an official international standard, and Transmission Control Protocol/Internet Protocol (TCP/IP), a widely accepted standard that lets Tandem systems integrate all major workstation environments.

A variety of Tandem products can link Tandem systems with IBM System Network Architecture (SNA) environments. One such product announced in 1989, SNAX/CDF



Margo Holen, section manager for communications software development: "SNAX/CDF software lets a Tandem system act as a host in an IBM SNA network, so customers can access Tandem OLTP applications from devices linked to other SNA hosts. A small team of people created SNAX/CDF software—with long hours, lots of excitement, and the belief that this capability is important to our customers."



In 1989, Tandem introduced products to enhance our customers' ability to link different vendors' systems with Tandem NonStop systems.

*"Recent software announcements at Tandem are strategically important and highlight the company's growing role as a provider of multivendor, global networks."*

Thomas T. Rooney  
Donaldson, Luftin & Jenrette Securities Corporation  
—July 31, 1989





software, enables Tandem systems to act as hosts in SNA networks, so customers can develop applications on a Tandem system and access them through devices attached to an SNA host.

### Security for online resources

As more critical data is transmitted over enterprise networks, demand for network security increases. Atalla Corporation, a Tandem subsidiary since November 1987, is the industry leader in hardware-based network security solutions using encryption technology. Atalla has security systems installed in more than 1,500 financial institutions and retail enterprises worldwide.

To provide data security for high-volume ATM, electronic funds transfer, and personal computer wire transfer applications running on Tandem NonStop systems, Atalla introduced the A-5000 High-Performance Security Module in 1989.

The Access/One system from Ungermann-Bass is a key element in a network at the huge E.I. du Pont de Nemours & Co. research and development complex in Wilmington, Delaware. One of the largest campus-wide networks in the eastern United States, it has 8,500 users—up from 2,500 three years ago—and supports a wide variety of host computers, terminals, and personal computers. Network manager, Hank Stocklosa (inset): "No matter what it is, we can connect it with the Access/One system, using existing telephone cables. The Access/One system is helping us achieve the ability to move quickly and inexpensively toward our vision of distributed computer power on every desktop."





### Intelligent networking for telephone companies

Telephone companies are increasingly using computer technology to provide more efficient network operations and faster delivery of such new services as calling-card validation and 800-numbers. Because these "intelligent networking" applications are based on online database systems (called service control points, or SCPs), the high availability, data integrity, and expandability of Tandem systems can offer competitive advantages.

Tandem Telecommunications Systems, Inc. (TTSI), a wholly owned subsidiary since 1988, was the first company to implement successfully an SCP in a major interexchange carrier's network using Signaling System 7, an international standard for intelligent networking. In 1989, TTSI made progress in the development of intelligent networking products that run on Tandem systems and, shortly after the year ended, released an enhanced version of its SCP product.

Used by the vast majority of travel agents in Scandinavia, the SMART travel reservation system switched to a network based entirely on Tandem NonStop VLX host systems and distributed CLX systems in 1988. Partly owned by the Scandinavian Airline System (SAS) and representing AMADEUS in Scandinavia, SMART gives travel agents access to the reservation systems of airlines, tour operators, auto rental agencies, railroads, hotels, and ferry lines—from a single computer terminal. Hakan Alvgren (inset), SMART systems manager: "Excellent connectivity, distributed processing with fault tolerance, and ease of adding new functionality for travel agents are critical requirements of SMART. Tandem is the only company I know offering all three."



## Growth Through Contribution: UNIX Systems

◆  
**THE INTEGRITY S2 SYSTEM  
BRINGS TANDEM STRENGTHS  
TO UNIX SYSTEMS.**  
◆



The Integrity S2 system brings Tandem advantages to systems based on the industry-standard UNIX operating system. We believe that the Integrity S2 system sets the standard for UNIX system reliability and performance, innovative UNIX operating system extensions, and serviceability.

*"...The Company has positioned itself in high-growth markets, with superior existing products and a very aggressive future product rollout for 1990."*

John C. Dean and Lucianne Painter  
Salomon Brothers Inc.  
—December 7, 1989

Throughout its system, database, and networking product lines, Tandem is committed to offering products that make unique contributions to its market—and thereby offer customers competitive advantages.

Tandem has the same strategy as it begins implementing standards for open systems: to add fundamental competitive advantages while adhering to industry specifications, so customers receive the maximum benefits of interconnectivity and application portability.

In recent years, the UNIX operating system has made inroads in many business and government organizations worldwide. As a standard operating system, UNIX lets users take advantage of available software packages for specific applications. Because many organizations prefer UNIX systems for certain applications, Tandem has made a significant investment in UNIX system research and development.

### **Innovative new UNIX computer**

In early 1990, Tandem will introduce the Integrity S2 system—an innovative computer that extends Tandem strengths to the rapidly expanding market for UNIX systems. We believe that the Integrity S2 system is the kind of UNIX system customers expect from Tandem.

The Integrity S2 system combines fault-tolerant hardware and an enhanced—but fully compliant—UNIX operating system, to deliver the high performance and availability required for critical, standards-based applications.

For high availability, the Integrity S2 system offers hardware fault tolerance, dual-ported input/output controllers, data integrity, mirrored disks, and protection against power failure. And the Integrity S2 system extends fault tolerance to an industry-standard VMEbus I/O subsystem for the first time. NonStop-UX software, Tandem's implementation of



the UNIX operating system standard, uses innovative extensions to maximize reliability while fully complying with AT&T UNIX System V, Release 3.

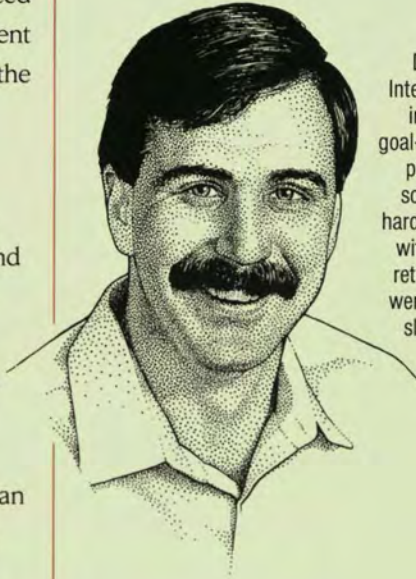
An industry-standard 32-bit MIPS R2000 RISC (reduced instruction set computing) microprocessor provides excellent price/performance for the Integrity S2 system—making it the industry's first fault-tolerant RISC-based system.

### Connectivity and serviceability

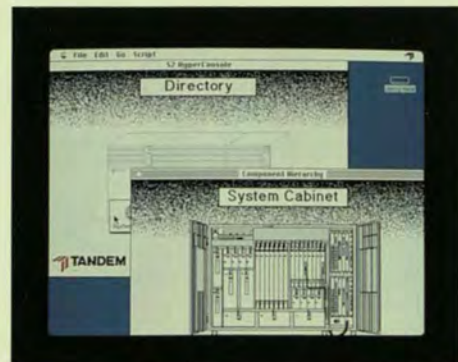
Because of its support for many industry-standard protocols, the Integrity S2 system can be integrated into local and wide area networks to access Tandem NonStop systems or other vendors' systems. To build relational databases, users can choose from several leading products, including INFORMIX, ORACLE, and INGRES.

Online serviceability reduces both downtime and cost of ownership of the Integrity S2 system. The system can be installed and serviced by a user without the use of any special tools, and any major component can be replaced while processing continues. In addition, the Integrity S2 system can operate in an office environment, without a raised floor or special air conditioning.

We believe that the Integrity S2 system is one of the best-tested and most reliable UNIX computers ever developed. Initial orders for the Integrity S2 system were received in the first quarter of fiscal 1990.



Doug Jewett, a developer of the Integrity S2 system: "Every technical innovation was in support of one goal—creating a fault-tolerant hardware platform that runs standard UNIX software. Because the Integrity S2 hardware was designed synergistically with the operating system—and not retrofitted to run UNIX software—we were able to start with nearly a clean slate and build a system that met our goal."



Using replicated components and data paths, the Integrity S2 system prevents a single point of failure from interrupting processing. If a CPU failure is detected, for example, the Integrity S2 system can take the CPU module offline, notify the system operator, and report the failure to a Tandem support center. (Pictured: Integrity S2 system operations console display.)



"We consider Tandem an exceptional, quality growth company with strong underpinnings that point to expansion over the next two years."

Carol E. Muratore  
*Morgan Stanley & Co. Incorporated*  
—August 24, 1989



# Management's Discussion and Analysis of Financial Condition and Results of Operations

## *Overview*

Tandem believes achieving success involves many factors, including strategic positioning, a commitment to product development, partnerships with companies that have complementary strengths, customer satisfaction, and an organizational structure and philosophy that foster employee productivity and creativity. Additionally, Tandem believes it is important to maintain a strong financial position to compete effectively in the growing online transaction processing (OLTP) marketplace.

In 1989 and 1988, the Company took major steps to enhance its leadership position in providing systems and networks for OLTP and to meet the needs of the developing online enterprise. During 1989 and shortly after the close of the year, the Company introduced significant hardware systems and software products.

In 1988, Tandem merged with Atalla Corporation, a leading vendor of secure transaction systems; acquired Ungermann-Bass, Inc., a leader in open, enterprise networks for multivendor environments; and acquired Integrated Technology, Inc., which later became Tandem Telecommunications Systems, Inc. (TTSI), a developer of computer products and services for the telecommunications industry. The Company believes that its investments in research and development and its business combinations in 1989 and 1988 will lead to increased market opportunities and an enhanced competitive position.

## *Operating results*

The Company acquired Ungermann-Bass on March 18, 1988, and assumed effective control of TTSI, a development organization, on January 8, 1988. Their results have been included from those dates forward and have affected the Company's operating results. The acquisitions were cash purchases and therefore reduced the Company's balance of interest-earning investments. The Company now absorbs the amortization of costs in excess of net assets acquired in the business combinations. In addition, it continues to incur development expenses at TTSI. These negative effects had less of an impact in 1989 than in 1988, as they were offset in part by the inclusion of Ungermann-Bass's favorable operating results, which improved in 1989. Ungermann-Bass contributed significantly to the Company's revenue growth in both 1989 and 1988.

Results for 1989 include a full year of operations of the acquired companies, but 1988 includes only a partial year. The acquired companies were not included at all in 1987. Therefore, year-to-year results are not comparable in this regard.

The following table summarizes the changes in selected operating statistics. The percentages in the left three columns show the relationships of income and expense items to total revenues. The percentages in the right columns measure the year-to-year changes.

Percent of Revenues			Percent Increase (Decrease)	
1989	1988	1987	1989	1988
83.0	82.1	83.2	26	24
17.0	17.9	16.8	18	34
100.0	100.0	100.0	24	26
25.3	23.6	22.1	34	34
11.8	13.5	12.6	8	35
37.1	37.1	34.7	24	34
12.5	12.9	10.4	20	55
39.1	38.8	38.6	25	26
11.3	11.2	16.3	25	(14)
.1	(.1)	1.3	NM	NM
11.4	11.1	17.6	28	(21)
4.2	3.9	7.6	34	(36)
7.2	7.2	10.0	25	(10)
<b>Earnings per share</b>			22	(10)

NM: Not meaningful

All references to the years 1989, 1988, and 1987 represent the Company's fiscal years ended September 30.

## *Revenues*

Revenues in 1989 were 24 percent higher than in the previous year. Revenues reached \$1.6 billion in 1989, compared with \$1.3 billion in 1988 and \$1.0 billion in 1987. Tandem's revenue gains over the past two years resulted from the addition of Ungermann-Bass, from increased shipments of hardware and software products to new and existing customers, and from a greater number of customers using its support and training services.

Over the past three years, the Company introduced several computer systems as well as a number of software, storage, and peripheral products that contributed to product revenue growth in 1989. These products include NonStop SQL relational database management software, introduced in 1987; the V80 and XL80 disk subsystems, first shipped in 1988; and the NonStop CLX midrange computer system, first sold in 1988, and enhanced for improved price/performance in 1989. In addition, unit shipments of the Company's NonStop VLX mainframe computer system, introduced in 1986, grew significantly in 1989 despite market awareness that a new mainframe system was scheduled



for introduction in early 1990. The Company's open, enterprise networking products, particularly Ungermann-Bass's Access/One product line, also contributed to revenue growth during the year.

Although growth in product revenues increased in 1989, the rate of growth of total revenues was lower in 1989 than in 1988 because service and other revenues grew at a slower rate in 1989 than in the previous year. The Company believes service revenue growth tends to lag product revenue growth. The trend toward increasing product reliability and serviceability, and the fact that maintenance revenue per product is not proportional to the sales revenue per product are also reflected in the relatively slower rate of growth of service and other revenues experienced in 1989.

In 1989, as in 1988, international business represented 50 percent of the Company's revenues. International revenues were 43 percent of revenues in 1987. Europe contributed 32 percent of revenues in 1989, compared with 34 percent in 1988 and 29 percent in 1987. Business in the Intercontinental Division (comprising all non-U.S., non-European operations) grew to 18 percent of revenues in 1989, compared with 16 percent in 1988 and 14 percent in 1987.

Revenues from domestic computer systems improved substantially in 1989, and were the principal contributor to total domestic revenue growth of 23 percent. This compares with an 11 percent domestic gain recorded a year earlier. International revenues grew 25 percent over the previous year. This compares with 45 percent growth achieved in 1988. European operations grew 20 percent, compared with 46 percent recorded in 1988. The revenue growth rate slowed in Europe as a result of lessening demand, particularly in the second quarter of 1989. Revenue growth in the Intercontinental Division remained high at 37 percent, although lower than the very strong 43 percent posted in the previous year. The decrease in the international growth rate was caused in part by the strengthening of the U.S. dollar against foreign currencies, compared with a weakening U.S. dollar in 1988.

### ***Operating income***

Operating income in 1989 grew to \$184.3 million, a 25 percent increase over the \$147.3 million reached in 1988. In 1987, operating income was \$170.4 million. Operating income as a percentage of revenues was substantially the same in 1989 and 1988. In 1988, operating income declined as a percentage of revenues compared with 1987, primarily as the result of higher cost of revenues, additional research and development spending, and the amortization of costs in excess of net assets acquired related to the acquisitions of Ungermann-Bass and TTSL.

Total cost of revenues as a percentage of revenues was flat between 1989 and 1988, although in 1989 the cost of product revenues as a percentage of revenues increased, and the cost of service and other revenues as a percentage of revenues decreased, compared with the previous year. The costs of both product revenues and service and other revenues increased as percentages of revenues in 1988 over 1987 levels.

The cost of product revenues grew at the same rate in 1989 as in 1988, but increased as a percentage of revenues. The higher cost of product revenues as a percentage of revenues reflects the fact that Ungermann-Bass was included for a full year in 1989 as contrasted with a half year in 1988. The acquisition was also a factor in the increase in cost of product revenues as a percentage of revenues in 1988 compared with 1987. In 1988, product upgrade programs, a product mix shift toward the Company's PSX workstations and NonStop CLX computer systems, and an increase in customer discounts also contributed to the increase in the Company's product costs as a percentage of revenues.

Cost of service and other revenues improved in 1989 and, as a result, was lower as a percentage of revenues than in 1988. This was primarily due to improvements in mix and the efficiency of Ungermann-Bass's service operations. In addition, a higher volume of business, productivity gains, and more sophisticated product reliability features had a positive effect on the cost of service and other revenues in 1989. Significant revenue growth of Ungermann-Bass's service operations also contributed to the improvements. Historically, Ungermann-Bass has had lower service margins than Tandem's traditional operations. The result was an increase in the cost of service and other revenues as a percentage of revenues in 1988 compared with 1987.

The Company's research and development expenses grew at a slower rate and were lower as a percentage of revenues in 1989 than in the previous year. This was primarily due to certain development projects reaching the point where capitalization is appropriate, leading to a higher level of capitalization of software development costs than in 1988. The acquired companies contributed to the growth of research and development spending in 1988. That factor, coupled with 1987 revenues exceeding the Company's budget, resulted in an increase in research and development spending as a percentage of revenues in 1988.

Research and development activities focus on meeting the needs of customers who are implementing online systems for single sites or for geographically distributed information processing networks. Research and development expenses increased over the past three years to support new and existing product development efforts. Among the products that resulted from this research and development spending were the XL80 and V80 disk subsystems; the NonStop CLX 600 and 700 series computer systems; NonStop SQL software, including a significantly enhanced



second release announced in 1989; the new NonStop Cyclone mainframe computer system and enhancements to the Access/One product line, both announced just after the close of the year; and the Company's UNIX operating system product, to be announced in 1990.

The acquisitions of Ungermann-Bass and TTSI, a development organization, also contributed to the increase in research and development expenses over the past two years. The Company expects to continue to support new product development with increased research and development spending.

Tandem's marketing strategy emphasizes direct sales to organizations that are implementing OLTP applications critical to their businesses. The Company believes that providing a high level of service and support, and offering solutions to customers' business problems are essential to meeting the needs of the customer base. Consequently, Tandem has built a direct sales and support organization in the United States and major international markets. To complement direct sales activities, relationships have been established with third-party application software developers, equipment remarketers, and distributors. The Company believes the market for its new UNIX operating system product, to be announced in 1990, will be augmented by these relationships, and intends to increase the use of alternate marketing channels.

Marketing, general, and administrative expenses grew slightly less rapidly in 1989 than in 1988. The level of spending has increased as the Company has continued to build its marketing organization; to train new and existing sales, service, and support personnel; and to develop marketing relationships with third parties to support the Company's growth. The increases were also partially attributable to the amortization of costs in excess of net assets acquired and other costs related to the Company's investments. In addition to the acquisitions of Ungermann-Bass and TTSI, Tandem has invested in joint ventures and taken equity positions in companies whose product, market, or geographic strengths support its strategies. These factors have all contributed to the growth in marketing, general, and administrative expenses, which have increased slightly as a percentage of revenues over the past three years.

### ***Net income and earnings per share***

Net income in 1989 was \$118.3 million, compared with \$94.5 million in 1988 and \$105.2 million in 1987. In addition to the factors discussed above, changes in net income over the past three years were the result of changes in the Company's net other income or expense and its effective tax rate. Net other income in 1989 was \$2.0 million, compared with an expense of \$1.9 million in 1988. Net interest income declined \$5.5 million between 1988 and 1989, and \$6.7 million between 1987 and 1988. These declines were the result of a combination of lower interest-earning

investments and higher levels of borrowing to finance the Company's activities in 1988 and 1989. In 1988, the Company settled a class action lawsuit that resulted in a pretax charge of \$9.4 million.

The effective tax rate in 1989 was 36.5 percent, compared with 35.0 percent in 1988 and 43.0 percent in 1987. The increase in tax rate from 1988 to 1989 was primarily the result of the change in the mix of profitability of the Company's foreign subsidiaries; the amortization of costs in excess of net assets acquired in the Ungermann-Bass acquisition, which is not tax deductible; and an increase in worldwide pretax income. The decline in the effective tax rate between 1988 and 1987 was primarily the result of lower federal statutory tax rates brought about by the passage of the Tax Reform Act of 1986. The Company has deferred adoption of Financial Accounting Standards Board Statement of Financial Accounting Standards No. 96, "Accounting for Income Taxes," in 1989 and believes that adoption will not have a material effect on the Company's financial statements.

Earnings per share grew to \$1.17 per share in 1989 from \$.96 in 1988 and \$1.07 in 1987. The growth in earnings per share was less than that of net income in 1989 because of a higher level of weighted average shares outstanding. The Company's Common Stock outstanding increased during the year due to the sale of stock to employees under the Employee Stock Purchase Plan, exercises under option plans, and the issuance of stock to the Employee Stock Ownership Plan (ESOP). Weighted average shares outstanding increased due to these factors and to additional common stock equivalents resulting from higher stock prices. These increases, lessened by the acquisition of treasury stock, resulted in a 3 percent increase in weighted average shares outstanding in 1989, compared with less than 1 percent in 1988 and 10 percent in 1987.

In July 1989, the Company issued 2.8 million shares of Common Stock to the ESOP. Beginning in 1990, compensation expense in the total amount of \$50 million will be recognized in increasing annual amounts over the next four-to-five-year period as shares are transferred into employee accounts. This will increase the Company's costs in future years, as it intends to make contributions to the ESOP equal to 1.5 percent of compensation.

### ***Personnel***

During the year, the number of employees increased by 924, bringing the total at year-end to 9,548. The Company hired primarily in areas it believes are critical to its success, with the largest increases in personnel in the field marketing and research and development organizations.

The Company believes that attracting and retaining high-quality employees are keys to success. Methods to achieve these objectives include employee stock option and purchase programs that also provide funds for the Company. In 1989, the Company established a leveraged ESOP for U.S. employees as a first step toward a comprehensive Company-funded retirement arrangement.



### ***Impact of currency and inflation***

In 1989, the comparative strength of the U.S. dollar against foreign currencies had a negative influence on revenues and pretax earnings. By contrast, in 1988 and 1987 the relative weakness of the U.S. dollar against foreign currencies had a positive influence on revenues; however, the impact on operating income in those years was moderated by price reductions taken to maintain consistent pricing across international boundaries, combined with the negative effect of strengthening currencies on international expenses.

The effect of inflation on the Company's financial results has not been significant.

### ***Financial condition***

The Company's financial position remains strong. Total assets at year-end increased to \$1.6 billion, compared with \$1.3 billion in 1988 and \$973 million in 1987. The equity base grew to \$989 million in 1989, from \$857 million in 1988 and \$724 million in 1987. Cash and equivalents grew \$72 million during the year to reach \$197 million at September 30, 1989, compared with \$125 million and \$318 million at the end of 1988 and 1987, respectively. Cash generated from operations, additional borrowings, and sale of Common Stock to employees contributed to cash during 1989. These additions to cash were partially offset by investments in property, plant, and equipment, and other assets; and a \$27 million open-market purchase of shares of the Company's Common Stock.

Funds to support the Company's operations have historically been generated internally. In 1989, cash flow from operations was \$199 million, compared with \$116 million in 1988 and \$140 million in 1987. This source of funds has traditionally been supplemented by employee stock purchases through employee stock option and stock purchase programs. As a result of these programs and related tax benefits, the Company received \$47 million in 1989. The Company received \$33 million from employee stock purchases and related tax benefits in 1988, and \$81 million in 1987.

In 1989, Tandem invested \$136 million in property, plant, and equipment. This compares with \$185 million and \$143 million invested in 1988 and 1987, respectively. In 1988, Tandem invested \$241 million in the acquisitions of Ungermann-Bass and TTSI. There were no significant business acquisitions prior to 1988.

Property, plant, and equipment investments in 1988 and 1987 included the purchase of buildings in the Company's headquarters area in Cupertino, California, and a building near London for the Company's headquarters in the United Kingdom. Prior to 1987, Tandem did not own the buildings it occupied in its headquarters area. The Company previously leased most of the buildings it has purchased. The Company did not purchase any buildings in 1989; however, after the close of the year, the Company entered into an agreement to purchase certain real property totaling

86 acres, including seven buildings and a retail shopping complex near its Cupertino headquarters. Some of those buildings are currently leased by the Company. The additional space will allow for expansion and for relocation of employees currently located in other Santa Clara County, California, facilities. This \$116 million transaction will be funded with cash.

In 1989, in conjunction with establishing a leveraged ESOP and issuing 2.8 million shares of Common Stock in exchange for a note from the ESOP, the Company borrowed \$50 million in a related loan agreement. This transaction contributed to the Company's 1989 year-end balance of borrowings of \$165 million, compared with \$148 million at the end of 1988 and \$11 million at the end of 1987. In 1989, the Company also borrowed in specific situations to support certain transactions and repaid certain borrowings as a result of positive cash flow. In 1988, borrowings increased to support the Company's investment activities.

Inventory management improved over the prior year, as inventory days declined to 77 days at the end of the year, compared with 78 days and 87 days at the end of 1988 and 1987, respectively. Accounts receivable days at year-end were 84, compared with 85 in 1988. Accounts receivable days in 1988 increased over the 1987 level of 80 days partially because of the acquisition of Ungermann-Bass, which has historically had higher average accounts receivable days than Tandem.

Tandem believes it is strategically important to maintain a conservative capital structure and a sound ratio of current assets to current liabilities in order to demonstrate its financial strength and to compete effectively in high-technology markets. The current ratio at year-end 1989 remained relatively stable at 2.0:1, compared with 1.8:1 at the end of 1988. The Company believes its current ratio is sound.

At September 30, 1989, Tandem had excellent liquidity; 23 percent of the Company's current assets were cash and equivalents. Long-term obligations as a percentage of capital at the end of 1989 rose to 9.7 percent, primarily because of activities involved in establishing the leveraged ESOP. As a result of the Company's level of investment activity in 1988, the current ratio decreased in that year from 3.6:1 in 1987, and long-term obligations to capital increased to 6.4 percent from 1.2 percent at the end of 1987.

The Company has various alternatives to meet future capital needs, including funds generated from future operations, short-term borrowings, continued stock issuances under employee stock purchase and option plans, and an unused \$200 million multiple-option financing facility. Tandem believes that its current lines of credit, anticipated cash generated from operations, and continued issuances of stock under employee plans will be sufficient to fund its growth for the next year.



## Selected Financial Data

For the years ended September 30

(In thousands except per share amounts)	1989	1988	1987	1986	1985
<b>Revenues</b>	\$1,632,522	\$1,314,721	\$1,047,532	\$778,014	\$635,983
Cost of revenues	606,408	487,791	363,730	283,227	273,516
Research and development	203,520	169,356	109,504	88,202	75,357
Marketing, general, and administrative	638,267	510,313	403,859	299,572	238,152
<b>Operating income</b>	184,327	147,261	170,439	107,013	48,958
Net interest income	1,998	7,477	14,207	8,399	6,178
Settlement of litigation	—	(9,375)	—	—	—
Provision for income taxes	(68,009)	(50,878)	(79,417)	(51,154)	(21,554)
<b>Net income</b>	\$ 118,316	\$ 94,485	\$ 105,229	\$ 64,258	\$ 33,582
<b>Earnings per share</b>	\$ 1.17	\$ .96	\$ 1.07	\$ .72	\$ .40
Total assets	\$1,618,788	\$1,318,377	\$ 973,040	\$710,024	\$559,244
Long-term obligations	\$ 106,643	\$ 58,197	\$ 9,055	\$ 5,795	\$ 11,884
Stockholders' investment	\$ 989,118	\$ 856,861	\$ 723,855	\$537,978	\$423,214

See the Business Combinations note to the consolidated financial statements for a description of significant transactions affecting the data from 1988 forward.



## Consolidated Statements of Income

For the years ended September 30

(In thousands except per share amounts)	1989	1988	1987
<b>Revenues</b>			
Product revenues	\$1,354,852	\$1,079,563	\$ 872,003
Service and other revenues	277,670	235,158	175,529
<b>Total revenues</b>	<b>1,632,522</b>	<b>1,314,721</b>	<b>1,047,532</b>
<b>Costs and expenses</b>			
Cost of product revenues	414,089	309,896	231,659
Cost of service and other revenues	192,319	177,895	132,071
Research and development	203,520	169,356	109,504
Marketing, general, and administrative	638,267	510,313	403,859
<b>Total costs and expenses</b>	<b>1,448,195</b>	<b>1,167,460</b>	<b>877,093</b>
<b>Operating income</b>	<b>184,327</b>	<b>147,261</b>	<b>170,439</b>
Interest income	11,357	15,560	15,811
Interest expense	(9,359)	(8,083)	(1,604)
Settlement of litigation	—	(9,375)	—
<b>Income before income taxes</b>	<b>186,325</b>	<b>145,363</b>	<b>184,646</b>
<b>Provision for income taxes</b>	<b>68,009</b>	<b>50,878</b>	<b>79,417</b>
<b>Net income</b>	<b>\$ 118,316</b>	<b>\$ 94,485</b>	<b>\$ 105,229</b>
<b>Earnings per share</b>	<b>\$ 1.17</b>	<b>\$ .96</b>	<b>\$ 1.07</b>
Weighted average shares outstanding	101,386	98,683	98,424

See accompanying notes.



## Consolidated Balance Sheets

At September 30

(In thousands)	1989	1988
<b>Assets</b>		
<b>Current assets</b>		
Cash and equivalents	\$ 197,174	\$ 124,599
Accounts receivable, net of allowances of \$11,599 in 1989 and \$9,491 in 1988	419,440	355,635
Inventories	144,176	129,426
Prepaid income taxes	77,759	4,288
Prepaid expenses and other	24,602	29,815
<b>Total current assets</b>	<b>863,151</b>	<b>643,763</b>
<b>Property, plant, and equipment, at cost</b>	<b>735,499</b>	<b>633,159</b>
Accumulated depreciation and amortization	(288,117)	(214,638)
<b>Net property, plant, and equipment</b>	<b>447,382</b>	<b>418,521</b>
<b>Cost in excess of net assets acquired,</b> net of accumulated amortization of \$18,422 in 1989 and \$6,248 in 1988	203,438	205,128
<b>Other assets</b>	<b>104,817</b>	<b>50,965</b>
<b>Total assets</b>	<b>\$1,618,788</b>	<b>\$1,318,377</b>
<b>Liabilities and stockholders' investment</b>		
<b>Current liabilities</b>		
Notes payable	\$ 19,857	\$ 80,971
Accounts payable	106,263	91,935
Accrued liabilities		
Accrued salaries and related items	66,864	52,586
Accrued commissions to third parties	22,199	14,757
Deferred income	38,832	29,479
Income taxes	53,198	25,412
Other	95,466	60,836
Current maturities of long-term obligations	38,726	9,322
<b>Total current liabilities</b>	<b>441,405</b>	<b>365,298</b>
<b>Long-term obligations</b>	<b>106,643</b>	<b>58,197</b>
<b>Deferred income taxes</b>	<b>81,622</b>	<b>38,021</b>
<b>Commitments and contingencies</b>	<b>—</b>	<b>—</b>
<b>Stockholders' investment</b>		
Common stock \$.025 par value, authorized 400,000 shares in 1989 and 200,000 shares in 1988, outstanding 102,064 in 1989 and 96,108 in 1988	2,552	2,403
Additional paid-in capital	500,155	403,241
Retained earnings	564,168	445,852
Accumulated translation adjustments	(820)	5,365
Treasury stock, at cost	(26,937)	—
Deferred compensation	(50,000)	—
<b>Total stockholders' investment</b>	<b>989,118</b>	<b>856,861</b>
<b>Total liabilities and stockholders' investment</b>	<b>\$1,618,788</b>	<b>\$1,318,377</b>

See accompanying notes.



## Consolidated Statements of Stockholders' Investment

For the years ended September 30

(In thousands)	Common Stock		Additional	Retained	Accumulated	Treasury	Deferred	Total
	Shares	Amount	Paid-In Capital	Earnings	Translation Adjustments	Stock	Compensation	Stockholders' Investment
<b>Balances,</b>								
<b>September 30, 1986</b>	88,515	\$2,213	\$289,627	\$246,138	\$ —	\$ —	\$ —	\$537,978
Sale of Common Stock under stock plans, including tax benefits	5,334	133	80,515	—	—	—	—	80,648
Net income	—	—	—	105,229	—	—	—	105,229
<b>Balances,</b>								
<b>September 30, 1987</b>	93,849	2,346	370,142	351,367	—	—	—	723,855
Effect of redesignating functional currency	—	—	—	—	10,191	—	—	10,191
Balances, October 1, 1987	93,849	2,346	370,142	351,367	10,191	—	—	734,046
Sale of Common Stock under stock plans, including tax benefits	2,259	57	33,099	—	—	—	—	33,156
Translation adjustments	—	—	—	—	(4,826)	—	—	(4,826)
Net income	—	—	—	94,485	—	—	—	94,485
<b>Balances,</b>								
<b>September 30, 1988</b>	96,108	2,403	403,241	445,852	5,365	—	—	856,861
Sale of Common Stock under stock plans, including tax benefits	3,149	79	46,984	—	—	—	—	47,063
Acquisition of treasury stock	—	—	—	—	—	(26,937)	—	(26,937)
Issuance of Common Stock to ESOP	2,807	70	49,930	—	—	—	(50,000)	—
Translation adjustments	—	—	—	—	(6,185)	—	—	(6,185)
Net income	—	—	—	118,316	—	—	—	118,316
<b>Balances,</b>								
<b>September 30, 1989</b>	102,064	\$2,552	\$500,155	\$564,168	\$ (820)	\$(26,937)	\$(50,000)	\$989,118

See accompanying notes.



## Consolidated Statements of Cash Flows

For the years ended September 30

(In thousands)	1989	1988	1987
<b>Cash flows from operating activities</b>			
Net income	\$ 118,316	\$ 94,485	\$ 105,229
Adjustments to reconcile net income to net cash from operating activities:			
Depreciation and amortization	112,683	85,971	52,501
Deferred income taxes	(24,534)	(11,831)	8,582
Loss on dispositions of property, plant, and equipment	1,763	1,820	1,068
Translation adjustments	—	—	3,775
Changes in:			
Accounts receivable	(64,855)	(60,993)	(48,591)
Inventories	(17,289)	(12,728)	(29,084)
Lease receivables	(22,582)	(13,337)	(2,252)
Prepaid expenses and non-debt current liabilities	95,571	33,017	48,272
Net cash from operating activities	199,073	116,404	139,500
<b>Cash flows used in investing activities</b>			
Payments for UB and ITI, net of cash acquired	—	(240,503)	—
Investment in property, plant, and equipment	(135,957)	(185,108)	(142,552)
Proceeds from dispositions of property, plant, and equipment	9,694	12,046	13,800
Increase in other assets	(37,736)	(6,093)	(16,550)
Net cash used in investing activities	(163,999)	(419,658)	(145,302)
<b>Cash flows from financing activities</b>			
Borrowings	119,163	88,518	2,701
Repayments	(101,932)	(11,061)	(4,147)
Deferred compensation related to ESOP	(50,000)	—	—
Purchase of treasury stock	(26,937)	—	—
Issuance of Common Stock under stock plans, including tax benefits	97,063	33,156	80,648
Net cash provided by financing activities	37,357	110,613	79,202
Effect of exchange rate fluctuations on cash and equivalents	144	(1,031)	4,562
<b>Net increase (decrease) in cash and equivalents</b>	72,575	(193,672)	77,962
Cash and equivalents at beginning of year	124,599	318,271	240,309
<b>Cash and equivalents at end of year</b>	<b>\$ 197,174</b>	<b>\$ 124,599</b>	<b>\$ 318,271</b>
Supplementary cash flow information — cash paid during the year for:			
Income taxes	\$ 49,814	\$ 39,077	\$ 54,291
Interest	\$ 9,340	\$ 7,328	\$ 2,746

See accompanying notes.



# Notes to Consolidated Financial Statements

## **Summary of significant accounting policies**

### **Consolidated financial statements**

The consolidated financial statements include the accounts of Tandem Computers Incorporated and its subsidiaries (the Company) after the elimination of intercompany accounts and transactions.

### **Revenue recognition**

The Company generally recognizes revenue from equipment sales at the time of shipment. Service and other revenues are recognized ratably over the contractual period or as the services are provided.

### **Translation of non-U.S. currency amounts**

The Company's non-U.S. subsidiaries use as their functional currency the local currencies of the countries in which they operate. Their assets and liabilities are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Revenues and expenses are translated at average rates of exchange prevailing during the period. In addition, all ongoing adjustments resulting from the process of translating each subsidiary's financial statements into U.S. dollars have been accumulated and recorded within a separate component of stockholders' investment. Foreign currency transaction gains and losses are not material and are included in the determination of net income.

The preceding policy became effective October 1, 1987, the date on which the Company redesignated the functional currency of non-U.S. subsidiaries from the U.S. dollar to the local currency. The effect of the change on 1988 income was insignificant.

### **Inventories**

Inventories are stated at the lower of cost (first-in, first-out) or market. The components of inventories at September 30 were:

(In thousands)	1989	1988
Purchased parts and subassemblies	\$ 73,514	\$ 68,718
Work-in-process	31,324	25,894
Finished goods	39,338	34,814
Total	\$144,176	\$129,426

### **Income taxes**

The Company accounts for research and development credits as a reduction of the provision for income taxes in the year in which the credits are generated. In general, the Company's practice is to provide U.S. federal taxes on undistributed international earnings.

### **Cash and equivalents**

Short-term cash investments are valued at cost, which approximates market; have maturity dates not exceeding 90 days; and generally consist of certificates of deposit, time deposits, treasury notes, money market preferred stocks, municipal notes, and commercial paper.

### **Property, plant, and equipment**

Property, plant, and equipment is stated at cost. Depreciation and amortization are computed using the straight-line method over estimated useful lives, as follows: buildings, 30 years; machinery and equipment, and computer equipment, 3 to 7 years; system spares, 5 years; and leasehold improvements, 1 to 7 years (the lease term).

### **Cost in excess of net assets acquired**

The excess acquisition cost over the fair value of net assets of businesses acquired is being amortized using the straight-line method over estimated lives ranging from 10 to 20 years. Amortization expense for 1989 and from acquisition dates in 1988 was \$12.2 million and \$6.2 million, respectively.

### **Software development costs**

The Company capitalizes software development costs as the resulting products become "technologically feasible" and amortizes those costs when, and as, the products are shipped. At a minimum, the amortization is that which would result from using a three-year straight-line method from the date of product release. The amounts of unamortized software development costs included in other assets at September 30, 1989 and 1988, were \$24.9 million and \$12.2 million, respectively. The amortization expense for 1989, 1988, and 1987 was \$6.2 million, \$5.2 million, and \$1.3 million, respectively.



### Earnings per share

Earnings per share are based on the weighted average number of common and common equivalent shares outstanding. Common equivalent shares result from the assumed exercise of outstanding stock options, which have a dilutive effect when applying the treasury stock method, and a convertible debenture. Fully diluted earnings per share are substantially the same as reported earnings per share.

### Reclassifications

Certain 1988 and 1987 amounts have been reclassified to conform to the current year presentation.

### Property, plant, and equipment

Property, plant, and equipment balances at September 30 were as follows:

(In thousands)	1989	1988
Land and buildings	\$ 199,924	\$ 193,940
Machinery and equipment	131,131	113,133
Computer equipment	259,801	206,076
System spares	68,058	65,022
Leasehold improvements	49,289	39,939
Construction in progress	27,296	15,049
Total	\$ 735,499	\$ 633,159

Included in the land and buildings and construction in progress balances at September 30, 1989 and 1988, were approximately \$27 million of costs relating to land and land improvements on a parcel located in San Jose, California, held for future development.

During 1988, the Company purchased land and six buildings for its headquarters in Cupertino, California, for \$85.5 million. The purchases were financed using \$54.8 million in cash and the assumption of mortgages totaling \$30.7 million. The Company also purchased land and a building for \$16.7 million near London for its U.K. headquarters.

The Company leases certain equipment, automobiles, and some of its operating facilities and offices under operating lease agreements. Future minimum lease payments as of September 30, 1989, are as follows (in millions): \$63.0 (1990), \$53.6 (1991), \$41.8 (1992), \$25.8 (1993), \$18.0 (1994), and \$84.4 (1995 and thereafter). Rent expense was \$63.2 million, \$53.4 million, and \$51.1 million in 1989, 1988, and 1987, respectively.

Interest costs related to construction in progress of \$1.8 million, \$1.6 million, and \$.2 million were capitalized in 1989, 1988, and 1987, respectively.

On October 18, 1989, the Company entered into an agreement in principle to acquire 15 parcels of improved and unimproved real properties near its Cupertino headquarters for \$115.8 million. The properties total approximately 86 acres, including seven buildings and a retail shopping complex. The Company expects to fund the acquisition with cash. In addition to acquiring the properties, the Company received certain rights to acquire other properties in Cupertino, totaling approximately 20 acres.

### Leasing program

The Company has a vendor leasing program whereby lease receivables may be financed by financial institutions either through limited recourse sales of the receivables or through direct borrowings. In the event of a default by a lessee, recourse by the financial institutions is limited to the collateralized computer equipment and a recourse amount, if any, from either a limited recourse pool established as a percentage of each associated group of financed lease transactions or limited recourse specified in the individual transaction agreement. The Company may also be required to remarket the computer equipment on a "best efforts" basis on behalf of the financial institutions. Collection of the lease receivables is performed by the financial institutions. In 1989, 1988, and 1987, the following amounts were received under the leasing program:

(In thousands)	1989	1988	1987
Sales of lease receivables	\$ 27,652	\$ 25,915	\$ 4,912
Borrowings	30,243	14,147	2,550
Total financing	\$ 57,895	\$ 40,062	\$ 7,462

At September 30, 1989 and 1988, reserves for recourse liabilities on sales of lease receivables were approximately \$3.3 million and \$1.7 million, respectively.



### Business combinations

In 1988, Atalla Corporation became a wholly owned subsidiary of the Company. The merger, accounted for as a pooling-of-interests, involved the exchange of 689,363 of the Company's shares for all of the outstanding shares of Atalla.

In 1988, the Company acquired Integrated Technology, Inc. (ITI), and Ungermann-Bass, Inc. The acquisitions were accounted for as purchases and, accordingly, the net assets acquired have been recorded at their estimated fair values at the date of their respective acquisitions. The Company's consolidated financial statements include the results of their operations from those dates forward.

The Company acquired ITI for approximately \$5.9 million in cash, issuance of a five-year note for \$6.1 million, and the assumption of ITI's net obligations. This resulted in costs in excess of net assets acquired of \$16.2 million, which is being amortized on a straight-line basis over ten years. In May 1988, ITI became Tandem Telecommunications Systems, Inc. (TTSI).

The Company acquired Ungermann-Bass for \$271.4 million in cash, which included \$21 million for a portion of its outstanding debentures. During 1989, the assessment of the fair values of the assets purchased and liabilities assumed was finalized, and the cost in excess of net assets acquired at the date of acquisition was determined to be \$205.7 million, which is being amortized on a straight-line basis over 20 years.

Unaudited pro forma consolidated financial information for 1988, as if the Ungermann-Bass acquisition had occurred at the beginning of 1988 at the purchase price established in March 1988, is as follows: revenues, \$1,372 million; net income, \$94.4 million; and earnings per share, \$.96. The effects of TTSI were immaterial. The pro forma results are not necessarily indicative of what would have occurred had the acquisitions actually been made on October 1, 1987, or of future operations of the combined companies.

### Settlement of litigation

In 1988, the Company settled a 1984 class action lawsuit arising from its December 1982 restatement of revenues and earnings for fiscal 1982. Without any admission or presumption of liability, the Company elected to contribute \$9.4 million to a settlement fund of \$16.5 million. The Company's insurance carrier contributed \$7.1 million.

### Income taxes

The provision for income taxes included the following:

(In thousands)	1989	1988	1987
Federal:			
Current	\$ 30,321	\$ 21,220	\$ 40,669
Deferred (prepaid)	(16,929)	(8,253)	4,402
	13,392	12,967	45,071
State:			
Current	13,165	10,195	9,362
Deferred (prepaid)	(1,985)	(917)	3,094
	11,180	9,278	12,456
Foreign:			
Current	49,057	31,294	20,804
Deferred (prepaid)	(5,620)	(2,661)	1,086
	43,437	28,633	21,890
Total provision	\$ 68,009	\$ 50,878	\$ 79,417

Sources of deferred (prepaid) taxes were as follows:

(In thousands)	1989	1988	1987
Inventory reserves	\$ (2,005)	\$ (3,668)	\$ (2,574)
Installment sale method for income tax reporting	(8,669)	(1,700)	10,300
Accelerated depreciation	(1,393)	440	1,606
Effect of intercompany profit eliminations	(7,070)	(2,681)	(10,227)
Operating leases for income tax reporting	7,037	5,361	1,622
Deferred income	(4,272)	(1,037)	—
Capitalized software	4,160	(212)	(598)
Unrealized exchange gains (losses)	(3,448)	55	1,135
Other	(8,874)	(8,389)	7,318
Total deferred (prepaid)	\$ (24,534)	\$ (11,831)	\$ 8,582



The provision for income taxes differed from the amount obtained by applying the federal statutory income tax rate to income before income taxes, as follows:

	1989	1988	1987
Federal statutory tax rate	34.0%	34.0%	43.0%
State taxes, net of federal income tax benefit	4.0	4.2	3.8
Research and development tax credits	(3.5)	(3.8)	(2.1)
Tax exempt FSC income	(3.4)	(2.9)	(2.5)
Amortization of cost in excess of net assets acquired	2.0	1.5	—
Other	3.4	2.0	.8
Effective tax rate	36.5%	35.0%	43.0%

The effective tax rate decreased from 43 percent in 1987 to 35 percent in 1988 largely as a result of the reduction in the federal tax rate by the Tax Reform Act of 1986.

In December 1987, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 96, "Accounting for Income Taxes," which, under a current proposal, the Company is not required to adopt until fiscal 1993. Adoption has been deferred by Management, pending resolution of certain implementation issues. However, the adoption of SFAS 96 is not expected to have a material impact on the Company's financial statements.

### Notes payable

Short-term notes payable consist of notes, bankers' acceptances, and borrowings under uncommitted foreign credit lines at weighted average interest rates of 6.7 and 8.5 percent at September 30, 1989 and 1988, respectively.

### Long-term obligations

Long-term obligations at September 30 consist of the following:

(In thousands)	1989	1988
\$49.9 million credit agreement (1)	\$ 49,930	\$ —
Installment notes due through 1994, collateralized by lease receivables (11.6%) (2)	36,918	14,524
Mortgages (9.3–14.5%) (3)	29,066	29,998
Japanese yen notes payable, due 1990–1993 (5.4%) (2)	14,833	4,606
Industrial revenue and development bonds due 1991 to 1996 (7.4–12.4%) (4)	6,204	7,863
Term note, principal and variable interest, due May 1993 (5)	6,466	6,085
6.875% subordinated debentures, due March 2011	1,493	1,564
Capital lease obligations due 1990–1993 (5–15%)	459	1,212
Convertible subordinated debenture, payable to an officer in September 1989 (9.5%) (6)	—	1,667
Total obligations	145,369	67,519
Less current portion	(38,726)	(9,322)
Long-term obligations	\$ 106,643	\$ 58,197

(1) Entered into in connection with the formation of the ESOP, this agreement provides for variable interest and repayments. At the bank's option, all borrowings are to be repaid in July 1996. If extended, the loan balance amortizes through July 2001. Interest rate at September 30, 1989, was 9.5%.

(2) Weighted average interest rate at September 30, 1989.

(3) Payable monthly; maturing 1990 to 2001; weighted average interest rate at September 30, 1989 and 1988, was 11.9%. The mortgages are secured by certain land and buildings, with a cost of \$68.3 million.

(4) Weighted average interest rate at September 30, 1989, was 8.5%.

(5) Interest rate at September 30, 1989, was 8.6%.

(6) On September 26, 1989, the debenture was converted into 200,000 shares of Common Stock, at a price of \$8.3375 per share.

Principal repayments required in the next five fiscal years are as follows (in millions): \$38.7 (1990), \$12.8 (1991), \$15.0 (1992), \$13.1 (1993), and \$3.4 (1994).

In September 1988, the Company entered into a five-year multiple option financing facility (facility agreement) with 12 banks. The facility agreement provides for U.S.



dollar and multicurrency advances. Borrowings under the agreement carry interest based on one of the following: the agent bank's prime rate, an average of the banks' certificate of deposit rates, or the London Interbank Offered Rate (LIBOR). The facility agreement also provides for the establishment of an uncommitted note placement facility, whereby the Company may request the banks to bid for the subscription of notes. Borrowings under the various options are allowed up to an aggregate amount of \$200 million. The Company pays an annual facility fee of \$.3 million for the commitment, and there are no compensating balance requirements. The agreement also contains certain financial covenants and restrictions with which the Company was in compliance at September 30, 1989. There were no borrowings under the facility agreement in either 1989 or 1988.

The Company has guaranteed payment of loans made to officers totaling \$1.7 million at September 30, 1989, and \$1.9 million at September 30, 1988, under bank credit lines aggregating \$5 million. In September 1989, the Company collected a \$1.7 million note receivable from an officer, which had been included in other current assets at September 30, 1988.

### **Capital stock**

The Company's authorized capital stock consists of 2.4 million shares of preferred stock, of which 800,000 shares are designated as Series A Participating Preferred Stock; 4 million shares of Junior Common Stock; and 396 million shares of Common Stock. No shares of preferred stock or Junior Common Stock have been issued. At September 30, 1989, 40.8 million shares of Common Stock were reserved for future issuance under stock option plans and the employee stock purchase plan.

### **Treasury stock**

In July 1989, concurrently with the formation of the Tandem Computers Incorporated Employee Stock Ownership Plan (ESOP), the Company began the reacquisition of its Common Stock on the open market. Such shares are carried

at cost and will be used to satisfy requirements under employee stock plans. At September 30, 1989, 1.3 million shares had been repurchased, at an aggregate cost of \$26.9 million.

### **Stock rights**

In 1988, the Company amended and restated its rights plan (Plan), originally adopted in 1985. The Plan is intended to protect stockholders from unfair takeover practices. Under the Plan, each share of Common Stock carries one right to obtain additional stock or other property with equivalent value, on terms provided in the Plan. The rights will not be exercisable, or transferable apart from the Common Stock, until another person or group of persons (subject to certain exceptions) acquires at least 20 percent of the Common Stock or commences, or announces its intention to commence, a tender offer for at least 30 percent of the Common Stock.

The rights are redeemable by the Board of Directors or upon vote of the stockholders for \$.05 per right, or property with an equivalent value, and expire on June 17, 1998.

### **Employee benefits**

#### **Employee stock ownership plan**

On July 18, 1989, the Company adopted the ESOP for eligible U.S. employees. In exchange for a \$49.9 million note from the ESOP Trustee and an initial cash contribution of \$.1 million, the Company issued 2,807,018 shares of Common Stock to the ESOP at a price of \$17.8125 per share. The note requires quarterly payment of interest at 9.375% and is secured by unallocated shares held by the ESOP trustee. Principal repayments are variable, at the Company's option, but must aggregate \$5 million by July 15, 1996, and the total borrowing must be repaid by July 15, 2001. Company contributions to the ESOP will be used to repay the loan to the Company. Beginning in fiscal 1990, as the loan is repaid, Common Stock will be allocated to ESOP participants based on the proportion of the loan repayment to total principal and interest payments required



over the remaining loan term. Shares allocated under the ESOP vest over periods of up to one year, depending on the participant's length of service. Currently, the Company intends to make contributions to the ESOP such that the shares allocated to participants have a cost value of at least 1.5 percent, but a market value limited to a maximum of 5 percent, of the participants' eligible compensation.

Deferred compensation equal to the initial amount loaned to the ESOP by the Company was recorded as a reduction of stockholders' investment. This amount will be recognized as expense in future periods, proportionately with share allocations by the ESOP.

The Company also made an additional contribution to allow the ESOP Trustee to purchase 38,500 shares of Common Stock for immediate allocation to participants' accounts, which resulted in compensation expense of \$.7 million being recognized in 1989.

#### Stock option plans

The Company has employee stock option plans under which qualified individuals may be granted options to purchase shares of Common Stock, generally at fair market value at the time of the grant. In general, options become exercisable six months after the effective date, vest over four years, and expire no more than ten years after the effective date. At the discretion of the Board of Directors, options granted under the stock option plans may qualify as incentive stock options under the Internal Revenue Code of 1986. At September 30, 1989, options for 14.0 million shares were available for future grant.

#### Employee stock purchase plan

Under the plan, the Company may offer shares to employees in two ways. Under the first method, eligible employees may elect to purchase shares of Common Stock at the lower of 85 percent of fair market value as of the last trading day before or as of the last trading day of the quarter. Under this method, in 1989, 1988, and 1987, employees purchased 969,000 shares for aggregate proceeds of \$13 million, 610,000 shares for aggregate proceeds of \$11.2 million, and 463,000 shares for aggregate proceeds of \$7.6 million, respectively. Under the second method, the Company may

grant to all employees the option to purchase an identical number of shares of Common Stock at not less than 85 percent of fair market value at the grant date. At September 30, 1989, the Company had reserved 9.9 million shares of Common Stock for future issuance under its employee stock purchase plan.

#### Stock option activity

Information concerning the combined option activity during the years ended September 30, under the stock option plans and the option portion of the employee stock purchase plan, follows:

	1989		1988		1987	
	Aggregate		Aggregate		Aggregate	
	Shares	Price	Shares	Price	Shares	Price
(In millions except per share amounts)						
Beginning of year	17.0	\$277.9	13.2	\$208.9	13.8	\$154.8
Options granted	5.4	98.1	6.1	100.4	4.6	110.3
Options exercised (\$2.62 to \$37.00 per share)	(1.9)	(21.9)	(1.6)	(18.5)	(4.9)	(52.0)
Options cancelled	(3.6)	(94.2)	(.7)	(12.9)	(.3)	(4.2)
End of year	16.9	\$259.9	17.0	\$277.9	13.2	\$208.9
Options vested at year end	9.6		7.3		7.1	

Included in the 1989 activity is the cancellation and regrant of 2.6 million shares in December 1988, at an exercise price equal to the fair market value on the date of the regrant. The regrant did not affect the vested status of the shares.

The Company has a long-standing policy of encouraging all levels of employees to become stockholders through various stock programs. This policy is based on a belief that all stockholders benefit from the higher productivity, lower turnover, and improved customer satisfaction realized by providing employees with a personal stake in the Company's success.



Although stock options may be exercised before they are fully vested and the effect of all dilutive stock options is considered in the determination of earnings per share, the following table shows the maximum number of shares that would be issued based on the number of options vesting in each future year.

Maximum number of existing options vesting each fiscal year							
Exercise Price Range	1989 and prior	1990	1991	1992	1993	Total Shares	Aggregate Price
(In thousands except price range amounts)							
\$0-\$10	2,736	53	6	6	3	2,804	\$ 24,944
\$10-\$20	6,842	3,070	2,252	1,297	326	13,787	228,772
\$20-\$30	62	67	54	47	36	266	6,165
	9,640	3,190	2,312	1,350	365	16,857	\$259,881

Common and common equivalent shares			
	Outstanding Shares	Outstanding Equivalents	Total
Fiscal 1989 weighted average	97,978	3,408	101,386
At September 30, 1989	100,750	5,634	106,384

#### Option loan program

On July 17, 1989, the Board of Directors approved the Tandem Computers Incorporated Option Loan Program (Option Loan Program) to enable employees to exercise certain outstanding options. Under the Option Loan Program, the Company can issue full recourse loans that are secured by a pledge of the Company's Common Stock. Loan agreements entered into between the Company and participants provide that in the event of a change in control of the Company (as defined), principal and interest will be forgiven over a four-year period. No loans were outstanding at September 30, 1989.

#### Commitments and contingencies

The Company is subject to legal proceedings and claims that arise in the normal course of its business. In the opinion of Management, these proceedings will not have a material adverse effect on the financial position or overall trends in the results of operations of the Company.

See the Property, Plant, and Equipment note for a discussion of the Company's operating lease commitments.

#### Geographic segment information

The Company operates in three geographic regions: the United States, Europe, and Intercontinental. Intercontinental includes operations outside of the United States and Europe, principally Canada, the Pacific Rim, and Latin America.

The following table sets forth information about the Company's operations in these different geographic regions for the years ended September 30.

(In thousands)	1989	1988	1987
<b>Revenues</b>			
United States—customers	\$ 817,210	\$ 664,458	\$ 599,671
United States—interarea	390,723	302,601	249,034
Europe—customers	530,024	442,735	302,966
Europe—interarea	16,560	16,823	22,383
Intercontinental—customers	285,288	207,528	144,895
Intercontinental—interarea	9,019	7,308	10,813
	2,048,824	1,641,453	1,329,762
Eliminations	(416,302)	(326,732)	(282,230)
<b>Total revenues</b>	<b>\$1,632,522</b>	<b>\$1,314,721</b>	<b>\$1,047,532</b>
<b>Pretax income</b>			
United States	\$ 124,207	\$ 79,521	\$ 146,238
Europe	54,858	64,310	37,229
Intercontinental	20,673	10,575	7,726
	199,738	154,406	191,193
Eliminations	(13,413)	(9,043)	(6,547)
<b>Total pretax income</b>	<b>\$ 186,325</b>	<b>\$ 145,363</b>	<b>\$ 184,646</b>
<b>Identifiable assets</b>			
United States	\$1,212,884	\$ 895,062	\$ 713,253
Europe	306,744	319,413	213,688
Intercontinental	177,182	164,782	105,791
	1,696,810	1,379,257	1,032,732
Eliminations	(78,022)	(60,880)	(59,692)
<b>Total identifiable assets</b>	<b>\$1,618,788</b>	<b>\$1,318,377</b>	<b>\$ 973,040</b>

Intercompany transfers are made at arm's-length prices. Identifiable assets are those assets of the Company that are identified with the operations of the corresponding geographic area. United States customer revenues include export sales of \$30.6 million in 1989, \$20.3 million in 1988, and \$12.4 million in 1987. The Company operates primarily in one industry segment, which includes the manufacturing, servicing, and marketing of computer systems and networks.



### Quarterly financial data (unaudited)

(In thousands except per share amounts)

Fiscal 1989				
Quarters Ended	Dec. 31	March 31	June 30	Sept. 30
Total revenues	\$392,285	\$363,388	\$420,687	\$456,162
Gross margin	\$246,958	\$228,417	\$266,132	\$284,607
Income before				
income taxes	\$ 49,285	\$ 26,546	\$ 48,439	\$ 62,055
Net income	\$ 31,295	\$ 16,858	\$ 30,759	\$ 39,404
Earnings per share	\$ .32	\$ .17	\$ .31	\$ .38
Market stock price				
range	High \$ 17.38	\$ 20.25	\$ 19.38	\$ 23.63
	Low \$ 13.75	\$ 16.63	\$ 14.88	\$ 16.88

Fiscal 1988				
Quarters Ended	Dec. 31	March 31	June 30	Sept. 30
Total revenues	\$282,282	\$309,449	\$338,993	\$383,997
Gross margin	\$180,026	\$199,547	\$214,248	\$233,109
Income before				
income taxes	\$ 37,019	\$ 36,452	\$ 26,232	\$ 45,660
Net income	\$ 23,693	\$ 23,330	\$ 17,286	\$ 30,176
Earnings per share	\$ .24	\$ .24	\$ .18	\$ .31
Market stock price				
range	High \$ 36.38	\$ 28.25	\$ 20.63	\$ 20.88
	Low \$ 19.88	\$ 17.50	\$ 16.50	\$ 12.50

Tandem Computers Incorporated Common Stock is traded on the New York, Midwest, and Pacific Stock Exchanges under the trading symbol TDM. All quotations shown represent the high and low closing sale prices. The Company has not declared or paid any cash dividends on its Common Stock and has no plans to do so in the foreseeable future.

### Report of Ernst & Young, independent auditors

To the Board of Directors and Stockholders of Tandem Computers Incorporated

We have audited the consolidated balance sheet of Tandem Computers Incorporated and subsidiaries at September 30, 1989, and the related consolidated statements of income, stockholders' investment, and cash flows for the year then ended. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit. The consolidated financial statements of Tandem Computers Incorporated and subsidiaries for the years ended September 30, 1988 and 1987, were audited by other auditors, whose report dated October 24, 1988, expressed an unqualified opinion on those statements.

We conducted our audit in accordance with generally accepted auditing standards. Those standards 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the 1989 financial statements referred to above present fairly, in all material respects, the consolidated financial position of Tandem Computers Incorporated and subsidiaries at September 30, 1989, and consolidated results of operations and cash flows for the year then ended, in conformity with generally accepted accounting principles.

*Ernst & Young*

San Jose, California  
October 25, 1989



#### Board of Directors

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General Partner,  
Kleiner, Perkins, Caufield & Byers

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Formerly Senior Vice President  
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General Partner, DSV Partners

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Graduate School of Business,  
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Manager—Tandem Systems Group

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Materials and Manufacturing MIS

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Information Services

Bruce Taylor,  
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Seiji Uehara,  
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Far East Operations

#### Auditors

Ernst & Young,  
San Jose, California

#### Registrar and Transfer Agent

Bank of America N.T. & S.A.  
San Francisco, California

#### Form 10-K

A copy of the Company's Report on  
Form 10-K for the 1989 fiscal year, as  
filed with the Securities and Exchange  
Commission, is available on written  
request. Please direct your request to:

Manager of Investor Relations  
Tandem Computers Incorporated  
19333 Valco Parkway  
Cupertino, California 95014-2599

#### Annual Meeting

The annual meeting of stockholders  
will be held at 10:00 a.m. on Wednes-  
day, February 21, 1990, at  
10435 North Tantau Avenue,  
Cupertino, California.

#### Corporate Headquarters

19333 Valco Parkway  
Cupertino, California 95014-2599  
(408) 725-6000

For additional free literature about  
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Perth  
Sydney  
Tasmania*Australian OnLine Systems  
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Uxbridge  
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Frankfurt  
Hamburg  
Hilden (Duesseldorf)  
Neufahrn (Munich)  
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FinlandGreece  
IsraelMalaysia  
MexicoMiddle East  
PeruPhilippines  
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Detroit, Michigan  
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Los Angeles, California  
New York, New York  
Newport Beach, California  
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Kongsberg, Norway

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